

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

JAN 24 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 720H	Facility Type Pipeline/ROW

Surface Owner Indian	Lease Information: NO-G1312-1862, MNM 135216A	API No. 30-045-35818
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LOCATION OF RELEASE

Unit Letter J	Section 23	Township 23N	Range 09W	Feet from the 75	North/South Line South	Feet from the 120	East/West Line East	County San Juan
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Latitude: N36.205393 Longitude: W107.749757 NAD83

NATURE OF RELEASE

Type of Release Crude Oil	Volume of Release Estimated 15 BBL	Volume Recovered Estimated 3 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Vanessa Fields/Cory Smith (NMOCD) Whitney Thomas (BLM-FFO), BIA-FIMO	
By Whom? Deborah Watson	Date and Hour 12/8/17, 14:42-14:46 followed by email 12/9 at 12:07	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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.*

Bi-pass valve froze and cracked at well tie-in riser, the impacted area included the ROW and 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. (Approximately 1,070 cubic yards)
- Following cleanup, 6 confirmation samples were collected from within the impacted area and analyzed for BTEX, and TPH (MRO/GRO/DRO). Confirmation samples were collected on 12/13/17-representatives from FIMO, NMOCD, and BLM were invited but not in attendance. One additional confirmation sample was collected on 12/15/17, a representative from BLM-FFO was in attendance during confirmation sampling on 12/15/17. Final laboratory analytical reports are attached. Final sample results were reported below applicable NMOCD action levels.
- Backfilling of the excavation occurred during the week of 12/18/17. Seeding followed backfilling of excavation during week of 12/18/17.
- No further action required.

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: 		OIL CONSERVATION DIVISION	
Printed Name: Deborah Watson		Approved by Environmental Specialist: 	
Title: Environmental Specialist		Approval Date: 1/26/18	Expiration Date:
E-mail Address: Deborah.watson@wpxenergy.com		Conditions of Approval:	Attached <input type="checkbox"/>
Date: January 22, 2018 Phone: 505-333-1880			

* Attach Additional Sheets If Necessary

NVF 1735236218

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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 #720H, 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 #720H

API #: 30-045-35818

Site Location Description: Unit Letter J, Section 23, Township 23N, Range 9W

Release Latitude/Longitude: N36.205393, W107.749757

Land Jurisdiction: Indian Allotted Lands (Lease # NO-G-1312-1862)

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 15 barrels crude oil

Volume Recovered: estimated 3 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 August 2017 ground bed drilling log for the W Lybrook Unit #720H which recorded depth to water at 260 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.

An unnamed drainage is located approximately 558 feet south 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 1,070 cubic yards of hydrocarbon impacted soils were removed from within the impacted area.

5.0 Soil Sampling

On December 13, 2017, six confirmation soil samples (SC-1 through SC-6) were collected from the excavation. Agencies were notified of the sampling event, but no representatives were present during collection of the confirmation samples. 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.

An additional sample, SC-4R, was collected on December 15, 2017. Mr. A. Adeloye, BLM-FFO, was present during collection of the additional sample. Sample SC-4R was analyzed for MRO and DRO only per USEPA Method 8015M/D.

6.0 Analytical Results

Final laboratory analytical results for soil confirmation samples (SC-1 through SC-6) 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 reports are attached.

7.0 Conclusions

A crude oil release of approximately 15 barrels of crude oil was discovered on December 8, 2017, along the well tie-in riser to the W Lybrook Unit #720H, located in Section 23, Township 23N, Range 9W, San Juan County, New Mexico. Cleanup consisted of removal of approximately 1,070 cubic yards of impacted soils from the location. Six 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
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 #1712992 and Report #1712834)



Figure 1. Topographic Map
W Lybrook Unit #720H Well Tie-In Riser
Section 23, Township 23N, Range 09W
N36.205393, W107.749757
San Juan County, NM
Scale 1:24,000



Figure 2. Aerial Map with Sample Locations
W Lybrook Unit #720H Well Tie-In Riser
Section 23, Township 23N, Range 09W
N36.205393, W107.749757
San Juan County, NM

Table 1: Final Soil Sampling Results
W Lybrook Unit #720H Well Tie-In Riser

Sample ID	Date Sampled	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	12/13/2017	<13.1	<47	<0.018	<0.162
SC-2	12/13/2017	<13.5	<48	<0.020	<0.177
SC-3	12/13/2017	<13.6	<46	<0.021	<0.193
SC-4(R)	12/13 and 12/15	9.6	<47	<0.018	0.164
SC-5	12/13/2017	85	57	<0.018	<0.162
SC-6	12/13/2017	75	50	<0.020	<0.177

*NMOCD Action Levels based on site ranking of ≥ 10



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

December 15, 2017

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

RE: W Lybrook Unit #720H Well Tie In Riser

OrderNo.: 1712834

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 6 sample(s) on 12/14/2017 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,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1712834

Date Reported: 12/15/2017

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** WPX Energy**Client Sample ID:** SC-1**Project:** W Lybrook Unit #720H Well Tie In Rise**Collection Date:** 12/13/2017 3:10:00 PM**Lab ID:** 1712834-001**Matrix:** SOIL**Received Date:** 12/14/2017 6:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	12/14/2017 9:51:13 AM	35505
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/14/2017 9:51:13 AM	35505
Surr: DNOP	90.8	70-130		%Rec	1	12/14/2017 9:51:13 AM	35505
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	12/14/2017 10:38:52 AM	G47787
Surr: BFB	82.9	15-316		%Rec	1	12/14/2017 10:38:52 AM	G47787
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.018		mg/Kg	1	12/14/2017 10:38:52 AM	B47787
Toluene	ND	0.036		mg/Kg	1	12/14/2017 10:38:52 AM	B47787
Ethylbenzene	ND	0.036		mg/Kg	1	12/14/2017 10:38:52 AM	B47787
Xylenes, Total	ND	0.072		mg/Kg	1	12/14/2017 10:38:52 AM	B47787
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	12/14/2017 10:38:52 AM	B47787

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 Quantitative 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 1712834

Date Reported: 12/15/2017

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** WPX Energy**Client Sample ID:** SC-2**Project:** W Lybrook Unit #720H Well Tie In Rise**Collection Date:** 12/13/2017 2:55:00 PM**Lab ID:** 1712834-002**Matrix:** SOIL**Received Date:** 12/14/2017 6:55:00 AM

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	12/14/2017 10:15:45 AM	35505
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/14/2017 10:15:45 AM	35505
Surr: DNOP	88.3	70-130		%Rec	1	12/14/2017 10:15:45 AM	35505
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	12/14/2017 11:02:21 AM	G47787
Surr: BFB	85.7	15-316		%Rec	1	12/14/2017 11:02:21 AM	G47787
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.020		mg/Kg	1	12/14/2017 11:02:21 AM	B47787
Toluene	ND	0.039		mg/Kg	1	12/14/2017 11:02:21 AM	B47787
Ethylbenzene	ND	0.039		mg/Kg	1	12/14/2017 11:02:21 AM	B47787
Xylenes, Total	ND	0.079		mg/Kg	1	12/14/2017 11:02:21 AM	B47787
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	12/14/2017 11:02:21 AM	B47787

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 Quantitative 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 1712834

Date Reported: 12/15/2017

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** WPX Energy**Client Sample ID:** SC-3**Project:** W Lybrook Unit #720H Well Tie In Rise**Collection Date:** 12/13/2017 2:45:00 PM**Lab ID:** 1712834-003**Matrix:** SOIL**Received Date:** 12/14/2017 6:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	12/14/2017 10:40:09 AM	35505
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/14/2017 10:40:09 AM	35505
Surr: DNOP	92.2	70-130		%Rec	1	12/14/2017 10:40:09 AM	35505
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	12/14/2017 11:25:50 AM	G47787
Surr: BFB	83.9	15-316		%Rec	1	12/14/2017 11:25:50 AM	G47787
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.021		mg/Kg	1	12/14/2017 11:25:50 AM	B47787
Toluene	ND	0.043		mg/Kg	1	12/14/2017 11:25:50 AM	B47787
Ethylbenzene	ND	0.043		mg/Kg	1	12/14/2017 11:25:50 AM	B47787
Xylenes, Total	ND	0.086		mg/Kg	1	12/14/2017 11:25:50 AM	B47787
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	12/14/2017 11:25:50 AM	B47787

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 Quantitative 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 1712834

Date Reported: 12/15/2017

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** WPX Energy**Client Sample ID:** SC-4**Project:** W Lybrook Unit #720H Well Tie In Rise**Collection Date:** 12/13/2017 2:30:00 PM**Lab ID:** 1712834-004**Matrix:** SOIL**Received Date:** 12/14/2017 6:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	1800	97		mg/Kg	10	12/14/2017 11:04:38 AM	35505
Motor Oil Range Organics (MRO)	910	490		mg/Kg	10	12/14/2017 11:04:38 AM	35505
Surr: DNOP	0	70-130	S	%Rec	10	12/14/2017 11:04:38 AM	35505
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	12/14/2017 11:49:22 AM	G47787
Surr: BFB	93.1	15-316		%Rec	1	12/14/2017 11:49:22 AM	G47787
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.018		mg/Kg	1	12/14/2017 11:49:22 AM	B47787
Toluene	0.044	0.036		mg/Kg	1	12/14/2017 11:49:22 AM	B47787
Ethylbenzene	ND	0.036		mg/Kg	1	12/14/2017 11:49:22 AM	B47787
Xylenes, Total	0.12	0.073		mg/Kg	1	12/14/2017 11:49:22 AM	B47787
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	12/14/2017 11:49:22 AM	B47787

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 Quantitative 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 1712834

Date Reported: 12/15/2017

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** WPX Energy**Client Sample ID:** SC-5**Project:** W Lybrook Unit #720H Well Tie In Rise**Collection Date:** 12/13/2017 2:20:00 PM**Lab ID:** 1712834-005**Matrix:** SOIL**Received Date:** 12/14/2017 6:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	85	9.4		mg/Kg	1	12/14/2017 11:29:02 AM	35505
Motor Oil Range Organics (MRO)	57	47		mg/Kg	1	12/14/2017 11:29:02 AM	35505
Surr: DNOP	101	70-130		%Rec	1	12/14/2017 11:29:02 AM	35505
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	12/14/2017 8:02:07 PM	G47787
Surr: BFB	81.0	15-316		%Rec	1	12/14/2017 8:02:07 PM	G47787
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.018		mg/Kg	1	12/14/2017 8:02:07 PM	B47787
Toluene	ND	0.036		mg/Kg	1	12/14/2017 8:02:07 PM	B47787
Ethylbenzene	ND	0.036		mg/Kg	1	12/14/2017 8:02:07 PM	B47787
Xylenes, Total	ND	0.072		mg/Kg	1	12/14/2017 8:02:07 PM	B47787
Surr: 4-Bromofluorobenzene	99.6	80-120		%Rec	1	12/14/2017 8:02:07 PM	B47787

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 Quantitative 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 1712834

Date Reported: 12/15/2017

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** WPX Energy**Client Sample ID:** SC-6**Project:** W Lybrook Unit #720H Well Tie In Rise**Collection Date:** 12/13/2017 2:15:00 PM**Lab ID:** 1712834-006**Matrix:** SOIL**Received Date:** 12/14/2017 6:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	75	9.4		mg/Kg	1	12/14/2017 11:53:24 AM	35505
Motor Oil Range Organics (MRO)	50	47		mg/Kg	1	12/14/2017 11:53:24 AM	35505
Surr: DNOP	102	70-130		%Rec	1	12/14/2017 11:53:24 AM	35505
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	12/14/2017 12:36:26 PM	G47787
Surr: BFB	88.9	15-316		%Rec	1	12/14/2017 12:36:26 PM	G47787
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.020		mg/Kg	1	12/14/2017 12:36:26 PM	B47787
Toluene	ND	0.039		mg/Kg	1	12/14/2017 12:36:26 PM	B47787
Ethylbenzene	ND	0.039		mg/Kg	1	12/14/2017 12:36:26 PM	B47787
Xylenes, Total	ND	0.079		mg/Kg	1	12/14/2017 12:36:26 PM	B47787
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	12/14/2017 12:36:26 PM	B47787

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 Quantitative 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#: 1712834

15-Dec-17

Client: WPX Energy
Project: W Lybrook Unit #720H Well Tie In Riser

Sample ID	LCS-35505		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 35505		RunNo: 47769					
Prep Date:	12/14/2017		Analysis Date: 12/14/2017		SeqNo: 1527674		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	94.9	73.2	114			
Surr: DNOP	4.6		5.000		92.9	70	130			

Sample ID	MB-35505	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID: 35505			RunNo: 47769					
Prep Date:	12/14/2017	Analysis Date: 12/14/2017			SeqNo: 1527675		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	9.6		10.00		95.8	70	130			

Sample ID	LCS-35492		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 35492		RunNo: 47770					
Prep Date:	12/13/2017		Analysis Date: 12/14/2017		SeqNo: 1528786		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.5		5.000		90.0	70	130			

Sample ID	MB-35492	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID: 35492			RunNo: 47770					
Prep Date:	12/13/2017	Analysis Date: 12/14/2017			SeqNo: 1528787		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		99.7	70	130			

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 Quantitative 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#: 1712834

15-Dec-17

Client: WPX Energy
Project: W Lybrook Unit #720H Well Tie In Riser

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	G47787	RunNo:	47787					
Prep Date:		Analysis Date:	12/14/2017	SeqNo:	1528357	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	850		1000		84.8	15	316			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	G47787	RunNo:	47787					
Prep Date:		Analysis Date:	12/14/2017	SeqNo:	1528358	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	94.4	75.9	131			
Surr: BFB	920		1000		91.5	15	316			

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 Quantitative 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#: 1712834

15-Dec-17

Client: WPX Energy

Project: W Lybrook Unit #720H Well Tie In Riser

Sample ID RB	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: B47787		RunNo: 47787							
Prep Date:	Analysis Date: 12/14/2017		SeqNo: 1528509		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		101	80	120			

Sample ID 100NG BTEX LCS	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: B47787		RunNo: 47787							
Prep Date:	Analysis Date: 12/14/2017		SeqNo: 1528597		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	92.8	77.3	128			
Toluene	0.94	0.050	1.000	0	93.9	79.2	125			
Ethylbenzene	0.95	0.050	1.000	0	94.9	80.7	127			
Xylenes, Total	2.9	0.10	3.000	0	95.7	81.6	129			
Surr: 4-Bromofluorobenzene	1.0		1.000		105	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 Quantitative 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
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: 1712834

RcptNo: 1

Received By: Anne Thorne 12/14/2017 6:55:00 AM

Completed By: Anne Thorne 12/14/2017 7:23:21 AM

Reviewed By: DDS 12/14/17

Anne Thorne

Anne Thorne

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 $>0^{\circ}\text{C}$ 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 ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
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 ☐

of preserved
bottles checked
for pH: _____
(<2 or >12 unless noted)
Adjusted? _____
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:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			



Hall Environmental Analysis Laboratory
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Albuquerque, NM 87109
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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 720H Well Tie in Riser

OrderNo.: 1712992

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 1 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 1712992

Date Reported: 12/19/2017

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** WPX Energy**Client Sample ID:** SC-4R**Project:** W Lybrook Unit 720H Well Tie in Riser**Collection Date:** 12/15/2017 11:23:00 AM**Lab ID:** 1712992-001**Matrix:** SOIL**Received Date:** 12/17/2017 12:02:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	9.6	9.4		mg/Kg	1	12/18/2017 10:34:35 AM	35560
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/18/2017 10:34:35 AM	35560
Surr: DNOP	84.4	70-130		%Rec	1	12/18/2017 10:34:35 AM	35560

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	Page 1 of 1
	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 Quantitative 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	



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Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: WPX ENERGY

Work Order Number: 1712992

RcptNo: 1

Received By: Andy Freeman

12/17/2017 12:02:00 PM

Completed By: Anne Thorne

12/18/2017 8:43:51 AM

Reviewed By: PDS

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 $>0^{\circ}\text{C}$ 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 ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
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 ☐
- # of preserved bottles checked for pH: _____
(<2 or >12 unless noted)
Adjusted? _____
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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.1	Good	Yes			

Chain-of-Custody Record		Turn-Around Time:	
Client: WPX Energy Production		<input type="checkbox"/> Standard <input checked="" type="checkbox"/> Rush <i>Same day</i>	
Mailing Address: 721 S Main Aztec NM		Project Name: <i>Wes' Lybrook Unit #720H</i>	
Phone #: 505 333 1880		Project #:	
email or Fax#: <i>dewah.watson@wpxenergy.com</i>		Project Manager:	
QA/QC Package:		DWatson	
<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Level 4 (Full Validation)		Sampler: DWatson	
Accreditation		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<input type="checkbox"/> NELAP <input type="checkbox"/> Other _____		Sample Temperature: <i>24.6</i>	
<input type="checkbox"/> EDD (Type)			

☐ **Standard**

☒ Rush Same day

Project Name:

Was Lybrook Unit #720H

Project #:

Project Manager:

D Watson

Sampler: DWatson

On Ice ☒ Yes ☐ No

Sample Temperature: 36.6

121 1817AT
Container
Type and #
Meat Kit

Preservative
Type

Cool

20

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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


Analysis Request

[illegible]

Date: 4/17	Time: 1340	Relinquished by: Phil Wade
------------	------------	----------------------------

Date:	Time:	Relinquished by:
2/16/77	1410	Chas W. Albert

Received by: Art Wab

Received by: 

Date 12/14/17 Time 1340

Date 12/17/17 Time 1202

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.