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 Department

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised August 24, 2018 Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: WPX Energy Permian, LLC	OGRID: 246289
Contact Name: Deborah Watson	Contact Telephone: 575-885-7561
Contact email: deborah.watson@wpxenergy.com	Incident: 2RP-4891
Contact mailing address: 5315 Buena Vista Drive, Carlsbad, NM 88	3220

Location of Release Source

Latitude 32.33332 Longitude -104.08521 (NAD 83 in decimal degrees to 5 decimal places)

Site Name: LVP SWD #001			Site Type: Well Pad			
Date Release Discovered: July 18, 2018			API# (if applicable) 30-015-4	2234		
-	1		1			1
Unit Letter	Section	Township	Range	Range County		
Ι	04	23S	28E	BE Eddy		
Surface Owne	r: State	Federal T	ribal Private			

Nature and Volume of Release

Materia	al(s) Released (Select all that apply and attach calculations or specific	justification for the volumes provided below)
Crude Oil	Volume Released (bbls)less than 1,000 bbl	Volume Recovered (bbls)
Produced Water	Volume Released (bbls) less than 4,750 bbl	Volume Recovered (bbls) 0
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	⊠ Yes □ No
Condensate	Volume Released (bbls)	Volume Recovered (bbls)
Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Cause of Release		
Fire at the facility.		

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Incident ID	
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: Each of the following items must be included in the closure report.

A scaled site and sampling diagram as described i	n 19.15.29.11 NMAC
Photographs of the remediated site prior to backf must be notified 2 days prior to liner inspection)	ill or photos of the liner integrity if applicable (Note: appropriate OCD District office
☐ Laboratory analyses of final sampling (Note: appr	ropriate ODC District office must be notified 2 days prior to final sampling)
☐ Description of remediation activities	
and regulations all operators are required to report and/may endanger public health or the environment. The ac should their operations have failed to adequately invest human health or the environment. In addition, OCD ac compliance with any other federal, state, or local laws a restore, reclaim, and re-vegetate the impacted surface a	and complete to the best of my knowledge and understand that pursuant to OCD rules or file certain release notifications and perform corrective actions for releases which exceptance of a C-141 report by the OCD does not relieve the operator of liability igate and remediate contamination that pose a threat to groundwater, surface water, ceptance of a C-141 report does not relieve the operator of responsibility for and/or regulations. The responsible party acknowledges they must substantially rea to the conditions that existed prior to the release or their final land use in tion to the OCD when reclamation and re-vegetation are complete.
Printed Name: Deborah Watson	Title: HSE Specialist
Signature:	
Signature:	Date: December 20, 2019
email: deborah.watson@wpxenergy.com	Telephone: 575-885-7561
OCD Only	
Received by:	Date:
	onsible party of liability should their operations have failed to adequately investigate and ater, surface water, human health, or the environment nor does not relieve the responsible al laws and/or regulations.
Closure Approved by:	Date:
Printed Name:	Title:
_	



P.O. Box 1708 • Artesia, NM 88211 www.hrlcomp.com

December 20, 2019

Ms. Deborah Watson Environmental Specialist WPX Energy Permian, LLC 5315 Buena Vista Drive Carlsbad, New Mexico 88220

Subject: Closure Report

2RP-4891 LVP SWD #001

Eddy County, New Mexico

Ms. Watson:

HRL Compliance Solutions, Inc. (HRL) is pleased to submit the attached closure report summarizing the actions taken to remediate the LVP SWD #001 release. The purpose of the report is to obtain approval from the New Mexico Oil Conservation Division (NMOCD) for the remediation and closure of the release that occurred on July 18, 2018. Table 1 below summarizes information regarding the release.

Table 1: Release Summary

Item	Discussion						
Site Name		LVP SWD #001					
	Latitude	Longitude	Public Lands				
Location	32.33331684°	-104.0852087°	Unit Letter I, Section 4,				
			Township 23S, Range 28E				
Company	WPX Energy Permian, LLC						
District RP	2RP-4891	2RP-4891					
API#	30-015-42234	30-015-42234					
Date Release Discovered	7/18/2018						
Date Reported	7/18/2018						
Reported To	Ken McQueen: Energy	, Minerals and Natu	ıral Resources Department				
	(EMNRD) Cabinet Secretary						
Surface Owner	Private						
Mineral Owner	State						



Item	Discussion
Cause of Release	Fire to Tank Battery
Released Material	Produced Water and Oil
Volume of Release	Less than 4,750 Barrels of Produced Water and Less than 1,000
	Barrels of Oil
Volume Recovered	0 Barrels
Depth to Groundwater	Less than 50 feet below ground surface
Nearest Waterway	Pecos River, 0.25 miles south of release

1.0 Background & Notification

On July 18, 2018, a fire occurred at the LVP SWD #1 well pad in Eddy County, New Mexico. The fire affected the on-site tank battery, resulting in a release of produced water and oil. The volume of release was determined to be less than 4,750 barrels of produced water and less than 1,000 barrels of oil. Immediate notification was provided to Ken McQueen, EMNRD Cabinet Secretary and an initial C-141 was submitted to the NMOCD District II Artesia office on July 30, 2018 (Appendix A).

2.0 Site Assessment and Characterization

The location of the release is approximately three miles northeast of Loving, New Mexico at an elevation of approximately 3,010 feet above sea level (Figure 1). The nearest surface water, the Pecos River, is located approximately 0.25 miles south of the release (Figure 2).

Depth-to-groundwater at the release was estimated to be less than 50 feet below ground surface, as determined by review of the United States Geological Survey (USGS) National Water Information System. A three-mile radius search of the USGS National Water Information System revealed six water wells with an average depth to groundwater of 25 feet (Figure 2 and Table A).

An assessment of wetlands and springs was conducted using the National Wetlands Inventory (Figure 3). No wetlands were identified within 300 feet of the release location. There are no springs within 1,000 feet of this location.

The release location is not within an area identified as an unstable karst geology area (Figure 4).



Based on the assessments outlined above, and in accordance with NMAC 19.15.29.12, the following closure criteria were applicable to the site.

Table 2: Closure Criteria

Depth to Ground Water	Constituent	Limit in milligrams per kilogram (mg/kg)
	Chloride	600 mg/kg
	Total Petroleum Hydrocarbons (TPH)	100 mg/kg
Less than 50 feet	Benzene	10 mg/kg
	Benzene, toluene, ethylbenzene, and total xylenes (BTEX)	50 mg/kg

3.0 Soil Remediation

Prior to remedial activity, the impacted area was mapped by an environmental consulting company with a Trimble survey-grade global positioning system (GPS) to delineate the horizontal extent of the release. The release impacted a total area of approximately 9,850 square yards (Figure 5). The impacts were limited to the LVP SWD #001 well pad surface.

Mechanical excavation of the impacted soil was performed by SDR Enterprises, LLC (SDR) utilizing a hydraulic excavator. As the excavator removed soil from the impacted area, a backhoe loaded the soil onto a belly dump truck to be transported offsite. All excavated soil was transported to R360 Halfway Site, an exploration and production waste disposal facility located in Hobbs, New Mexico.

Throughout remedial activities, HRL personnel collected soil samples for field screening to assess the in-situ concentrations of the impacted area. The field screening results were used to guide the excavation to soil concentrations below the parameters specified in Table I of 19.15.29.12 NMAC. Field screen data was collected utilizing an electrical conductivity (EC) meter, a photoionization detector (PID), and PetroFLAG kit. The EC meter was utilized to approximate soil chloride concentrations. The PID unit was used to approximate soil concentrations of non-specific volatile organic compounds (VOC's) such as benzene and lighterend hydrocarbons. The PetroFLAG kit was used to approximate soil concentrations of petroleum hydrocarbons.



In the impacted area beneath the tank battery (Figure 6A), a well-cemented caliche hardpan layer was encountered at approximately three feet below ground surface. In this area, a hydraulic hammer was used to penetrate and break through the caliche hardpan (Appendix D, Photographs). The excavation was extended an additional 1.5 feet to a total depth of 4.5 feet below ground surface. This area was prioritized during remedial activities so that that the tank battery could be rebuilt as soon as possible. Following receipt of laboratory analytical results for the confirmation samples, WPX received approval from NMOCD to backfill the area and the battery was subsequently reconstructed.

Following the reconstruction of the tank battery, all remaining excavation areas were extended to a total depth of approximately five feet below ground surface. Upon completion of the excavation, an estimated total volume of 17,280 cubic yards was removed from the impacted area.

Upon receipt of soil sample analytical results to confirm the remaining in-situ soil was below NMOCD closure criteria, SDR backfilled the excavation area with approximately 16,500 cubic yards of clean caliche.

4.0 Confirmation Soil Sampling and Analytical Results

A confirmation sample plan was implemented utilizing a five-point composite sample strategy that represented areas less than 200-square feet, in accordance with Subparagraph (c) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC. A total of 494 confirmation samples were collected, including 455 excavation footprint samples and 39 sidewall samples. Confirmation sampling occurred in stages and was divided by excavation area. The three areas were divided into the northernmost Tank Battery Excavation Area, the Southern Excavation Area, and the Central Excavation Area. Digital receipts of confirmation sample notifications to EMNRD and NMOCD are attached as Appendix B.

All confirmation samples were submitted to Hall Environmental Analysis Laboratory, Inc., a National Environmental Laboratory Accreditation Program (NELAP) laboratory, in accordance with NMOCD soil sampling procedures. The samples were analyzed for:

- Chloride by EPA Method 300.0
- Benzene, toluene, ethyl benzene, and total xylenes (BTEX) by EPA Method 8021B
- Gasoline range organics (GRO), diesel range organics (DRO), and motor oil range organics (MRO) by EPA Method 8015M/D



A summary of the laboratory results is attached as Table A with the raw analytical reports included as Appendix C.

Confirmation sampling of the Tank Battery Excavation Area occurred on February 27 and 28, 2019. A total of 123 footprint samples (SP1 through SP123) and 8 sidewall samples (SW1 through SW8) were collected (Figures 6A through 6C). Samples which exceeded NMOCD closure standards were resampled on March 11, 2019.

Confirmation sampling of the Southern Excavation Area occurred on April 2 and 3, 2019. A total of 217 footprint samples (SP124-SP341) and 22 sidewall samples (SW9 through SW31) were collected (Figures 6D, 6E, and 6F). All of the samples collected in the Southern Excavation Area were reported below applicable NMOCD closure standards.

Confirmation sampling of the Central Excavation Area occurred on June 26 and 27, 2019. A total of 113 footprint samples (SP342 through SP455) and 7 sidewall samples (SW32 through SW39) were collected (Figures 6F and 6I). Samples which exceeded NMOCD closure standards were resampled on July 17, 2019.

5.0 Summary

A release occurred at the LVP SWD #001 well site on July 18, 2018, that was due to a fire at the tank battery. A volume of less than 4,750 barrels of produced water and less than 1,000 barrels of oil impacted the well pad surface. The excavation was completed to a depth of 4.5 feet below ground surface in the tank battery area and five feet below ground surface in the other areas. Upon completion of the excavation, an estimated total volume of 17,280 cubic yards was removed from the impacted area. Impacted soil was transported to R360 waste disposal facility located in Hobbs, New Mexico.

A total of 494 confirmation samples were collected to confirm the remaining in-situ soil concentrations were below NMOCD closure standards. Analytical results for all 494 samples were reported below the cleanup limits outlined in Table 1 of Subsection E of NMAC 19.15.29.12. Upon receipt of confirmatory soil sample the excavation was backfilled. At this time, HRL does not recommend additional remedial action.



6.0 Scope and Limitations

The scope of HRL's services consists of site delineation and characterization, directing remediation activity, collecting confirmation soil samples, and preparation of this closure report. The tasks have been completed in accordance with 19.15.29 NMAC.

Please contact me at (575) 616-7398 ext. 435 with any questions or concerns regarding this report.

Prepared by:

HRL Compliance Solutions, Inc.

Kein Such

Kevin Smith

Environmental Scientist



Attachments:

Figure 1: Site Location Map

Figure 2: Depth to Groundwater Map Figure 3: Wetlands Assessment Map

Figure 4: Karst Location Map Figure 5: Impacted Area Map

Figure 6A: Confirmation Sample Location Map – Tank Battery Area Footprint (Sample ID)
Figure 6B: Confirmation Sample Location Map – Tank Battery Area Footprint (Sample Points)

Figure 6C: Confirmation Sample Location Map - Tank Battery Area Sidewalls

Figure 6D: Confirmation Sample Location Map – Southern Area Footprint (Sample ID)
Figure 6E: Confirmation Sample Location Map – Southern Area Footprint (Sample Points)

Figure 6F: Confirmation Sample Location Map – Southern Area Sidewalls

Figure 6G: Confirmation Sample Location Map – Central Area Footprint (Sample ID)
Figure 6H: Confirmation Sample Location Map – Central Area Footprint (Sample Points)

Figure 61: Confirmation Sample Location Map – Central Area Sidewalls

Table A: USGS Water Well Data Summary Table B: Analytical Results Summary

Appendix A: C-141 Release Notification

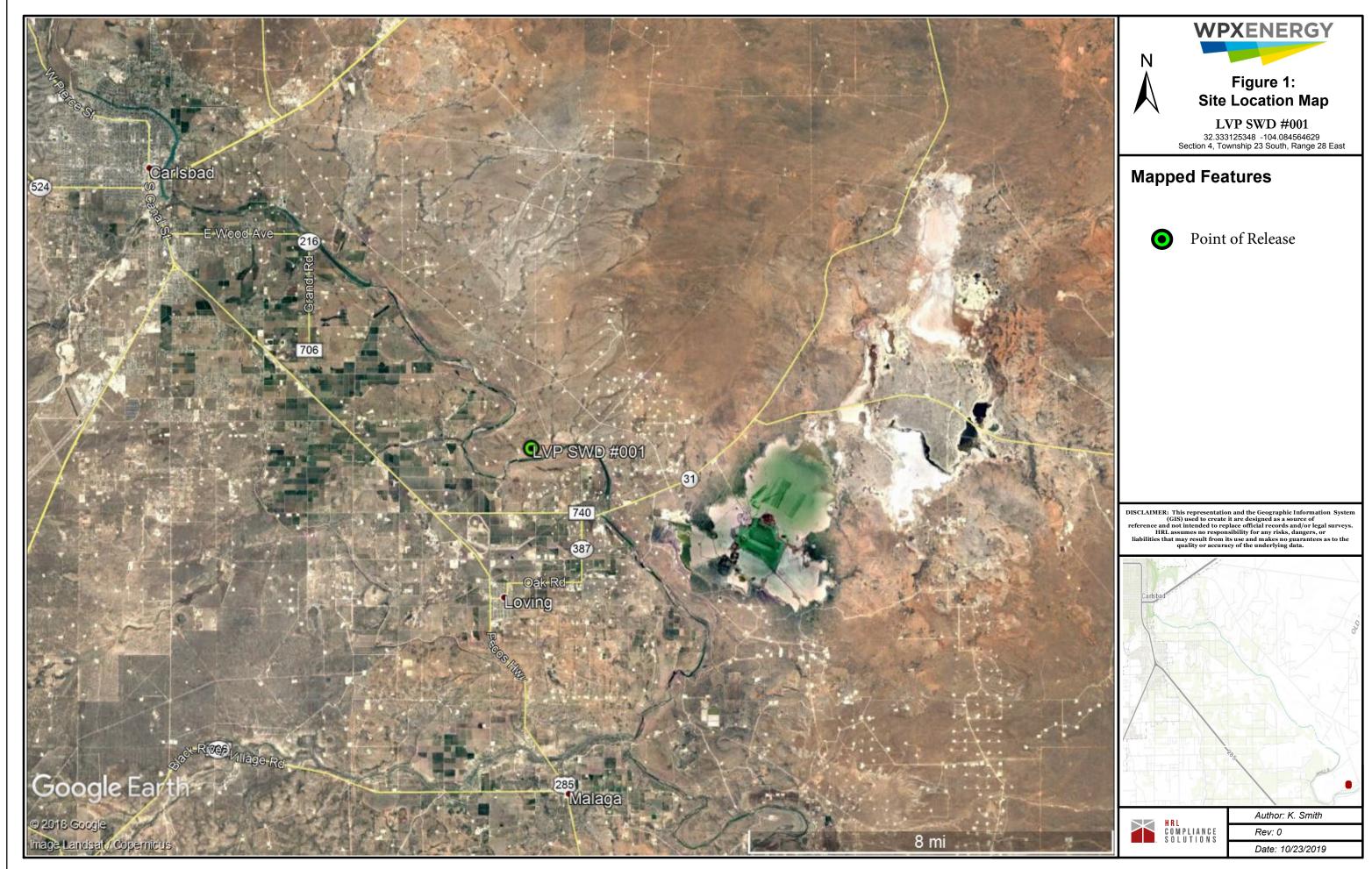
Appendix B: Confirmation Sampling Notification

Appendix C: Site Photographs

Appendix D:Laboratory Analytical Reports

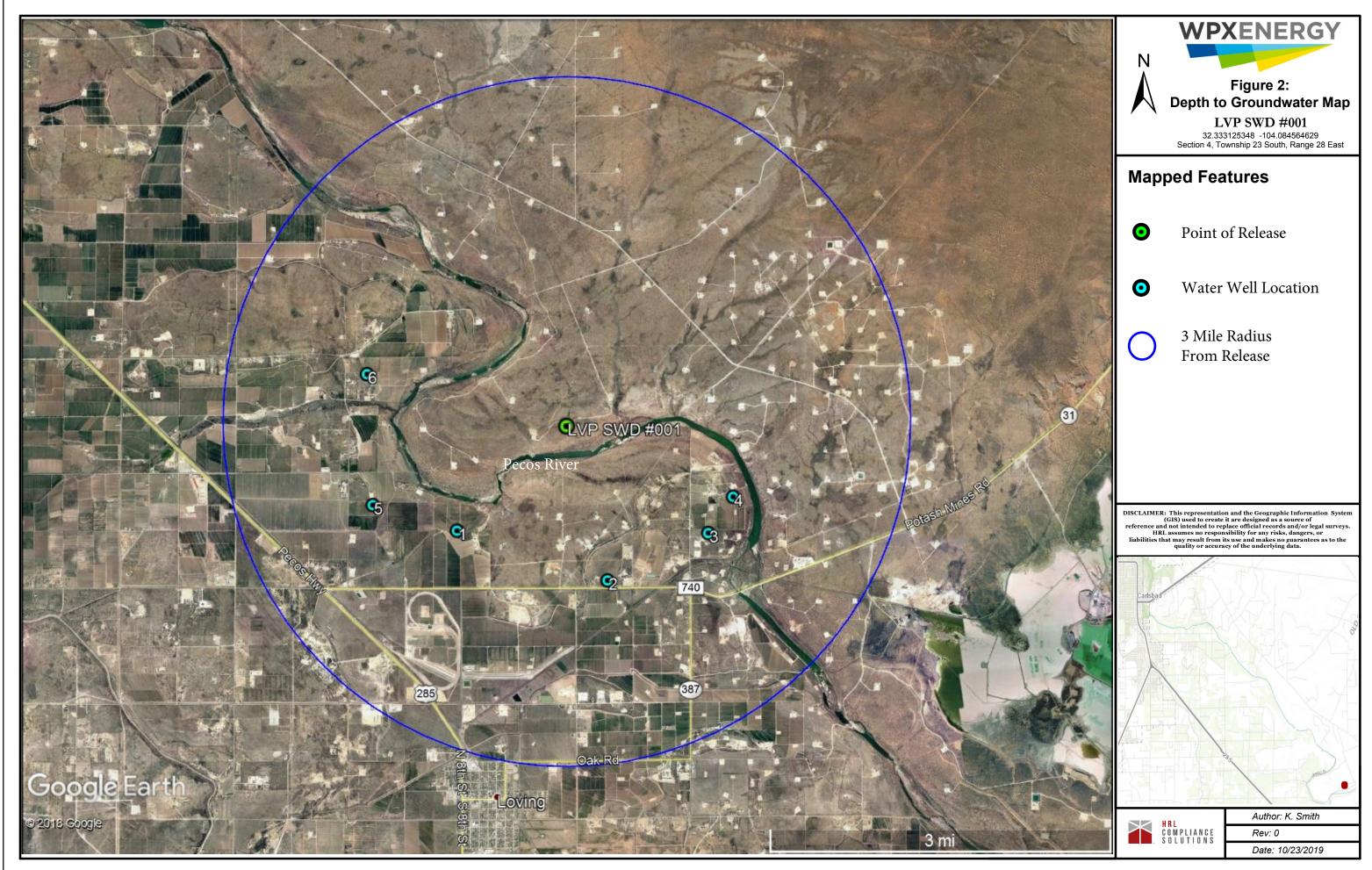
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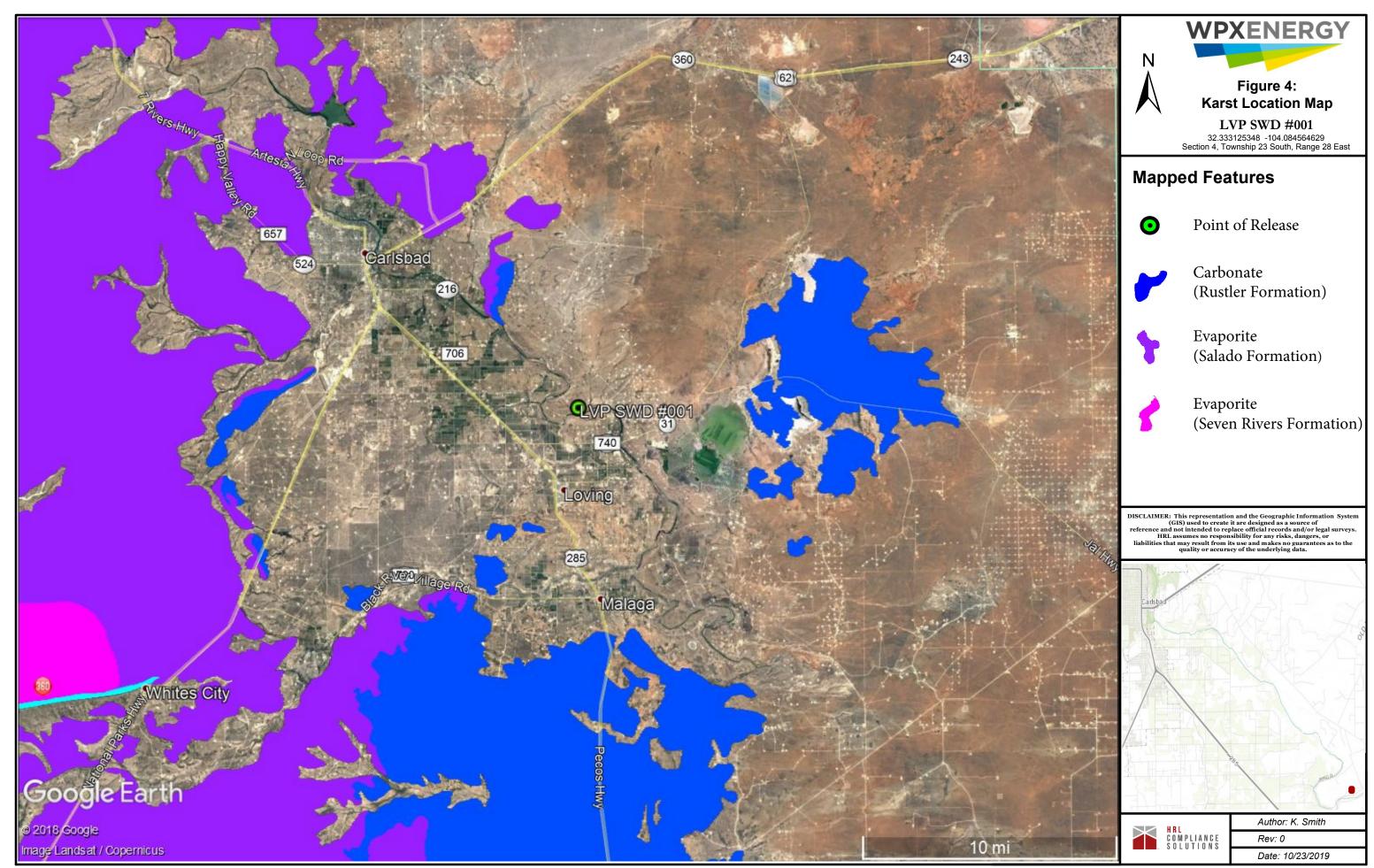
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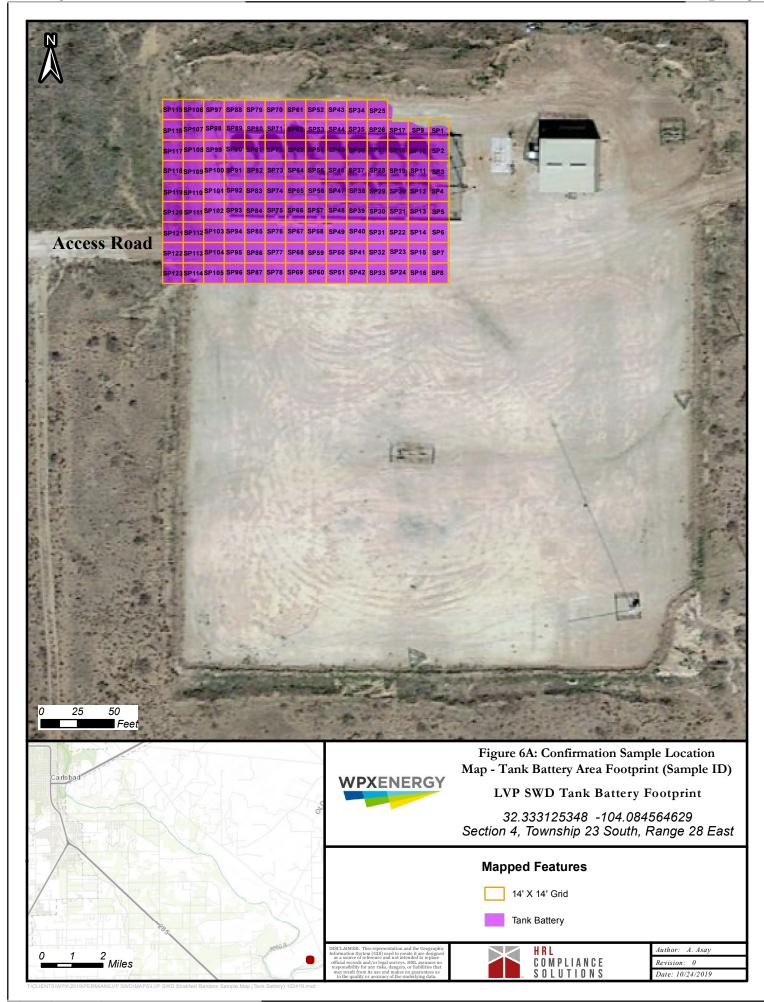
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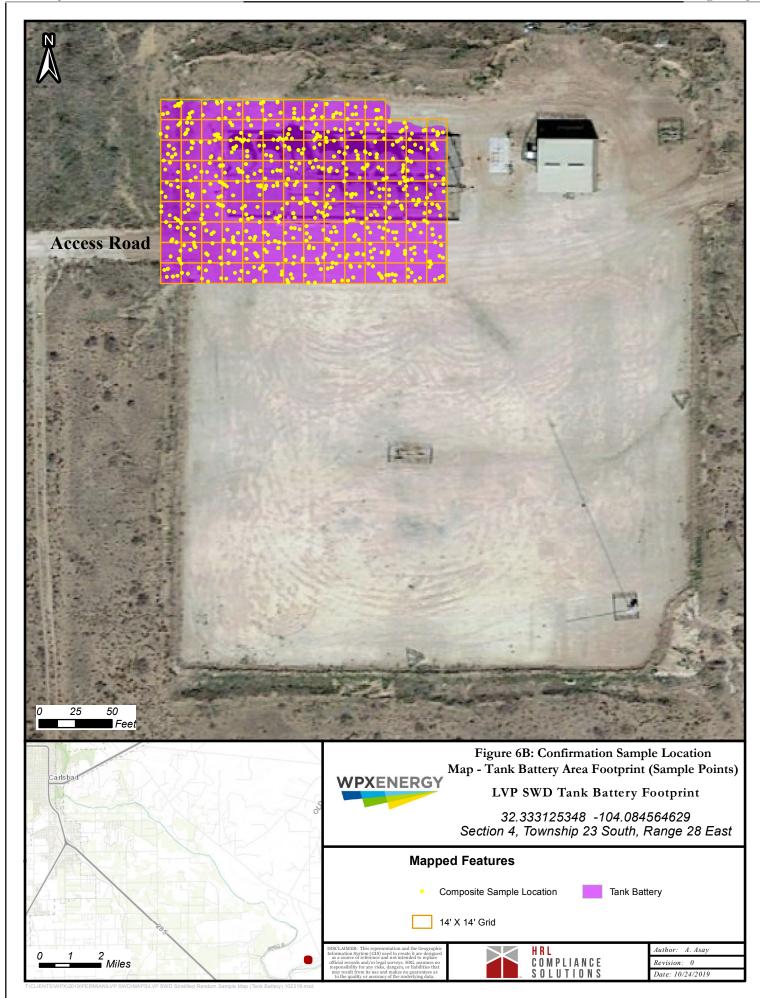
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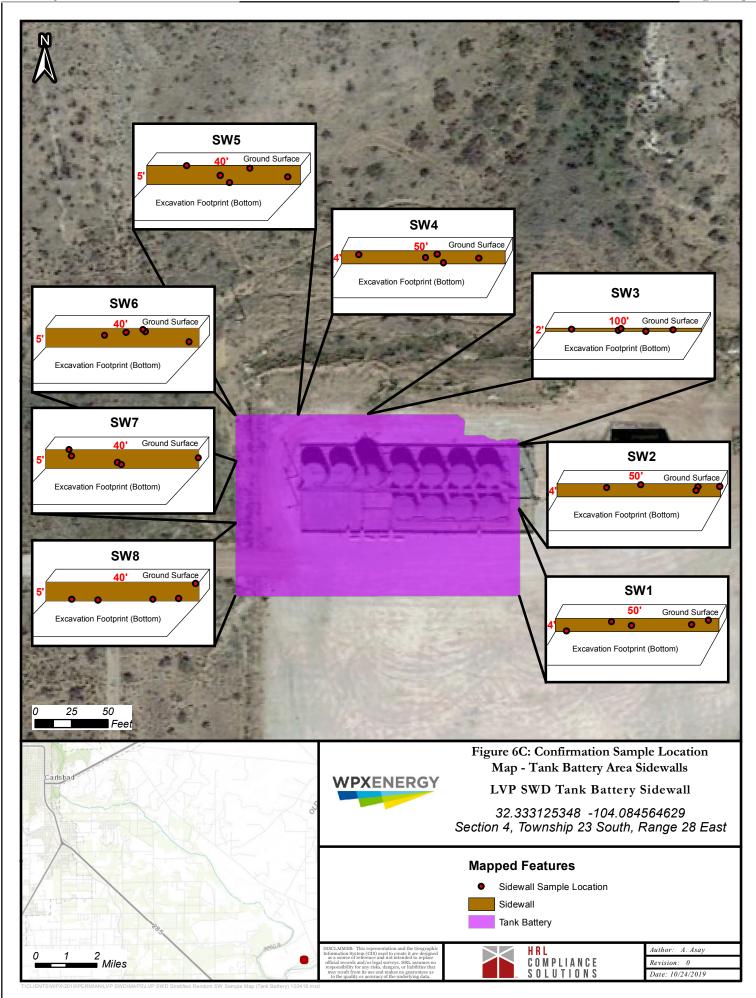


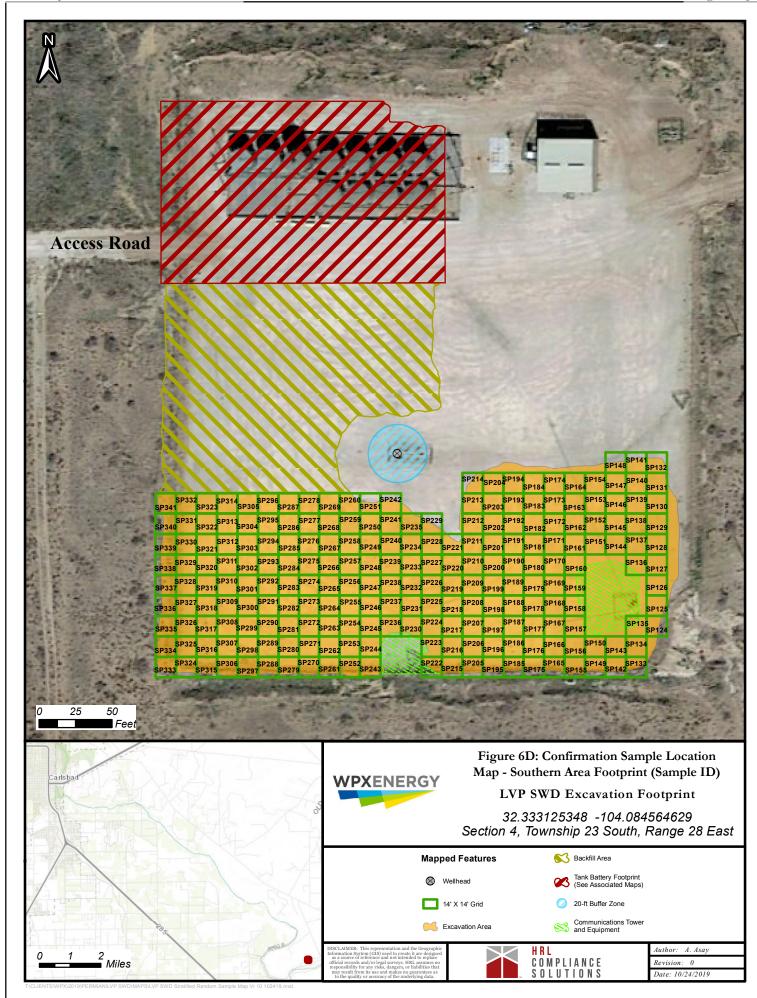
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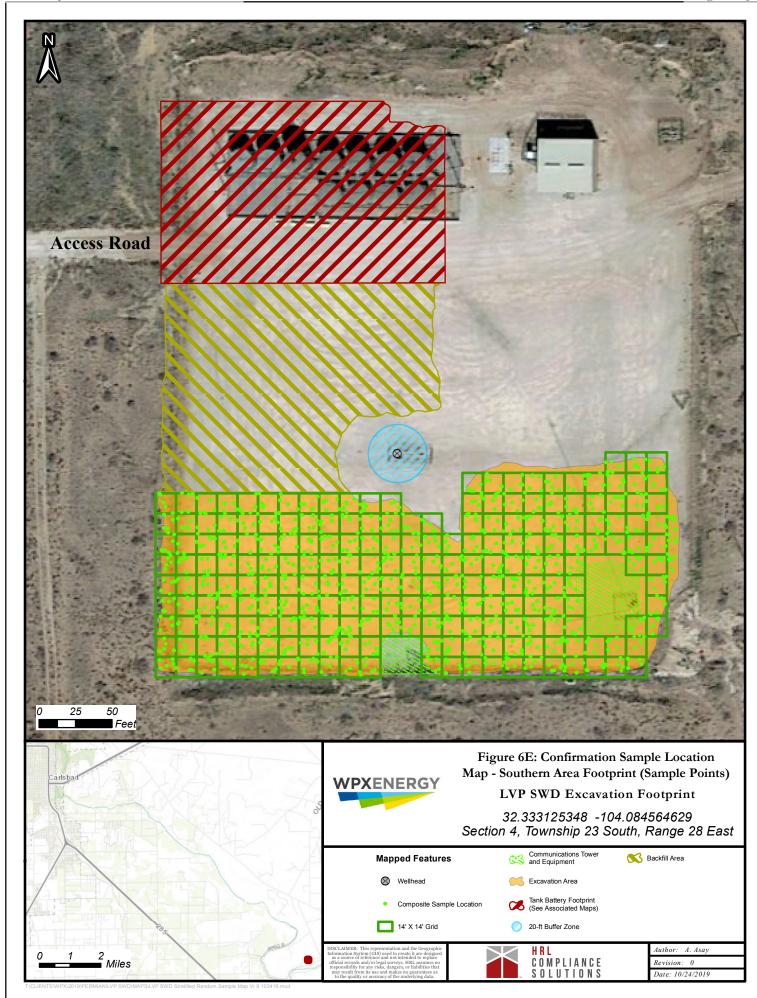






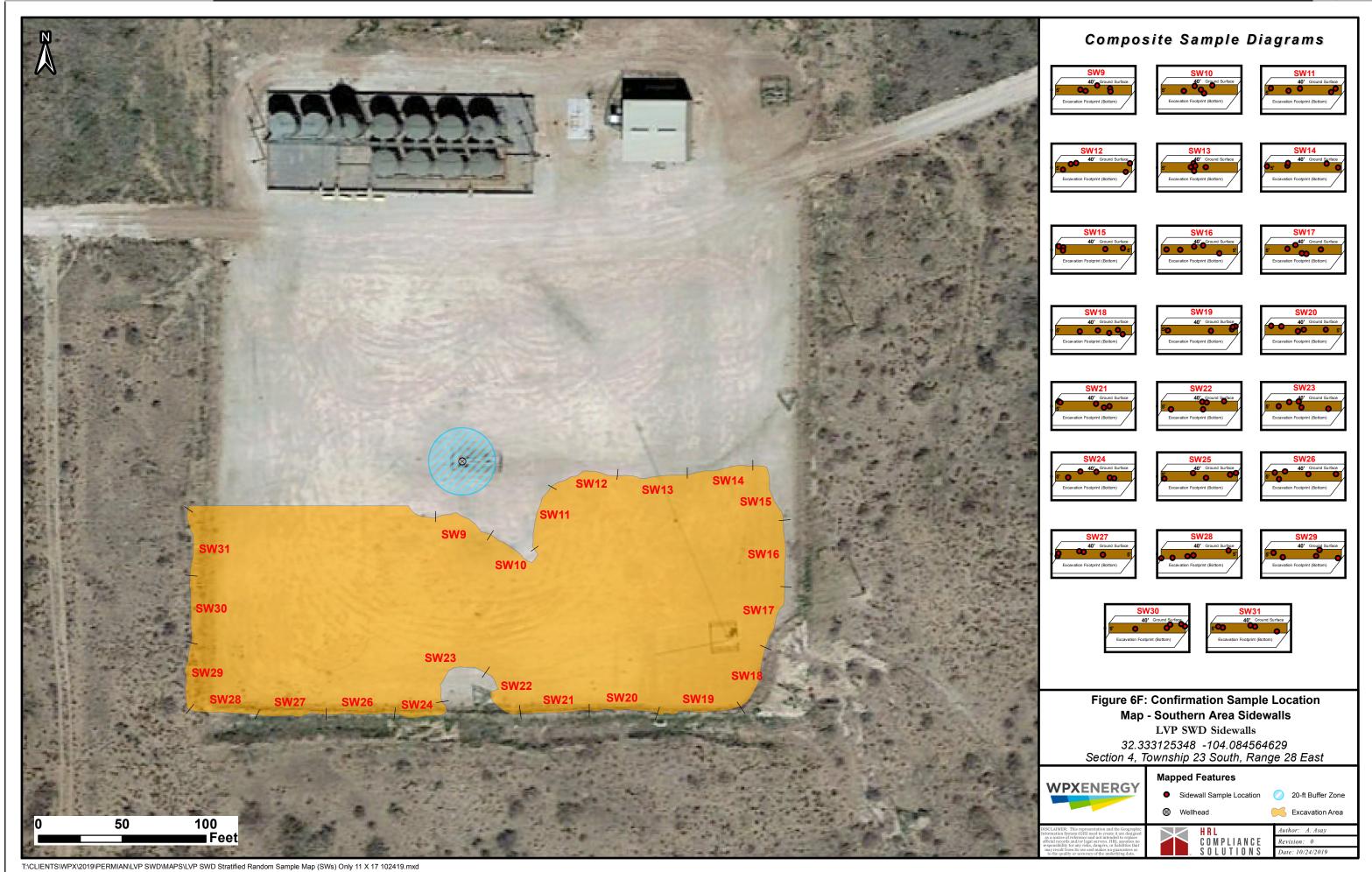


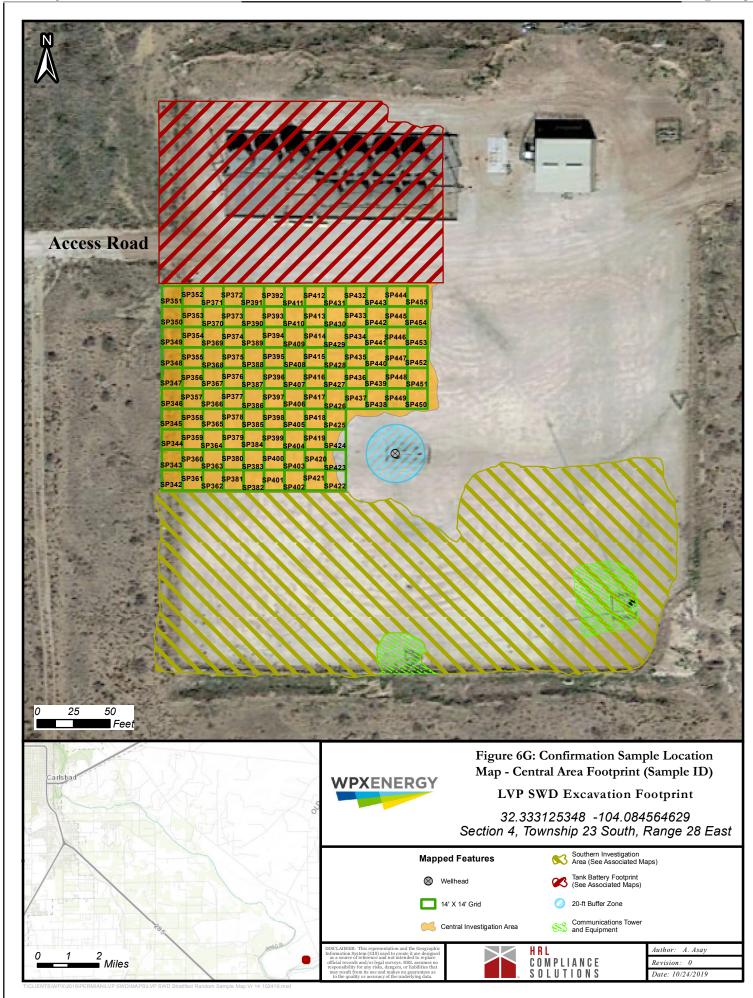


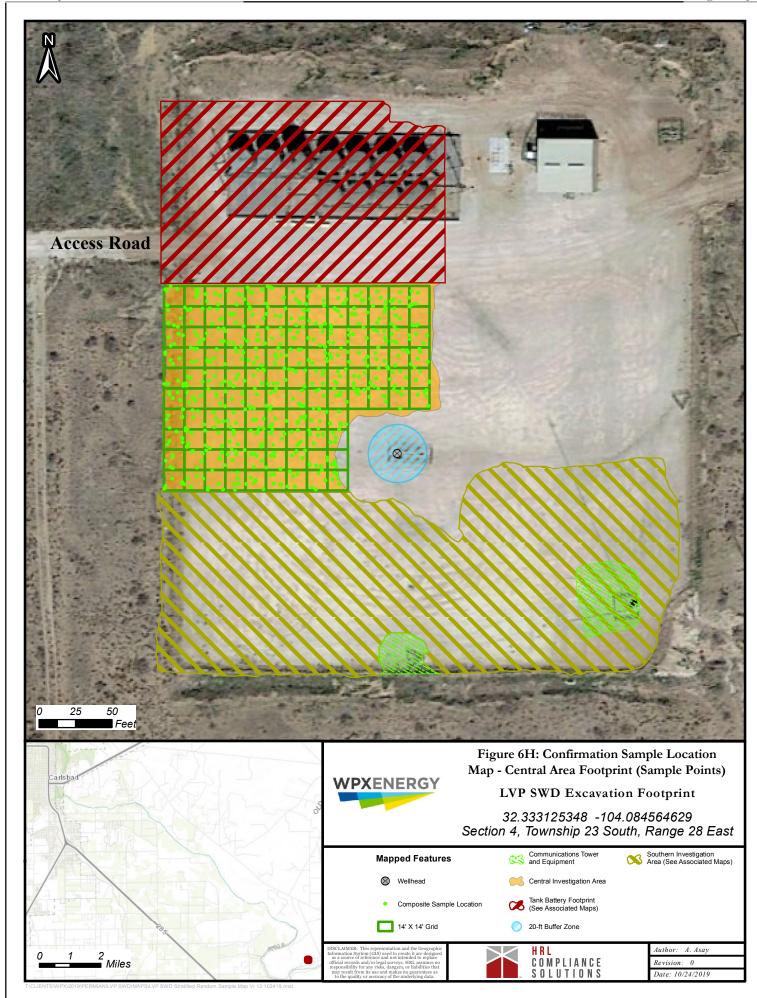


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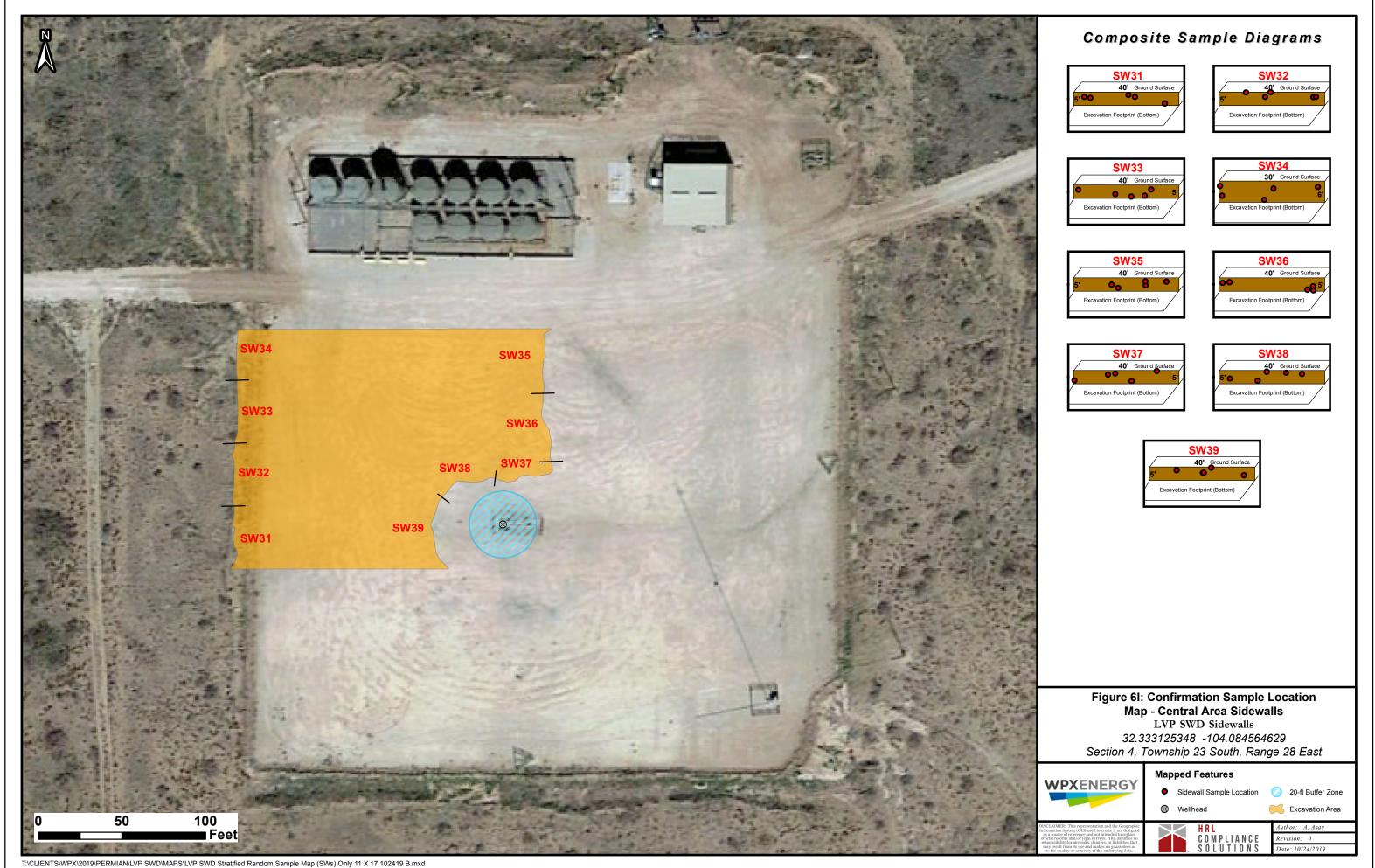




Table A: Water Well Data Summary

Well Number on Figure 2	Well ID	Water Level Below Surface (ft.)	Distance from Source (mi)
1	USGS 321852104045601	19	1.39
2	USGS 322024104064601	25	1.41
3	USGS 321927104033701	18	1.53
4	USGS 321924104065201	32	1.67
5	USGS 322030104065202	30	1.79
6	USGS 321859104062101	28	1.81
		·	

^{*} avg depth of water below ground surface = 25 feet



Table B: Laboratory Results Summary

	ergy Pe /P SWD	ermian, LLC #001	Sample Results - Hall Environmental Analysis Laboratory					atory	
Exca	vation F	ootprint						Report	ted in mg/kg
NM OCD	Table 1 GW <5	Thresholds 50')	600	10	50		10	00	
Sample ID	Depth (ft)	Sampling Date	Chloride	Benzene	BTEX	GRO	DRO	MRO	Total TPH
SP1	4	2/27/2019	ND	ND	ND	ND	ND	ND	ND
SP2	4	2/27/2019	74	ND	ND	ND	150	75	225
SP2R	4.5	3/11/2019	-	-	-	-	ND	ND	ND
SP3	4	2/27/2019	120	ND	ND	ND	ND	ND	ND
SP4	4	2/27/2019	100	ND	ND	ND	ND	ND	ND
SP5	4	2/27/2019	220	ND	ND	ND	ND	ND	ND
SP6	4	2/27/2019	260	ND	ND	ND	ND	ND	ND
SP7	4	2/27/2019	ND	ND	ND	ND	ND	ND	ND
SP8	4	2/27/2019	300	ND	ND	ND	14	ND	14
SP9	4	2/27/2019	ND	ND	ND	ND	ND	ND	ND
SP10	4	2/27/2019	ND	ND	ND	ND	ND	ND	ND
SP11	4	2/27/2019	150	ND	ND	ND	11	ND	11
SP12	4	2/27/2019	310	ND	ND	ND	12	ND	12
SP13	4	2/27/2019	ND	ND	ND	ND	ND	ND	ND
SP14	4	2/27/2019	320	ND	ND	ND	ND	ND	ND
SP15	4	2/27/2019	470	ND	ND	ND	ND	ND	ND
SP16	4	2/27/2019	84	ND	ND	ND	ND	ND	ND
SP17	4	2/27/2019	83	ND	ND	ND	350	170	520
SP17R	4.5	3/11/2019	-	-	-	-	ND	ND	ND
SP18	4	2/27/2019	140	ND	ND	ND	68	ND	68
SP19	4	2/27/2019	310	ND	ND	ND	17	ND	17
SP20	4	2/27/2019	ND	ND	ND	ND	ND	ND	ND
SP21	4	2/27/2019	100	ND	ND	ND	14	ND	14
SP22	4	2/27/2019	85	ND	ND	ND	ND	ND	ND
SP23	4	2/27/2019	560	ND	ND	ND	ND	ND	ND
SP24	4	2/27/2019	520	ND	ND	ND	ND	ND	ND
SP25	4	2/27/2019	500	ND	ND	ND	ND	ND	ND
SP26	4	2/27/2019	580	ND	ND	ND	ND	ND	ND
SP27	4	2/27/2019	110	ND	ND	ND	ND	ND	ND
SP28	4	2/27/2019	660	ND	ND	ND	ND	ND	ND
SP28R	4.5	3/11/2019	140	-		-	-	-	-

	ergy Pe /P SWD	ermian, LLC #001	Sample Results - Hall Environmental Analysis Labo				sis Labor	atory	
Exca	vation F	ootprint				Repor	Reported in mg/kg		
NM OCD	Table 1 GW <5	. Thresholds 50')	600	10	50		10	00	
Sample ID	Depth (ft)	Sampling Date	Chloride	Benzene	BTEX	GRO	DRO	MRO	Total TPH
SP29	4	2/27/2019	71	ND	ND	ND	ND	ND	ND
SP30	4	2/27/2019	400	ND	ND	ND	ND	ND	ND
SP31	4	2/27/2019	390	ND	ND	ND	ND	ND	ND
SP32	4	2/27/2019	440	ND	ND	ND	ND	ND	ND
SP33	4	2/27/2019	ND	ND	ND	ND	ND	ND	ND
SP34	4	2/27/2019	ND	ND	ND	ND	ND	ND	ND
SP35	4	2/27/2019	130	ND	ND	ND	ND	ND	ND
SP36	4	2/27/2019	530	ND	ND	ND	44	110	154
SP36R	4.5	3/11/2019	-	-	-	-	ND	ND	ND
SP37	4	2/27/2019	90	ND	ND	ND	ND	ND	ND
SP38	4	2/27/2019	270	ND	ND	ND	ND	ND	ND
SP39	4	2/27/2019	360	ND	ND	ND	ND	ND	ND
SP40	4	2/27/2019	750	ND	ND	ND	ND	ND	ND
SP40R	4.5	3/11/2019	66	-	-	-	-	-	-
SP41	4	2/27/2019	98	ND	ND	ND	ND	ND	ND
SP42	4	2/27/2019	77	ND	ND	ND	ND	ND	ND
SP43	4	2/27/2019	130	ND	ND	ND	ND	ND	ND
SP44	4	2/27/2019	63	ND	ND	ND	ND	ND	ND
SP45	4	2/27/2019	130	ND	ND	ND	ND	ND	ND
SP46	4	2/28/2019	460	ND	ND	ND	ND	ND	ND
SP47	4	2/28/2019	320	ND	ND	ND	ND	ND	ND
SP48	4	2/28/2019	670	ND	ND	ND	ND	ND	ND
SP48R	4.5	3/11/2019	65	-	-	-	-	-	-
SP49	4	2/28/2019	390	ND	ND	ND	ND	ND	ND
SP50	4	2/28/2019	350	ND	ND	ND	ND	ND	ND
SP51	4	2/28/2019	350	ND	ND	ND	ND	ND	ND
SP52	4	2/28/2019	120	ND	ND	ND	ND	ND	ND
SP53	4	2/28/2019	290	ND	ND	ND	ND	ND	ND
SP54	4	2/28/2019	130	ND	ND	ND	ND	ND	ND

	WPX Energy Permian, LLC LVP SWD #001			Sample Results - Hall Environmental Analysis Laboratory							
Exca	vation F	ootprint		Reported in mg/kg							
NMOCD	NM OCD Table 1 Thresholds (GW <50')			600 10 50 100							
Sample ID	Depth (ft)	Sampling Date	Chloride	Benzene	BTEX	GRO	DRO	MRO	Total TPH		
SP55	4	2/28/2019	220	ND	ND	ND	ND	ND	ND		
SP56	4	2/28/2019	230	ND	ND	ND	ND	ND	ND		
SP57	4	2/28/2019	330	ND	ND	ND	ND	ND	ND		
SP58	4	2/28/2019	410	ND	ND	ND	ND	ND	ND		
SP59	4	2/28/2019	290	ND	ND	ND	ND	ND	ND		
SP60	4	2/28/2019	180	ND	ND	ND	ND	ND	ND		
SP61	4	2/28/2019	260	ND	ND	ND	ND	ND	ND		
SP62	4	2/28/2019	240	ND	ND	ND	ND	ND	ND		
SP63	4	2/28/2019	88	ND	ND	ND	ND	ND	ND		
SP64	4	2/28/2019	310	ND	ND	ND	ND	ND	ND		
SP65	4	2/28/2019	270	ND	ND	ND	ND	ND	ND		
SP66	4	2/28/2019	220	ND	ND	ND	ND	ND	ND		
SP67	4	2/28/2019	370	ND	ND	ND	ND	ND	ND		
SP68	4	2/28/2019	320	ND	ND	ND	ND	ND	ND		
SP69	4	2/28/2019	320	ND	ND	ND	ND	ND	ND		
SP70	4	2/28/2019	280	ND	ND	ND	ND	ND	ND		
SP71	4	2/28/2019	230	ND	ND	ND	ND	ND	ND		
SP72	4	2/28/2019	300	ND	ND	ND	ND	ND	ND		
SP73	4	2/28/2019	110	ND	ND	ND	ND	ND	ND		
SP74	4	2/28/2019	180	ND	ND	ND	ND	ND	ND		
SP75	4	2/28/2019	ND	ND	ND	ND	ND	ND	ND		
SP76	4	2/28/2019	ND	ND	ND	ND	ND	ND	ND		
SP77	4	2/28/2019	69	ND	ND	ND	ND	ND	ND		
SP78	4	2/28/2019	200	ND	ND	ND	ND	ND	ND		
SP79	4	2/28/2019	ND	ND	ND	ND	ND	ND	ND		
SP80	4	2/28/2019	150	ND	ND	ND	ND	ND	ND		
SP81	4	2/28/2019	310	ND	ND	ND	ND	ND	ND		
SP82	4	2/28/2019	ND	ND	ND	ND	ND	ND	ND		
SP83	4	2/28/2019	700	ND	ND	ND	ND	ND	ND		
SP83R	4	3/11/2019	82	-	-	-	-				

	ergy Pe	ermian, LLC #001	Sample Results - Hall Environmental Analysis Laboratory									
Exca	vation F	ootprint		Reported in mg/kg								
NM OCD	Table 1 (GW <5	. Thresholds 50')	600	600 10 50 100								
Sample ID	Depth (ft)	Sampling Date	Chloride	Benzene	BTEX	GRO	DRO	MRO	Total TPH			
SP84	4	2/28/2019	110	ND	ND	ND	ND	ND	ND			
SP85	4	2/28/2019	210	ND	ND	ND	ND	ND	ND			
SP86	4	2/28/2019	120	ND	ND	ND	ND	ND	ND			
SP87	4	2/28/2019	250	ND	ND	ND	ND	ND	ND			
SP88	4	2/28/2019	280	ND	ND	ND	ND	ND	ND			
SP89	4	2/28/2019	260	ND	ND	ND	ND	ND	ND			
SP90	4	2/28/2019	450	ND	ND	ND	ND	ND	ND			
SP91	4	2/28/2019	320	ND	ND	ND	ND	ND	ND			
SP92	4	2/28/2019	320	ND	ND	ND	ND	ND	181			
SP92R	4.5	3/11/2019	-	-	-	-	ND	ND	ND			
SP93	4	2/28/2019	290	ND	ND	ND	ND	ND	ND			
SP94	4	2/28/2019	360	ND	ND	ND	ND	ND	ND			
SP95	4	2/28/2019	330	ND	ND	ND	ND	ND	ND			
SP96	4	2/28/2019	430	ND	ND	ND	ND	ND	ND			
SP97	4	2/28/2019	390	ND	ND	ND	ND	ND	ND			
SP98	4	2/28/2019	390	ND	ND	ND	ND	ND	ND			
SP99	4	2/28/2019	1300	ND	ND	ND	ND	ND	ND			
SP99R	4.5	3/11/2019	170	-	-	-	-	-	-			
SP100	4	2/28/2019	320	ND	ND	ND	ND	ND	ND			
SP101	4	2/28/2019	690	ND	ND	ND	ND	ND	ND			
SP101R	4.5	3/11/2019	61	-	-	-	-	-	-			
SP102	4	2/28/2019	460	ND	ND	ND	ND	ND	ND			
SP103	4	2/28/2019	130	ND	ND	ND	ND	ND	ND			
SP104	4	2/28/2019	240	ND	ND	ND	ND	ND	ND			
SP105	4	2/28/2019	300	ND	ND	ND	ND	ND	ND			
SP106	4	2/28/2019	280	ND	ND	ND	ND	ND	ND			
SP107	4	2/28/2019	330	ND	ND	ND	ND	ND	ND			
SP108	4	2/28/2019	230	ND	ND	ND	ND	ND	ND			
SP109	4	2/28/2019	270	ND	ND	ND	ND	ND	ND			
SP110	4	2/28/2019	260	ND	ND	ND	ND	ND	ND			

	ergy Pe	rmian, LLC #001	San	nple Resul	ts - Hall E	nvironmer	ntal Analys	sis Labora	tory
Excav	ation F	ootprint						Repo	rted in mg/kg
	Table 1 (GW <5	Thresholds 0')	600	10	50		100		
Sample ID	Depth (ft)	Sampling Date	Chloride	Benzene	BTEX	GRO	DRO	MRO	Total TPH
SP111	4	2/28/2019	290	ND	ND	ND	ND	ND	ND
SP112	4	2/28/2019	270	ND	ND	ND	ND	ND	ND
SP113	4	2/28/2019	340	ND	ND	ND	ND	ND	ND
SP114	4	2/28/2019	390	ND	ND	ND	ND	ND	ND
SP115	4	2/28/2019	310	ND	ND	ND	ND	ND	ND
SP116	4	2/28/2019	300	ND	ND	ND	ND	ND	ND
SP117	4	2/28/2019	170	ND	ND	ND	ND	ND	ND
SP118	4	2/28/2019	300	ND	ND	ND	ND	ND	ND
SP119	4	2/28/2019	480	ND	ND	ND	ND	ND	ND
SP120	4	2/28/2019	590	ND	ND	ND	ND	ND	ND
SP121	4	2/28/2019	290	ND	ND	ND	ND	ND	ND
SP122	4	2/28/2019	440	ND	ND	ND	ND	ND	ND
SP123	4	2/28/2019	230	ND	ND	ND	ND	ND	ND
SP124	5	4/2/2019	190	ND	ND	ND	ND	ND	ND
SP125	5	4/2/2019	170	ND	ND	ND	ND	ND	ND
SP126	5	4/2/2019	280	ND	ND	ND	ND	ND	ND
SP127	5	4/2/2019	200	ND	ND	ND	ND	ND	ND
SP128	5	4/2/2019	130	ND	ND	ND	ND	ND	ND
SP129	5	4/2/2019	150	ND	ND	ND	ND	ND	ND
SP130	5	4/2/2019	240	ND	ND	ND	ND	ND	ND
SP131	5	4/2/2019	220	ND	ND	ND	ND	ND	ND
SP132	5	4/2/2019	130	ND	ND	ND	ND	ND	ND
SP133	5	4/2/2019	190	ND	ND	ND	ND	ND	ND
SP134	5	4/2/2019	120	ND	ND	ND	ND	ND	ND
SP135	5	4/2/2019	150	ND	ND	ND	ND	ND	ND
SP136	5	4/2/2019	160	ND	ND	ND	ND	ND	ND
SP137	5	4/2/2019	180	ND	ND	ND	ND	ND	ND
SP138	5	4/2/2019	210	ND	ND	ND	ND	ND	ND
SP139	5	4/2/2019	220	ND	ND	ND	ND	ND	ND
SP140	5	4/2/2019	170	ND	ND	ND	ND	ND	ND
SP141	5	4/2/2019	130	ND	ND	ND	ND	ND	ND
SP142	5	4/2/2019	150	ND	ND	ND	ND	ND	ND
SP143	5	4/2/2019	270	ND	ND	ND	ND	ND	ND

	ergy Pe P SWD	rmian, LLC #001	San	nple Resul	ts - Hall E	nvironmer	ntal Analys	sis Labora	itory
Excav	ation F	ootprint						Repo	rted in mg/kg
	Table 1 (GW <5	Thresholds 0')	600	600 10 50 100					
Sample ID	Depth (ft)	Sampling Date	Chloride	Benzene	BTEX	GRO	DRO	MRO	Total TPH
SP144	5	4/2/2019	150	ND	ND	ND	ND	ND	ND
SP145	5	4/2/2019	73	ND	ND	ND	ND	ND	ND
SP146	5	4/2/2019	180	ND	ND	ND	ND	ND	ND
SP147	5	4/2/2019	180	ND	ND	ND	ND	ND	ND
SP148	5	4/2/2019	150	ND	ND	ND	ND	ND	ND
SP149	5	4/2/2019	200	ND	ND	ND	ND	ND	ND
SP150	5	4/2/2019	220	ND	ND	ND	ND	ND	ND
SP151	5	4/2/2019	90	ND	ND	ND	ND	ND	ND
SP152	5	4/2/2019	130	ND	ND	ND	ND	ND	ND
SP153	5	4/2/2019	190	ND	ND	ND	ND	ND	ND
SP154	5	4/2/2019	190	ND	ND	ND	ND	ND	ND
SP155	5	4/2/2019	150	ND	ND	ND	ND	ND	ND
SP156	5	4/2/2019	120	ND	ND	ND	ND	ND	ND
SP157	5	4/2/2019	130	ND	ND	ND	ND	ND	ND
SP158	5	4/2/2019	140	ND	ND	ND	ND	ND	ND
SP159	5	4/2/2019	160	ND	ND	ND	ND	ND	ND
SP160	5	4/2/2019	160	ND	ND	ND	ND	ND	ND
SP161	5	4/2/2019	150	ND	ND	ND	ND	ND	ND
SP162	5	4/2/2019	150	ND	ND	ND	ND	ND	ND
SP163	5	4/2/2019	230	ND	ND	ND	ND	ND	ND
SP164	5	4/2/2019	310	ND	ND	ND	ND	ND	ND
SP165	5	4/3/2019	180	ND	ND	ND	ND	ND	ND
SP166	5	4/3/2019	250	ND	ND	ND	ND	ND	ND
SP167	5	4/3/2019	250	ND	ND	ND	ND	ND	ND
SP168	5	4/3/2019	210	ND	ND	ND	ND	ND	ND
SP169	5	4/3/2019	230	ND	ND	ND	ND	ND	ND
SP170	5	4/3/2019	200	ND	ND	ND	ND	ND	ND
SP171	5	4/3/2019	190	ND	ND	ND	ND	ND	ND
SP172	5	4/3/2019	180	ND	ND	ND	ND	ND	ND
SP173	5	4/3/2019	210	ND	ND	ND	ND	ND	ND
SP174	5	4/3/2019	230	ND	ND	ND	ND	ND	ND
SP175	5	4/3/2019	300	ND	ND	ND	ND	ND	ND
SP176	5	4/3/2019	240	ND	ND	ND	ND	ND	ND
SP177	5	4/3/2019	230	ND	ND	ND	ND	ND	ND

WPX Energy Permian, LLC LVP SWD #001			San	nple Resul	ts - Hall E	nvironmer	ntal Analy:	sis Labora	itory
Excav	ation F	ootprint						Repo	orted in mg/kg
	Table 1 (GW <5	Thresholds 0')	600	10	50	100			
Sample ID	Depth (ft)	Sampling Date	Chloride	Benzene	BTEX	GRO	DRO	MRO	Total TPH
SP178	5	4/3/2019	260	ND	ND	ND	ND	ND	ND
SP179	5	4/3/2019	270	ND	ND	ND	ND	ND	ND
SP180	5	4/3/2019	150	ND	ND	ND	ND	ND	ND
SP181	5	4/3/2019	330	ND	ND	ND	ND	ND	ND
SP182	5	4/3/2019	240	ND	ND	ND	ND	ND	ND
SP183	5	4/3/2019	240	ND	ND	ND	ND	ND	ND
SP184	5	4/3/2019	170	ND	ND	ND	ND	ND	ND
SP185	5	4/3/2019	220	ND	ND	ND	ND	ND	ND
SP186	5	4/3/2019	170	ND	ND	ND	ND	ND	ND
SP187	5	4/3/2019	220	ND	ND	ND	ND	ND	ND
SP188	5	4/3/2019	180	ND	ND	ND	ND	ND	ND
SP189	5	4/3/2019	150	ND	ND	ND	ND	ND	ND
SP190	5	4/3/2019	120	ND	ND	ND	ND	ND	ND
SP191	5	4/3/2019	190	ND	ND	ND	ND	ND	ND
SP192	5	4/3/2019	120	ND	ND	ND	ND	ND	ND
SP193	5	4/3/2019	220	ND	ND	ND	ND	ND	ND
SP194	5	4/3/2019	150	ND	ND	ND	ND	ND	ND
SP195	5	4/3/2019	220	ND	ND	ND	ND	ND	ND
SP196	5	4/3/2019	110	ND	ND	ND	ND	ND	ND
SP197	5	4/3/2019	150	ND	ND	ND	ND	ND	ND
SP198	5	4/3/2019	160	ND	ND	ND	ND	ND	ND
SP199	5	4/3/2019	210	ND	ND	ND	ND	ND	ND
SP200	5	4/3/2019	150	ND	ND	ND	ND	ND	ND
SP201	5	4/3/2019	160	ND	ND	ND	ND	ND	ND
SP202	5	4/3/2019	140	ND	ND	ND	ND	ND	ND
SP203	5	4/3/2019	220	ND	ND	ND	ND	ND	ND
SP204	5	4/3/2019	200	ND	ND	ND	ND	ND	ND
SP205	5	4/3/2019	210	ND	ND	ND	ND	ND	ND
SP206	5	4/3/2019	240	ND	ND	ND	ND	ND	ND
SP207	5	4/3/2019	180	ND	ND	ND	ND	ND	ND
SP208	5	4/3/2019	200	ND	ND	ND	ND	ND	ND
SP209	5	4/3/2019	210	ND	ND	ND	ND	ND	ND
SP210	5	4/3/2019	270	ND	ND	ND	ND	ND	ND
SP211	5	4/3/2019	180	ND	ND	ND	ND	ND	ND

WPX Energy Permian, LLC LVP SWD #001			San	nple Resul	ts - Hall E	nvironmer	ntal Analys	sis Labora	itory	
Excav	ation F	ootprint						Repo	rted in mg/kg	
	Table 1 (GW <50	Thresholds 0')	600	10	50		10	00		
Sample ID	Depth (ft)	Sampling Date	Chloride	Benzene	BTEX	GRO	DRO	MRO	Total TPH	
SP212	5	4/3/2019	190	ND	ND	ND	ND	ND	ND	
SP213	5	4/3/2019	130	ND	ND	ND	ND	ND	ND	
SP214	5	4/3/2019	210	ND	ND	ND	ND	ND	ND	
SP215	5	4/3/2019	190	ND	ND	ND	ND	ND	ND	
SP216	5	4/3/2019	200	ND	ND	ND	ND	ND	ND	
SP217	5	4/3/2019	110	ND	ND	ND	ND	ND	ND	
SP218	5	4/3/2019	180	ND	ND	ND	ND	ND	ND	
SP219	5	4/3/2019	200	ND	ND	ND	ND	ND	ND	
SP220	5	4/3/2019	210	ND	ND	ND	ND	ND	ND	
SP221	5	4/3/2019	240	ND	ND	ND	ND	ND	ND	
SP222	5	4/3/2019	170	ND	ND	ND	ND	ND	ND	
SP223	5	4/3/2019	190	ND	ND	ND	ND	ND	ND	
SP224	5	4/3/2019	160	ND	ND	ND	ND	ND	ND	
SP225	5	4/3/2019	220	ND	ND	ND	ND	ND	ND	
SP226	5	4/3/2019	180	ND	ND	ND	ND	ND	ND	
SP227	5	4/3/2019	180	ND	ND	ND	ND	ND	ND	
SP228	5	4/3/2019	200	ND	ND	ND	ND	ND	ND	
SP229	5	4/3/2019	230	ND	ND	ND	ND	ND	ND	
SP230	5	4/3/2019	260	ND	ND	ND	ND	ND	ND	
SP231	5	4/3/2019	210	ND	ND	ND	ND	ND	ND	
SP232	5	4/3/2019	91	ND	ND	ND	ND	ND	ND	
SP233	5	4/3/2019	433	ND	ND	ND	ND	ND	ND	
SP234	5	4/3/2019	170	ND	ND	ND	ND	ND	ND	
SP235	5	4/3/2019	130	ND	ND	ND	ND	ND	ND	
SP236	5	4/3/2019	110	ND	ND	ND	ND	ND	ND	
SP237	5	4/3/2019	260	ND	ND	ND	ND	ND	ND	
SP238	5	4/3/2019	160	ND	ND	ND	ND	ND	ND	
SP239	5	4/3/2019	210	ND	ND	ND	ND	ND	ND	
SP240	5	4/3/2019	230	ND	ND	ND	ND	ND	ND	
SP241	5	4/3/2019	260	ND	ND	ND	ND	ND	ND	
SP242	5	4/3/2019	160	ND	ND	ND	ND	ND	ND	
SP243	5	4/3/2019	120	ND	ND	ND	ND	ND	ND	
SP244	5	4/3/2019	120	ND	ND	ND	ND	ND	ND	

	WPX Energy Permian, LLC LVP SWD #001			Sample Results - Hall Environmental Analysis Laboratory							
Excav	ation F	ootprint						Repo	rted in mg/kg		
	NM OCD Table 1 Thresholds (GW <50')			10	50		100				
Sample ID	Depth (ft)	Sampling Date	Chloride	Benzene	BTEX	GRO	DRO	MRO	Total TPH		
SP244	5	4/3/2019	120	ND	ND	ND	ND	ND	ND		
SP245	5	4/3/2019	81	ND	ND	ND	ND	ND	ND		
SP246	5	4/3/2019	190	ND	ND	ND	ND	ND	ND		
SP247	5	4/3/2019	120	ND	ND	ND	ND	ND	ND		
SP248	5	4/3/2019	74	ND	ND	ND	ND	ND	ND		
SP249	5	4/3/2019	150	ND	ND	ND	ND	ND	ND		
SP250	5	4/3/2019	220	ND	ND	ND	ND	ND	ND		
SP251	5	4/3/2019	180	ND	ND	ND	ND	ND	ND		
SP252	5	4/3/2019	110	ND	ND	ND	ND	ND	ND		
SP253	5	4/3/2019	190	ND	ND	ND	ND	ND	ND		
SP254	5	4/3/2019	170	ND	ND	ND	ND	ND	ND		
SP255	5	4/3/2019	120	ND	ND	ND	ND	ND	ND		
SP256	5	4/3/2019	130	ND	ND	ND	ND	ND	ND		
SP257	5	4/3/2019	130	ND	ND	ND	ND	ND	ND		
SP258	5	4/3/2019	170	ND	ND	ND	ND	ND	ND		
SP259	5	4/3/2019	250	ND	ND	ND	ND	ND	ND		
SP260	5	4/3/2019	310	ND	ND	ND	ND	ND	ND		
SP261	5	4/3/2019	200	ND	ND	ND	ND	ND	ND		
SP262	5	4/3/2019	200	ND	ND	ND	ND	ND	ND		
SP263	5	4/3/2019	180	ND	ND	ND	ND	ND	ND		
SP264	5	4/3/2019	280	ND	ND	ND	ND	ND	ND		
SP265	5	4/3/2019	150	ND	ND	ND	ND	ND	ND		
SP266	5	4/3/2019	280	ND	ND	ND	ND	ND	ND		
SP267	5	4/3/2019	94	ND	ND	ND	ND	ND	ND		
SP268	5	4/3/2019	200	ND	ND	ND	ND	ND	ND		
SP269	5	4/3/2019	230	ND	ND	ND	ND	ND	ND		
SP270	5	4/3/2019	220	ND	ND	ND	ND	ND	ND		
SP271	5	4/3/2019	260	ND	ND	ND	ND	ND	ND		
SP272	5	4/3/2019	160	ND	ND	ND	ND	ND	ND		
SP273	5	4/3/2019	200	ND	ND	ND	ND	ND	ND		

	ergy Pe	rmian, LLC #001	Sample Results - Hall Environmental Analysis Laboratory								
Excav	ation F	ootprint		Reported in mg/							
	Table 1 (GW <5	Thresholds 0')	600	10	50	100					
Sample ID	Depth (ft)	Sampling Date	Chloride	Benzene	BTEX	GRO	DRO	MRO	Total TPH		
SP274	5	4/3/2019	120	ND	ND	ND	ND	ND	ND		
SP275	5	4/3/2019	ND	ND	ND	ND	ND	ND	ND		
SP276	5	4/3/2019	260	ND	ND	ND	ND	ND	ND		
SP277	5	4/3/2019	210	ND	ND	ND	ND	ND	ND		
SP278	5	4/3/2019	170	ND	ND	ND	ND	ND	ND		
SP279	5	4/3/2019	86	ND	ND	ND	ND	ND	ND		
SP280	5	4/3/2019	120	ND	ND	ND	ND	ND	ND		
SP281	5	4/3/2019	140	ND	ND	ND	ND	ND	ND		
SP282	5	4/3/2019	210	ND	ND	ND	ND	ND	ND		
SP283	5	4/3/2019	220	ND	ND	ND	ND	ND	ND		
SP284	5	4/3/2019	150	ND	ND	ND	ND	ND	ND		
SP285	5	4/3/2019	170	ND	ND	ND	ND	ND	ND		
SP286	5	4/3/2019	140	ND	ND	ND	ND	ND	ND		
SP287	5	4/3/2019	ND	ND	ND	ND	ND	ND	ND		
SP288	5	4/3/2019	180	ND	ND	ND	ND	ND	ND		
SP289	5	4/3/2019	ND	ND	ND	ND	ND	ND	ND		
SP290	5	4/3/2019	130	ND	ND	ND	ND	ND	ND		
SP291	5	4/3/2019	280	ND	ND	ND	ND	ND	ND		
SP292	5	4/3/2019	230	ND	ND	ND	ND	ND	ND		
SP293	5	4/3/2019	290	ND	ND	ND	ND	ND	ND		
SP294	5	4/3/2019	ND	ND	ND	ND	ND	ND	ND		
SP295	5	4/3/2019	180	ND	ND	ND	ND	ND	ND		
SP296	5	4/3/2019	ND	ND	ND	ND	ND	ND	ND		
SP297	5	4/3/2019	ND	ND	ND	ND	ND	ND	ND		
SP298	5	4/3/2019	230	ND	ND	ND	ND	ND	ND		
SP299	5	4/3/2019	ND	ND	ND	ND	ND	ND	ND		
SP300	5	4/3/2019	150	ND	ND	ND	ND	ND	ND		
SP301	5	4/3/2019	130	ND	ND	ND	ND	ND	ND		
SP302	5	4/3/2019	240	ND	ND	ND	ND	ND	ND		

WPX Energy Permian, LLC LVP SWD #001			Sample Results - Hall Environmental Analysis Laboratory								
Excav	ation F	ootprint						Repo	orted in mg/kg		
	Table 1 (GW <50	Thresholds D')	600	10	50	100					
Sample ID	Depth (ft)	Sampling Date	Chloride	Benzene	BTEX	GRO	DRO	MRO	Total TPH		
SP303	5	4/3/2019	85	ND	ND	ND	ND	ND	ND		
SP304	5	4/3/2019	170	ND	ND	ND	ND	ND	ND		
SP305	5	4/3/2019	ND	ND	ND	ND	ND	ND	ND		
SP306	5	4/3/2019	110	ND	ND	ND	19.0	ND	19.0		
SP307	5	4/3/2019	89	ND	ND	ND	ND	ND	ND		
SP308	5	4/3/2019	140	ND	ND	ND	ND	ND	ND		
SP309	5	4/3/2019	120	ND	ND	ND	ND	ND	ND		
SP310	5	4/3/2019	130	ND	ND	ND	ND	ND	ND		
SP311	5	4/3/2019	310	ND	ND	ND	ND	ND	ND		
SP312	5	4/3/2019	100	ND	ND	ND	ND	ND	ND		
SP313	5	4/3/2019	140	ND	ND	ND	ND	ND	ND		
SP314	5	4/3/2019	220	ND	ND	ND	ND	ND	ND		
SP315	5	4/3/2019	ND	ND	ND	ND	ND	ND	ND		
SP316	5	4/3/2019	120	ND	ND	ND	ND	ND	ND		
SP317	5	4/3/2019	120	ND	ND	ND	ND	ND	ND		
SP318	5	4/3/2019	200	ND	ND	ND	ND	ND	ND		
SP319	5	4/3/2019	130	ND	ND	ND	ND	ND	ND		
SP320	5	4/3/2019	140	ND	ND	ND	ND	ND	ND		
SP321	5	4/3/2019	190	ND	ND	ND	ND	ND	ND		
SP322	5	4/3/2019	120	ND	ND	ND	ND	ND	ND		
SP323	5	4/3/2019	240	ND	ND	ND	ND	ND	ND		
SP324	5	4/3/2019	190	ND	ND	ND	ND	ND	ND		
SP325	5	4/3/2019	280	ND	ND	ND	ND	ND	ND		
SP326	5	4/3/2019	210	ND	ND	ND	ND	ND	ND		
SP327	5	4/3/2019	280	ND	ND	ND	ND	ND	ND		
SP328	5	4/3/2019	170	ND	ND	ND	ND	ND	ND		
SP329	5	4/3/2019	88	ND	ND	ND	ND	ND	ND		
SP330	5	4/3/2019	100	ND	ND	ND	ND	ND	ND		
SP331	5	4/3/2019	130	ND	ND	ND	ND	ND	ND		
SP332	5	4/3/2019	180	ND	ND	ND	ND	ND	ND		
SP333	5	4/3/2019	220	ND	ND	ND	ND	ND	ND		

	nergy Perr /P SWD #0		Sample Results - Hall Environmental Analysis Laboratory								
	vation Fo							Repo	orted in mg/kg		
NM OCD	Table 1Tl		600	10	50		10	00			
Cample	(GW <50'										
Sample ID	Depth (ft)	Sampling Date	Chloride	Benzene	BTEX	GRO	DRO	MRO	Total TPH		
SP334	5	4/3/2019	250	ND	ND	ND	ND	ND	ND		
SP335	5	4/3/2019	150	ND	ND	ND	ND	ND	ND		
SP336	5	4/3/2019	280	ND	ND	ND	ND	ND	ND		
SP337	5	4/3/2019	130	ND	ND	ND	ND	ND	ND		
SP338	5	4/3/2019	190	ND	ND	ND	ND	ND	ND		
SP339	5	4/3/2019	150	ND	ND	ND	ND	ND	ND		
SP340	5	4/3/2019	220	ND	ND	ND	ND	ND	ND		
SP341	5	4/3/2019	120	ND	ND	ND	ND	ND	ND		
SP342	5	6/26/2019	260	ND	ND	ND	ND	ND	ND		
SP343	5	6/26/2019	220	ND	ND	ND	ND	ND	ND		
SP344	5	6/26/2019	810	ND	ND	ND	ND	ND	ND		
	5.5	7/17/2019	160								
SP345	5	6/26/2019	400	ND	ND	ND	ND	ND	ND		
SP346	5	6/26/2019	230	ND	ND	ND	ND	ND	ND		
SP347	5	6/26/2019	250	ND	ND	ND	ND	ND	ND		
SP348	5	6/26/2019	120	ND	ND	ND	ND	ND	ND		
SP349	5	6/26/2019	220	ND	ND	ND	ND	ND	ND		
SP350	5	6/26/2019	250	ND	ND	ND	ND	ND	ND		
SP351	5	6/26/2019	330	ND	ND	ND	ND	ND	ND		
SP352	5	6/26/2019	240	ND	ND	ND	ND	ND	ND		
SP353	5	6/26/2019	170	ND	ND	ND	ND	ND	ND		
SP354	5	6/26/2019	240	ND	ND	ND	ND	ND	ND		
SP355	5	6/26/2019	880	ND	ND	ND	ND	ND	ND		
	5.5	7/17/2019	230								
SP356	5	6/26/2019	150	ND	ND	ND	ND	ND	ND		
SP357	5	6/26/2019	200	ND	ND	ND	ND	ND	ND		
SP358	5	6/26/2019	210	ND	ND	ND	ND	ND	ND		
SP359	5	6/26/2019	260	ND	ND	ND	ND	ND	ND		
SP360	5	6/26/2019	220	ND	ND	ND	ND	ND	ND		
SP361	5	6/26/2019	120	ND	ND	ND	ND	ND	ND		
SP362	5	6/26/2019	180	ND	ND	ND	ND	ND	ND		
SP363	5	6/26/2019	99	ND	ND	ND	ND	ND	ND		
SP364	5	6/26/2019	180	ND	ND	ND	ND	ND	ND		
SP365	5	6/26/2019	190	ND	ND	ND	ND	ND	ND		
SP366	5	6/26/2019	140	ND	ND	ND	ND	ND	ND		

WPX Energy Permian, LLC LVP SWD #001			Sample Results - Hall Environmental Analysis Laboratory								
Exca	vation Foo	otprint						Repo	orted in mg/kg		
NM OCD	NM OCD Table 1 Thresholds (GW <50')			10	50	100					
Sample ID	Depth (ft)	Sampling Date	Chloride	Benzene	BTEX	GRO	DRO	MRO	Total TPH		
SP367	5	6/26/2019	160	ND	ND	ND	ND	ND	ND		
SP368	5	6/26/2019	180	ND	ND	ND	ND	ND	ND		
SP369	5	6/26/2019	170	ND	ND	ND	ND	ND	ND		
SP370	5	6/26/2019	200	ND	ND	ND	ND	ND	ND		
SP371	5	6/26/2019	240	ND	ND	ND	ND	ND	ND		
SP372	5	6/26/2019	230	ND	ND	ND	ND	ND	ND		
SP373	5	6/26/2019	170	ND	ND	ND	ND	ND	ND		
SP374	5	6/26/2019	200	ND	ND	ND	ND	ND	ND		
SP375	5	6/26/2019	210	ND	ND	ND	ND	ND	ND		
SP376	5	6/26/2019	300	ND	ND	ND	ND	ND	ND		
SP377	5	6/26/2019	150	ND	ND	ND	ND	ND	ND		
SP378	5	6/26/2019	370	ND	ND	ND	ND	ND	ND		
SP379	5	6/26/2019	280	ND	ND	ND	ND	ND	ND		
SP380	5	6/26/2019	290	ND	ND	ND	ND	ND	ND		
SP381	5	6/26/2019	240	ND	ND	ND	ND	ND	ND		
SP382	5	6/26/2019	270	ND	ND	ND	ND	ND	ND		
SP383	5	6/26/2019	310	ND	ND	ND	ND	ND	ND		
SP384	5	6/26/2019	290	ND	ND	ND	ND	ND	ND		
SP385	5	6/26/2019	270	ND	ND	ND	ND	ND	ND		
SP386	5	6/26/2019	260	ND	ND	ND	ND	ND	ND		
SP387	5	6/26/2019	310	ND	ND	ND	ND	ND	ND		
SP388	5	6/26/2019	260	ND	ND	ND	ND	ND	ND		
SP389	5	6/26/2019	530	ND	ND	ND	ND	ND	ND		
SP390	5	6/26/2019	330	ND	ND	ND	ND	ND	ND		
SP391	5	6/26/2019	250	ND	ND	ND	ND	ND	ND		
SP392	5	6/26/2019	300	ND	ND	ND	ND	ND	ND		
SP393	5	6/26/2019	310	ND	ND	ND	ND	ND	ND		
SP394	5	6/26/2019	230	ND	ND	ND	ND	ND	ND		
SP395	5	6/26/2019	220	ND	ND	ND	ND	ND	ND		
SP396	5	6/26/2019	290	ND	ND	ND	ND	ND	ND		
SP397	5	6/26/2019	270	ND	ND	ND	ND	ND	ND		

	nergy Perr /P SWD #6	-	Sample Results - Hall Environmental Analysis Laboratory								
Exca	vation Fo	otprint						Repo	orted in mg/kg		
NM OCE	NM OCD Table 1 Thresholds (GW <50')			10	50		10	00	0		
Sample ID	Depth (ft)	Sampling Date	Chloride	ride Benzene BTEX GRO DRO		MRO	Total TPH				
SP398	5	6/26/2019	280	ND	ND	ND	ND	ND	ND		
SP399	5	6/26/2019	230	ND	ND	ND	ND	ND	ND		
SP400	5	6/26/2019	310	ND	ND	ND	ND	ND	ND		
SP401	5	6/26/2019	410	ND	ND	ND	ND	ND	ND		
SP402	5	6/27/2019	180	ND	ND	ND	ND	ND	ND		
SP403	5	6/27/2019	310	ND	ND	ND	ND	ND	ND		
SP404	5	6/27/2019	340	ND	ND	ND	ND	ND	ND		
SP405	5	7/2/2019	280	ND	ND	ND	ND	ND	ND		
SP406	5	6/27/2019	260	ND	ND	ND	ND	ND	ND		
SP407	5	6/27/2019	280	ND	ND	ND	ND	ND	ND		
SP408	5	6/27/2019	280	ND	ND	ND	ND	ND	ND		
SP409	5	7/2/2019	190	ND	ND	ND	ND	ND	ND		
SP410	5	6/27/2019	210	ND	ND	ND	ND	ND	ND		
SP411	5	7/2/2019	190	ND	ND	ND	ND	ND	ND		
SP412	5	6/27/2019	240	ND	ND	ND	ND	ND	ND		
SP413	5	6/27/2019	140	ND	ND	ND	ND	ND	ND		
SP414	5	6/27/2019	150	ND	ND	ND	ND	ND	ND		
SP415	5	6/27/2019	150	ND	ND	ND	ND	ND	ND		
SP416	5	7/2/2019	190	ND	ND	ND	ND	ND	ND		
SP417	5	6/27/2019	200	ND	ND	ND	ND	ND	ND		
SP418	5	6/27/2019	260	ND	ND	ND	ND	ND	ND		
SP419	5	6/27/2019	280	ND	ND	ND	ND	ND	ND		
SP420	5	6/27/2019	310	ND	ND	ND	ND	ND	ND		
SP421	5	7/2/2019	170	ND	ND	ND	ND	ND	ND		
SP422	5	7/2/2019	180	ND	ND	ND	ND	ND	ND		
SP423	5	6/27/2019	340	ND	ND	ND	ND	ND	ND		
SP424	5	6/27/2019	150	ND	ND	ND	ND	ND	ND		
SP425	5	6/27/2019	160	ND	ND	ND	ND	ND	ND		
SP426	5	6/27/2019	270	ND	ND	ND	ND	ND	ND		
SP427	5	6/27/2019	290	ND	ND	ND	ND	ND	ND		
SP428	5	6/27/2019	290	ND	ND	ND	ND	ND	ND		
SP429	5	7/2/2019	190	ND	ND	ND	ND	ND	ND		

WPX Energy Permian, LLC LVP SWD #001			Sample Results - Hall Environmental Analysis Laboratory								
Exca	vation Fo	otprint						Repo	orted in mg/kg		
NM OCE	NM OCD Table 1 Thresholds (GW <50')			10	50		100				
Sample ID	Depth (ft)	Sampling Date	Chloride	Benzene	BTEX	GRO	DRO	MRO	Total TPH		
SP430	5	6/27/2019	350	ND	ND	ND	ND	ND	ND		
SP431	5	7/2/2019	210	ND	ND	ND	ND	ND	ND		
SP432	5	6/27/2019	180	ND	ND	ND	ND	ND	ND		
SP433	5	7/2/2019	210	ND	ND	ND	ND	ND	ND		
SP434	5	7/2/2019	170	ND	ND	ND	ND	ND	ND		
SP435	5	6/27/2019	250	ND	ND	ND	ND	ND	ND		
SP436	5	7/2/2019	190	ND	ND	ND	ND	ND	ND		
SP437	5	6/27/2019	170	ND	ND	ND	ND	ND	ND		
SP438	5	6/27/2019	360	ND	ND	ND	ND	ND	ND		
SP439	5	7/2/2019	280	ND	ND	ND	ND	ND	ND		
SP440	5	6/27/2019	210	ND	ND	ND	ND	ND	ND		
SP441	5	6/27/2019	270	ND	ND	ND	ND	ND	ND		
SP442	5	6/27/2019	260	ND	ND	ND	ND	ND	ND		
SP443	5	7/2/2019	190	ND	ND	ND	ND	ND	ND		
SP444	5	6/27/2019	200	ND	ND	ND	ND	ND	ND		
SP445	5	6/27/2019	320	ND	ND	ND	ND	ND	ND		
SP446	5	6/27/2019	260	ND	ND	ND	ND	ND	ND		
SP447	5	6/27/2019	270	ND	ND	ND	ND	ND	ND		
SP448	5	7/2/2019	200	ND	ND	ND	ND	ND	ND		
SP449	5	7/2/2019	210	ND	ND	ND	ND	ND	ND		
SP450	5	6/27/2019	240	ND	ND	ND	ND	ND	ND		
SP451	5	6/27/2019	260	ND	ND	ND	ND	ND	ND		
SP452	5	6/27/2019	230	ND	ND	ND	ND	ND	ND		
SP453	5	6/27/2019	330	ND	ND	ND	ND	ND	ND		
SP454	5	6/27/2019	260	ND	ND	ND	ND	ND	ND		
SP455	5	6/27/2019	200	ND	ND	ND	ND	ND	ND		

	nergy Permi LVP SWD #00	-	Sample Results - Hall Environmental Analysis Laboratory								
Exc	avation Side	walls						Repo	rted in mg/kg		
NM OCD	1 OCD Table 1 Thresholds (GW <50')			10	50	100					
Sample ID	Depth (ft)	Sampling Date	Chloride	Chloride Benzene BTEX GRO DRO		MRO	Total TPH				
SW1	Composite	2/28/2019	70	ND	ND	ND	ND	ND	ND		
SW2	Composite	2/28/2019	72	ND	ND	ND	ND	ND	ND		
SW3	Composite	2/28/2019	550	ND	ND	ND	ND	ND	ND		
SW4	Composite	2/28/2019	560	ND	ND	ND	ND	ND	ND		
SW5	Composite	2/28/2019	600	ND	ND	ND	ND	ND	ND		
SW6	Composite	2/28/2019	850	ND	ND	ND	ND	ND	ND		
SW6R	Composite	3/11/2019	110	-	-	-	-	-	-		
SW7	Composite	2/28/2019	570	ND	ND	ND	ND	ND	ND		
SW8	Composite	2/28/2019	ND	ND	ND	ND	ND	ND	ND		
SW9	Composite	4/3/2019	110	ND	ND	ND	ND	ND	ND		
SW10	Composite	4/3/2019	120	ND	ND	ND	ND	ND	ND		
SW11	Composite	4/3/2019	110	ND	ND	ND	ND	ND	ND		
SW12	Composite	4/3/2019	75	ND	ND	ND	ND	ND	ND		
SW13	Composite	4/3/2019	130	ND	ND	ND	ND	ND	ND		
SW14	Composite	4/3/2019	130	ND	ND	ND	ND	ND	ND		
SW15	Composite	4/3/2019	110	ND	ND	ND	ND	ND	ND		
SW16	Composite	4/3/2019	110	ND	ND	ND	ND	ND	ND		
SW17	Composite	4/3/2019	110	ND	ND	ND	ND	ND	ND		
SW18	Composite	4/3/2019	130	ND	ND	ND	ND	ND	ND		
SW19	Composite	4/3/2019	96	ND	ND	ND	ND	ND	ND		
SW20	Composite	4/3/2019	110	ND	ND	ND	ND	ND	ND		
SW21	Composite	4/3/2019	360	ND	ND	ND	ND	ND	ND		
SW22	Composite	4/3/2019	71	ND	ND	ND	ND	ND	ND		
SW23	Composite	4/3/2019	110	ND	ND	ND	ND	ND	ND		
SW24	Composite	4/3/2019	260	ND	ND	ND	ND	ND	ND		
SW25	Composite	4/3/2019	130	ND	ND	ND	ND	ND	ND		

	nergy Permi LVP SWD #0	•	Sample Results - Hall Environmental Analysis Laboratory								
Exc	avation Side	walls						Repo	orted in mg/kg		
NM OCD	Table 1 Thres <50')	sholds (GW	600	600 10 50 100							
Sample ID	Depth (ft)	Sampling Date	Chloride	Benzene	BTEX	GRO	DRO	MRO	Total TPH		
SW26	Composite	4/3/2019	380	ND	ND	ND	ND	ND	ND		
SW27	Composite	4/3/2019	120	ND	ND	ND	ND	ND	ND		
SW28	Composite	4/3/2019	130	ND	ND	ND	ND	ND	ND		
SW29	Composite	4/3/2019	93	ND	ND	ND	ND	ND	ND		
SW30	Composite	4/3/2019	110	ND	ND	ND	ND	ND	ND		
SW31	Composite	7/2/2019	180	ND	ND	ND	ND	ND	ND		
SW32	Composite	7/2/2019	120	ND	ND	ND	ND	ND	ND		
SW33	Composite	7/2/2019	240	ND	ND	ND	ND	ND	ND		
SW34	Composite	6/27/2019	220	ND	ND	ND	ND	ND	ND		
SW35	Composite	7/2/2019	160	ND	ND	ND	ND	ND	ND		
SW36	Composite	7/2/2019	140	ND	ND	ND	ND	ND	ND		
SW37	Composite	6/27/2019	230	ND	ND	ND	ND	ND	ND		
SW38	Composite	6/27/2019	210	ND	ND	ND	ND	ND	ND		
SW39	Composite	6/27/2019	710	ND	ND	ND	ND	ND	ND		
	Composite	7/17/2019	180								



Appendix A: Release Notification

<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 <u>District II</u> 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 JUL 3 0 2018

Form C-141 Revised April 3, 2017

Oil Conservation Division
1220 South St. Francis Dr.

Submit 1 Copy to appropriate District Office in 1220 South St. Francis Dr.

DISTRICT II-ARTESIA O.C.D. and 19.15.29 NMAC.

Santa Fe, NM 87505 Release Notification and Corrective Action

DABIS	72183	30791	1010	asc rounc		OPERAT			☑ Initia	l Report	П	Final Report	
Name of Co	mpany: R	KI Explorati	on and P	roduction, LLC	241228	ontact Kar	olina Blanev						
Address 531						Telephone No. 970 589 0743							
Facility Nan						Facility Type Well Pad							
									,				
Surface Owi	ner: Privat	e		Mineral O	wner: S	state			API No.	. 30-015-42	234		
					TION	ON OF RELEASE							
Unit Letter							Feet from the		est Line	County			
I	4	23S	28E	2100	FSL		385	FEL		Eddy			
			Latitude	2_32.33331684_	Lo	ngitude	104.08520874_	_ NAD	83				
				NAT	URE (OF RELI	EASE						
Type of Relea	ase: Produc	ed Water, Oil	and 15%	Hydrochloric Acid	i	Volume of	Release Unknowi	n	Volume R	ecovered 0			
Source of Rel	ease Tank	Battery				Date and H 7/18/18	our of Occurrence	e	Date and 1 7/18/18	Hour of Disc	overy		
Was Immedia	te Notice C		Yes [No □ Not Re	auired	If YES, To	Whom? Ken Mc	Queen E	MNRD Ca	binet Secret	ary		
By Whom? Je	off Wilson				1	Date and U							
Was a Watero		hed?					our 7/18/18 lume Impacting th	he Wate	FCOURSA				
was a water	ourse Reac		Yes 🛭	No		N/A	rume impacting ti	ne wate	icourse.		-		
If a Watercou N/A	If a Watercourse was Impacted, Describe Fully.* N/A												
Describe Cau The spill was				n Taken.* e fire is currently t	under in	vestigation.							
were sent to a north side of	area was ma lab for ana the pad will	apped with a a alysis. Excava I be excavated	Trimble to tion of the I when the	en.* delineate the hori impacted soil alor site is cleared of or pleted. WPX will	ng the so debris. T	outh side of t The impacted	he location will st soil will be haule	art as so d to disp	on as the li	ine locates an	re con	npleted. The	
regulations al public health should their o or the environ	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.										ndanger f liability ıman health		
	1/	1. 01					OIL CONS	SERV	ATION	DIVISIO	N		
G:	Kan	lina Blo	aney						<i>A</i> .		_		
Signature:			0					ر بنے					
Printed Name	: Karolina	Blaney				Approved by	Enviro higendi B j	pecialist	1./4 B)A	and or			
Title: Enviror	mental Spe	ecialist				Approval Dat	e: 8/10/18	F	Expiration 1	Date: //	A		
E-mail Addre	ss: Karolin	a.blaney@wp	xenergy.c	om		Conditions of	Approval:		,	Assochad			
							RODAL	LARA		Attached	か	1001	
Date: 7-30-13 Attach Addit		hone: 970 589 ets If Necess					Sel UTT	UUL	U—		17)	-4841	

Operator/Responsible Party,

The OCD has received the form C-141 you provided on ____07/30/18______ regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number <u>ARP. 4891</u> has been assigned. Please refer to this case number in all future correspondence.

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

The responsible person shall complete <u>division-approved corrective action</u> for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC. [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District _2_ office in Artesia_ on or before _08/30/18_______. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.
- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.
- Nominal detection limits for field and laboratory analyses must be provided.
- Composite sampling is not generally allowed.
- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

- •Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.
- If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.
- Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold
OCD Environmental Bureau Chief
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

505-476-3465

jim.griswold@state.nm.us



Appendix B: Confirmation Sampling Notification

From: Watson, Debbie

To: Bratcher, Mike, EMNRD; Venegas, Victoria, EMNRD; Hamlet, Robert, EMNRD; Billings, Bradford, EMNRD

Cc: Raup, Bob; Kevin Smith; Natalie Gordon

Subject: LVP SWD #1 (2RP-4891)

Date: Monday, February 25, 2019 6:56:19 AM
Attachments: LVP SWD Sampling Plan -Tank Battery.pdf

Good Morning,

This email serves as notification of confirmation sampling for a section of the LVP SWD #1 (2RP-4891). Confirmation sampling will begin on Wednesday morning, February 27, 2019 at approximately 8:00 AM. Sampling will be conducted by HRL Compliance Solutions. Sampling maps are included as an attachment to this email.

Sampling will begin in the area of the tank battery (North)-this area will be backfilled and construction of the new tank battery will begin once laboratory results reach or are reported below closure criteria. Receipt of results will be provided to NMOCD prior to backfill. WPX has crews on stand-by for construction of the new tank battery.

WPX will be submitting a variance request for sampling of the remaining portion of the pad.

Please contact me with any questions or comments.

Thank you,

Debbie

Deborah Watson Environmental Specialist 5315 Buena Vista Drive | Carlsbad, NM 88220 office 575.885.7561 | cell 505.386.9693 deborah.watson@wpxenergy.com



If you have received this message in error, please reply to advise the sender of the error and then immediately delete this message. Thank you.

From: Watson, Debbie

To: Billings, Bradford, EMNRD; Bratcher, Mike, EMNRD; Venegas, Victoria, EMNRD; Hamlet, Robert, EMNRD

Cc: Kevin Smith; Lori O"Brien

Subject: LVP SWD #1 (2RP-4891) Confirmation Sampling Notification

Date: Monday, June 24, 2019 6:10:59 AM

WPX is providing notification that a representative from HRL Compliance Solutions will be onsite Wednesday, June 26 at 8:30 AM to conduct confirmation sampling from within the final section of the excavation.

Please contact me with any questions.

Thank you,

Debbie

Deborah Watson
Environmental Specialist
5315 Buena Vista Drive | Carlsbad, NM 88220
office 575.885.7561 | cell 505.386.9693
deborah.watson@wpxenergy.com



If you have received this message in error, please reply to advise the sender of the error and then immediately delete this message. Thank you.

From: <u>Watson, Debbie</u>

To: <u>Billings, Bradford, EMNRD</u>

Cc: Bratcher, Mike, EMNRD; Venegas, Victoria, EMNRD; Hamlet, Robert, EMNRD; Watson, Debbie; Kevin Smith; Lori

O"Brien

Subject: FW: LVP SWD #1 (2RP-4891) Confirmation Sampling Notification

Date: Monday, July 15, 2019 7:23:02 AM

Importance: High

Good Morning,

Three samples exceeded chloride closure standards following the recent sampling event. Resampling of SP344, SP355, and SW39 is scheduled for Wednesday, July 17 at 8:30 AM. These samples will be only analyzed for chloride.

Please contact me with any questions.

Thank you,

Debbie

From: Watson, Debbie

Sent: Tuesday, July 2, 2019 6:04 AM

To: Billings, Bradford, EMNRD < Bradford. Billings@state.nm.us>

Cc: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Venegas, Victoria, EMNRD

<Victoria.Venegas@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; Watson,

Debbie <deborah.watson@wpxenergy.com>

Subject: FW: LVP SWD #1 (2RP-4891) Confirmation Sampling Notification

Importance: High

The lab has added three more samples to the list for resample. See updated list below:

SP405, SP409, SP411, SP416, SP421, SP422, SP 429, SP431, SP433, SP434, SP436, SP439, SP443, SP448, SP449, SW36, SW31, SW32, SW33, SW35

Sampling is scheduled for this morning around 8:30 am.

Thank you,

Debbie

From: Watson, Debbie

Sent: Friday, June 28, 2019 5:19 PM

To: Billings, Bradford, EMNRD < Bradford.Billings@state.nm.us>

Cc: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Venegas, Victoria, EMNRD

< <u>victoria. Venegas@state.nm.us</u>>; Hamlet, Robert, EMNRD < <u>Robert. Hamlet@state.nm.us</u>>; Watson,

Debbie < deborah.watson@wpxenergy.com>

Subject: FW: LVP SWD #1 (2RP-4891) Confirmation Sampling Notification

Importance: High

Good Afternoon Mr. Billings,

As I mentioned in my voicemail (@4:30 PM), we had 17 samples impacted by cooler water during travel to the laboratory. HRL Compliance will be at the LVP SWD #1 to conduct resampling on Tuesday, July 2 at 8:30 am.

The following samples were impacted by cooler water and will be resampled on Tuesday, July 2:

SP416, SP421, SP422, SP 429, SP431, SP433, SP434, SP436, SP439, SP443, SP448, SP449, SW36, SW31, SW32, SW33, SW35

If you have any questions or would like me to change the date, please let me know. Thank you.

Have a great weekend,

Debbie

From: Watson, Debbie

Sent: Thursday, June 27, 2019 8:24 AM

To: Billings, Bradford, EMNRD < <u>Bradford.Billings@state.nm.us</u>>; Bratcher, Mike, EMNRD < <u>mike.bratcher@state.nm.us</u>>; Venegas, Victoria, EMNRD < <u>Victoria.Venegas@state.nm.us</u>>; Hamlet,

Robert, EMNRD < Robert. Hamlet@state.nm.us >

Cc: Watson, Debbie < deborah.watson@wpxenergy.com >

Subject: LVP SWD #1 (2RP-4891) Confirmation Sampling Notification

Good Morning,

HRL was unable to finish sampling yesterday at the LVP SWD #1. The remaining samples will be collected today.

Thank you,

Debbie

From: Watson, Debbie

Sent: Monday, June 24, 2019 6:11 AM

To: Billings, Bradford, EMNRD < <u>Bradford.Billings@state.nm.us</u>>; Bratcher, Mike, EMNRD

<<u>mike.bratcher@state.nm.us</u>>; Venegas, Victoria, EMNRD <<u>Victoria.Venegas@state.nm.us</u>>; Hamlet,

Robert, EMNRD < Robert.Hamlet@state.nm.us>

Cc: Kevin Smith < <u>ksmith@hrlcomp.com</u>>; Lori O'Brien < <u>lobrien@hrlcomp.com</u>>

Subject: LVP SWD #1 (2RP-4891) Confirmation Sampling Notification

WPX is providing notification that a representative from HRL Compliance Solutions will be onsite Wednesday, June 26 at 8:30 AM to conduct confirmation sampling from within the final section of the excavation.

Please contact me with any questions.

Thank you,

From: Watson, Debbie

To: Billings, Bradford, EMNRD; Bratcher, Mike, EMNRD; Venegas, Victoria, EMNRD; Hamlet, Robert, EMNRD

Cc: Kevin Smith; Lori O"Brien

Subject: LVP SWD #1 (2RP-4891) Confirmation Sampling Notification

Date: Monday, June 24, 2019 6:10:59 AM

WPX is providing notification that a representative from HRL Compliance Solutions will be onsite Wednesday, June 26 at 8:30 AM to conduct confirmation sampling from within the final section of the excavation.

Please contact me with any questions.

Thank you,

Debbie

Deborah Watson
Environmental Specialist
5315 Buena Vista Drive | Carlsbad, NM 88220
office 575.885.7561 | cell 505.386.9693
deborah.watson@wpxenergy.com



If you have received this message in error, please reply to advise the sender of the error and then immediately delete this message. Thank you.



Appendix C: Site Photos













































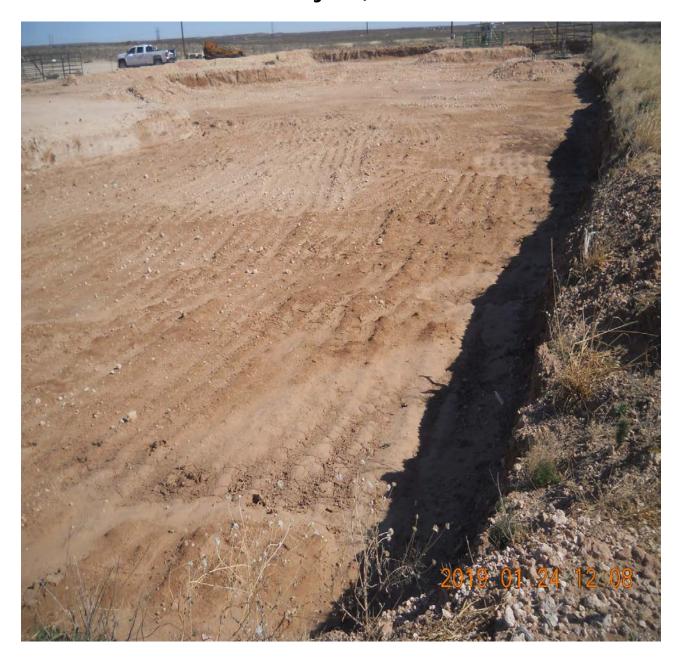


























Excavation Area

January 24, 2019





Excavation Area January 24, 2019





Excavation Area

January 24, 2019





Excavation Area January 24, 2019





Excavation Area January 31, 2019





Excavation Area

January 31, 2019





Excavation Area January 31, 2019





Excavation Area January 31, 2019





Excavation Area

January 31, 2019





Excavation Area January 31, 2019





Excavation Area

January 31, 2019



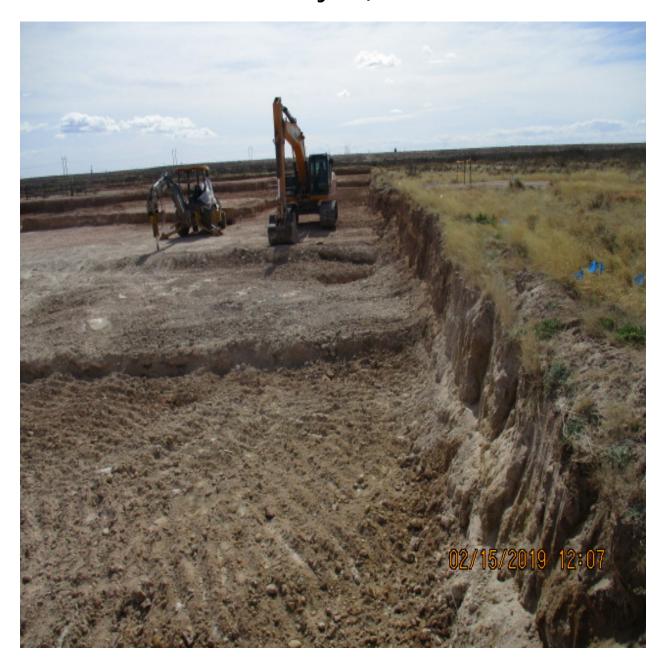






































Excavation Area
June 27, 2019





Excavation Area
June 27, 2019





Excavation Area
June 27, 2019





Appendix D: Laboratory Analytical Results



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

March 05, 2019

Kris Rowe WPX Energy 5315 Buena Vista Drive Carlsbad, NM 88220 TEL: (505) 386-9693

FAX

RE: LVP SWD OrderNo.: 1902B92

Dear Kris Rowe:

Hall Environmental Analysis Laboratory received 45 sample(s) on 2/28/2019 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 #NM0901

Sincerely,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP1

Project: LVP SWD **Collection Date:** 2/27/2019

Lab ID: 1902B92-001 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	
EPA METHOD 8015M/D: DIESEL RANGE OR	EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	3/1/2019 6:42:16 PM	
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	3/1/2019 6:42:16 PM	
Surr: DNOP	91.7	70-130	%Rec	1	3/1/2019 6:42:16 PM	
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB	
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	3/1/2019 11:15:47 AM	
Surr: BFB	93.5	73.8-119	%Rec	1	3/1/2019 11:15:47 AM	
EPA METHOD 8021B: VOLATILES					Analyst: NSB	
Benzene	ND	0.025	mg/Kg	1	3/1/2019 11:15:47 AM	
Toluene	ND	0.049	mg/Kg	1	3/1/2019 11:15:47 AM	
Ethylbenzene	ND	0.049	mg/Kg	1	3/1/2019 11:15:47 AM	
Xylenes, Total	ND	0.098	mg/Kg	1	3/1/2019 11:15:47 AM	
Surr: 4-Bromofluorobenzene	89.3	80-120	%Rec	1	3/1/2019 11:15:47 AM	
EPA METHOD 300.0: ANIONS					Analyst: MRA	
Chloride	ND	60	mg/Kg	20	3/1/2019 2:45:22 PM	

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP2

Project: LVP SWD **Collection Date:** 2/27/2019

Lab ID: 1902B92-002 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Q	Qual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	Analyst: Irm				
Diesel Range Organics (DRO)	150	9.6	mg/Kg	1	3/1/2019 7:06:28 PM
Motor Oil Range Organics (MRO)	75	48	mg/Kg	1	3/1/2019 7:06:28 PM
Surr: DNOP	120	70-130	%Rec	1	3/1/2019 7:06:28 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	3/1/2019 12:25:57 PM
Surr: BFB	95.3	73.8-119	%Rec	1	3/1/2019 12:25:57 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	3/1/2019 12:25:57 PM
Toluene	ND	0.050	mg/Kg	1	3/1/2019 12:25:57 PM
Ethylbenzene	ND	0.050	mg/Kg	1	3/1/2019 12:25:57 PM
Xylenes, Total	ND	0.10	mg/Kg	1	3/1/2019 12:25:57 PM
Surr: 4-Bromofluorobenzene	90.8	80-120	%Rec	1	3/1/2019 12:25:57 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	74	60	mg/Kg	20	3/1/2019 3:47:26 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP3

Project: LVP SWD **Collection Date:** 2/27/2019

Lab ID: 1902B92-003 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Qu	ial Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	Analyst: Irm				
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	3/1/2019 7:30:52 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/1/2019 7:30:52 PM
Surr: DNOP	123	70-130	%Rec	1	3/1/2019 7:30:52 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/1/2019 1:36:13 PM
Surr: BFB	95.8	73.8-119	%Rec	1	3/1/2019 1:36:13 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/1/2019 1:36:13 PM
Toluene	ND	0.048	mg/Kg	1	3/1/2019 1:36:13 PM
Ethylbenzene	ND	0.048	mg/Kg	1	3/1/2019 1:36:13 PM
Xylenes, Total	ND	0.097	mg/Kg	1	3/1/2019 1:36:13 PM
Surr: 4-Bromofluorobenzene	91.1	80-120	%Rec	1	3/1/2019 1:36:13 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	120	60	mg/Kg	20	3/1/2019 3:59:50 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP4

Project: LVP SWD **Collection Date:** 2/27/2019

Lab ID: 1902B92-004 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Qu	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: Irm				
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	3/1/2019 7:55:11 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/1/2019 7:55:11 PM
Surr: DNOP	125	70-130	%Rec	1	3/1/2019 7:55:11 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/1/2019 1:59:51 PM
Surr: BFB	95.8	73.8-119	%Rec	1	3/1/2019 1:59:51 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/1/2019 1:59:51 PM
Toluene	ND	0.048	mg/Kg	1	3/1/2019 1:59:51 PM
Ethylbenzene	ND	0.048	mg/Kg	1	3/1/2019 1:59:51 PM
Xylenes, Total	ND	0.096	mg/Kg	1	3/1/2019 1:59:51 PM
Surr: 4-Bromofluorobenzene	90.9	80-120	%Rec	1	3/1/2019 1:59:51 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	100	60	mg/Kg	20	3/1/2019 4:12:15 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 4 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP5

Project: LVP SWD **Collection Date:** 2/27/2019

Lab ID: 1902B92-005 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	GANICS				Analyst: CLP
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	3/1/2019 11:53:31 AM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/1/2019 11:53:31 AM
Surr: DNOP	125	70-130	%Rec	1	3/1/2019 11:53:31 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	3/1/2019 2:23:27 PM
Surr: BFB	93.5	73.8-119	%Rec	1	3/1/2019 2:23:27 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/1/2019 2:23:27 PM
Toluene	ND	0.047	mg/Kg	1	3/1/2019 2:23:27 PM
Ethylbenzene	ND	0.047	mg/Kg	1	3/1/2019 2:23:27 PM
Xylenes, Total	ND	0.095	mg/Kg	1	3/1/2019 2:23:27 PM
Surr: 4-Bromofluorobenzene	87.8	80-120	%Rec	1	3/1/2019 2:23:27 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	220	60	mg/Kg	20	3/1/2019 4:24:39 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 5 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP6

Project: LVP SWD **Collection Date:** 2/27/2019

Lab ID: 1902B92-006 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: CLP
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	3/1/2019 1:05:51 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/1/2019 1:05:51 PM
Surr: DNOP	113	70-130	%Rec	1	3/1/2019 1:05:51 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/1/2019 2:46:55 PM
Surr: BFB	93.1	73.8-119	%Rec	1	3/1/2019 2:46:55 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/1/2019 2:46:55 PM
Toluene	ND	0.048	mg/Kg	1	3/1/2019 2:46:55 PM
Ethylbenzene	ND	0.048	mg/Kg	1	3/1/2019 2:46:55 PM
Xylenes, Total	ND	0.095	mg/Kg	1	3/1/2019 2:46:55 PM
Surr: 4-Bromofluorobenzene	87.9	80-120	%Rec	1	3/1/2019 2:46:55 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	260	60	mg/Kg	20	3/1/2019 8:20:24 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 6 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP7

Project: LVP SWD **Collection Date:** 2/27/2019

Lab ID: 1902B92-007 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	3/1/2019 1:29:52 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/1/2019 1:29:52 PM
Surr: DNOP	95.1	70-130	%Rec	1	3/1/2019 1:29:52 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	3/1/2019 3:10:18 PM
Surr: BFB	92.9	73.8-119	%Rec	1	3/1/2019 3:10:18 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	3/1/2019 3:10:18 PM
Toluene	ND	0.050	mg/Kg	1	3/1/2019 3:10:18 PM
Ethylbenzene	ND	0.050	mg/Kg	1	3/1/2019 3:10:18 PM
Xylenes, Total	ND	0.10	mg/Kg	1	3/1/2019 3:10:18 PM
Surr: 4-Bromofluorobenzene	88.2	80-120	%Rec	1	3/1/2019 3:10:18 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	ND	60	mg/Kg	20	3/1/2019 8:57:39 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 7 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP8

Project: LVP SWD **Collection Date:** 2/27/2019

Lab ID: 1902B92-008 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG		Analyst: CLP			
Diesel Range Organics (DRO)	14	9.7	mg/Kg	1	3/1/2019 1:54:01 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/1/2019 1:54:01 PM
Surr: DNOP	122	70-130	%Rec	1	3/1/2019 1:54:01 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	3/1/2019 7:27:22 PM
Surr: BFB	92.2	73.8-119	%Rec	1	3/1/2019 7:27:22 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	3/1/2019 7:27:22 PM
Toluene	ND	0.050	mg/Kg	1	3/1/2019 7:27:22 PM
Ethylbenzene	ND	0.050	mg/Kg	1	3/1/2019 7:27:22 PM
Xylenes, Total	ND	0.10	mg/Kg	1	3/1/2019 7:27:22 PM
Surr: 4-Bromofluorobenzene	87.1	80-120	%Rec	1	3/1/2019 7:27:22 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	300	60	mg/Kg	20	3/1/2019 9:10:03 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 8 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

CLIENT: WPX Energy

Analytical Report Lab Order 1902B92

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: SP9

Project: LVP SWD **Collection Date:** 2/27/2019

Lab ID: 1902B92-009 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Qı	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	3/1/2019 2:18:10 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/1/2019 2:18:10 PM
Surr: DNOP	122	70-130	%Rec	1	3/1/2019 2:18:10 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	3/1/2019 7:50:58 PM
Surr: BFB	92.1	73.8-119	%Rec	1	3/1/2019 7:50:58 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	3/1/2019 7:50:58 PM
Toluene	ND	0.046	mg/Kg	1	3/1/2019 7:50:58 PM
Ethylbenzene	ND	0.046	mg/Kg	1	3/1/2019 7:50:58 PM
Xylenes, Total	ND	0.092	mg/Kg	1	3/1/2019 7:50:58 PM
Surr: 4-Bromofluorobenzene	87.0	80-120	%Rec	1	3/1/2019 7:50:58 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	ND	60	mg/Kg	20	3/1/2019 9:22:28 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 9 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Collection Date: 2/27/2019

Lab ID: 1902B92-010 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	3/1/2019 2:42:17 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/1/2019 2:42:17 PM
Surr: DNOP	94.5	70-130	%Rec	1	3/1/2019 2:42:17 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	3/1/2019 8:14:29 PM
Surr: BFB	93.0	73.8-119	%Rec	1	3/1/2019 8:14:29 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	3/1/2019 8:14:29 PM
Toluene	ND	0.047	mg/Kg	1	3/1/2019 8:14:29 PM
Ethylbenzene	ND	0.047	mg/Kg	1	3/1/2019 8:14:29 PM
Xylenes, Total	ND	0.093	mg/Kg	1	3/1/2019 8:14:29 PM
Surr: 4-Bromofluorobenzene	87.5	80-120	%Rec	1	3/1/2019 8:14:29 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	ND	60	mg/Kg	20	3/1/2019 9:34:53 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 10 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP11
Project: LVP SWD
Collection Date: 2/27/2019

Lab ID: 1902B92-011 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	Analyst: CLP				
Diesel Range Organics (DRO)	11	9.9	mg/Kg	1	3/1/2019 3:06:26 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/1/2019 3:06:26 PM
Surr: DNOP	119	70-130	%Rec	1	3/1/2019 3:06:26 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	3/1/2019 8:38:02 PM
Surr: BFB	94.2	73.8-119	%Rec	1	3/1/2019 8:38:02 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/1/2019 8:38:02 PM
Toluene	ND	0.047	mg/Kg	1	3/1/2019 8:38:02 PM
Ethylbenzene	ND	0.047	mg/Kg	1	3/1/2019 8:38:02 PM
Xylenes, Total	ND	0.094	mg/Kg	1	3/1/2019 8:38:02 PM
Surr: 4-Bromofluorobenzene	88.4	80-120	%Rec	1	3/1/2019 8:38:02 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	150	60	mg/Kg	20	3/1/2019 9:47:17 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 11 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP12

Collection Date: 2/27/2019

Lab ID: 1902B92-012 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: CLP				
Diesel Range Organics (DRO)	12	9.9	mg/Kg	1	3/1/2019 3:30:30 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/1/2019 3:30:30 PM
Surr: DNOP	119	70-130	%Rec	1	3/1/2019 3:30:30 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	3/1/2019 9:01:35 PM
Surr: BFB	92.8	73.8-119	%Rec	1	3/1/2019 9:01:35 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	3/1/2019 9:01:35 PM
Toluene	ND	0.047	mg/Kg	1	3/1/2019 9:01:35 PM
Ethylbenzene	ND	0.047	mg/Kg	1	3/1/2019 9:01:35 PM
Xylenes, Total	ND	0.094	mg/Kg	1	3/1/2019 9:01:35 PM
Surr: 4-Bromofluorobenzene	88.2	80-120	%Rec	1	3/1/2019 9:01:35 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	310	60	mg/Kg	20	3/1/2019 9:59:42 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 12 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP13
Project: LVP SWD
Collection Date: 2/27/2019

Lab ID: 1902B92-013 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	3/1/2019 3:54:36 PM
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	3/1/2019 3:54:36 PM
Surr: DNOP	97.3	70-130	%Rec	1	3/1/2019 3:54:36 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	3/1/2019 9:25:18 PM
Surr: BFB	91.7	73.8-119	%Rec	1	3/1/2019 9:25:18 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	3/1/2019 9:25:18 PM
Toluene	ND	0.050	mg/Kg	1	3/1/2019 9:25:18 PM
Ethylbenzene	ND	0.050	mg/Kg	1	3/1/2019 9:25:18 PM
Xylenes, Total	ND	0.10	mg/Kg	1	3/1/2019 9:25:18 PM
Surr: 4-Bromofluorobenzene	86.8	80-120	%Rec	1	3/1/2019 9:25:18 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	ND	60	mg/Kg	20	3/1/2019 10:36:56 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 13 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP14
Project: LVP SWD
Collection Date: 2/27/2019

Lab ID: 1902B92-014 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	3/1/2019 4:18:39 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/1/2019 4:18:39 PM
Surr: DNOP	104	70-130	%Rec	1	3/1/2019 4:18:39 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	3/1/2019 9:48:51 PM
Surr: BFB	92.8	73.8-119	%Rec	1	3/1/2019 9:48:51 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/1/2019 9:48:51 PM
Toluene	ND	0.049	mg/Kg	1	3/1/2019 9:48:51 PM
Ethylbenzene	ND	0.049	mg/Kg	1	3/1/2019 9:48:51 PM
Xylenes, Total	ND	0.097	mg/Kg	1	3/1/2019 9:48:51 PM
Surr: 4-Bromofluorobenzene	87.0	80-120	%Rec	1	3/1/2019 9:48:51 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	320	60	mg/Kg	20	3/1/2019 10:49:20 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 14 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP15
Project: LVP SWD
Collection Date: 2/27/2019

Lab ID: 1902B92-015 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	3/1/2019 4:42:42 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/1/2019 4:42:42 PM
Surr: DNOP	125	70-130	%Rec	1	3/1/2019 4:42:42 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	3/1/2019 10:12:20 PM
Surr: BFB	94.0	73.8-119	%Rec	1	3/1/2019 10:12:20 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/1/2019 10:12:20 PM
Toluene	ND	0.047	mg/Kg	1	3/1/2019 10:12:20 PM
Ethylbenzene	ND	0.047	mg/Kg	1	3/1/2019 10:12:20 PM
Xylenes, Total	ND	0.095	mg/Kg	1	3/1/2019 10:12:20 PM
Surr: 4-Bromofluorobenzene	88.3	80-120	%Rec	1	3/1/2019 10:12:20 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	470	60	mg/Kg	20	3/1/2019 11:01:44 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 15 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP16
Project: LVP SWD
Collection Date: 2/27/2019

Lab ID: 1902B92-016 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst: CLP
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	3/1/2019 5:06:43 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/1/2019 5:06:43 PM
Surr: DNOP	133	70-130	S	%Rec	1	3/1/2019 5:06:43 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	3/1/2019 10:36:00 PM
Surr: BFB	95.2	73.8-119		%Rec	1	3/1/2019 10:36:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	3/1/2019 10:36:00 PM
Toluene	ND	0.046		mg/Kg	1	3/1/2019 10:36:00 PM
Ethylbenzene	ND	0.046		mg/Kg	1	3/1/2019 10:36:00 PM
Xylenes, Total	ND	0.092		mg/Kg	1	3/1/2019 10:36:00 PM
Surr: 4-Bromofluorobenzene	89.4	80-120		%Rec	1	3/1/2019 10:36:00 PM
EPA METHOD 300.0: ANIONS						Analyst: smb
Chloride	84	61		mg/Kg	20	3/1/2019 7:49:14 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 16 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP17

Project: LVP SWD

Collection Date: 2/27/2019

Lab ID: 1902B92-017 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: CLP				
Diesel Range Organics (DRO)	350	9.7	mg/Kg	1	3/1/2019 5:30:48 PM
Motor Oil Range Organics (MRO)	170	48	mg/Kg	1	3/1/2019 5:30:48 PM
Surr: DNOP	108	70-130	%Rec	1	3/1/2019 5:30:48 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	3/1/2019 10:59:36 PM
Surr: BFB	94.6	73.8-119	%Rec	1	3/1/2019 10:59:36 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	3/1/2019 10:59:36 PM
Toluene	ND	0.047	mg/Kg	1	3/1/2019 10:59:36 PM
Ethylbenzene	ND	0.047	mg/Kg	1	3/1/2019 10:59:36 PM
Xylenes, Total	ND	0.094	mg/Kg	1	3/1/2019 10:59:36 PM
Surr: 4-Bromofluorobenzene	89.4	80-120	%Rec	1	3/1/2019 10:59:36 PM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	83	60	mg/Kg	20	3/1/2019 8:51:19 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 17 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP18

Project: LVP SWD

Collection Date: 2/27/2019

Lab ID: 1902B92-018 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Qu	ial Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: Irm				
Diesel Range Organics (DRO)	68	10	mg/Kg	1	3/4/2019 11:11:38 AM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/4/2019 11:11:38 AM
Surr: DNOP	106	70-130	%Rec	1	3/4/2019 11:11:38 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	3/2/2019 12:33:35 AM
Surr: BFB	94.9	73.8-119	%Rec	1	3/2/2019 12:33:35 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	3/2/2019 12:33:35 AM
Toluene	ND	0.049	mg/Kg	1	3/2/2019 12:33:35 AM
Ethylbenzene	ND	0.049	mg/Kg	1	3/2/2019 12:33:35 AM
Xylenes, Total	ND	0.098	mg/Kg	1	3/2/2019 12:33:35 AM
Surr: 4-Bromofluorobenzene	89.6	80-120	%Rec	1	3/2/2019 12:33:35 AM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	140	60	mg/Kg	20	3/1/2019 9:03:43 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 18 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Collection Date: 2/27/2019

Lab ID: 1902B92-019 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE O	Analyst: CLP				
Diesel Range Organics (DRO)	17	9.8	mg/Kg	1	3/1/2019 6:19:13 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/1/2019 6:19:13 PM
Surr: DNOP	127	70-130	%Rec	1	3/1/2019 6:19:13 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/2/2019 12:57:08 AM
Surr: BFB	92.6	73.8-119	%Rec	1	3/2/2019 12:57:08 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/2/2019 12:57:08 AM
Toluene	ND	0.048	mg/Kg	1	3/2/2019 12:57:08 AM
Ethylbenzene	ND	0.048	mg/Kg	1	3/2/2019 12:57:08 AM
Xylenes, Total	ND	0.096	mg/Kg	1	3/2/2019 12:57:08 AM
Surr: 4-Bromofluorobenzene	88.3	80-120	%Rec	1	3/2/2019 12:57:08 AM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	310	60	mg/Kg	20	3/1/2019 9:16:07 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 19 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP20

Collection Date: 2/27/2019

Lab ID: 1902B92-020 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	3/1/2019 6:43:19 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/1/2019 6:43:19 PM
Surr: DNOP	121	70-130	%Rec	1	3/1/2019 6:43:19 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	3/1/2019 3:33:34 PM
Surr: BFB	94.3	73.8-119	%Rec	1	3/1/2019 3:33:34 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	3/1/2019 3:33:34 PM
Toluene	ND	0.046	mg/Kg	1	3/1/2019 3:33:34 PM
Ethylbenzene	ND	0.046	mg/Kg	1	3/1/2019 3:33:34 PM
Xylenes, Total	ND	0.093	mg/Kg	1	3/1/2019 3:33:34 PM
Surr: 4-Bromofluorobenzene	88.2	80-120	%Rec	1	3/1/2019 3:33:34 PM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	ND	60	mg/Kg	20	3/1/2019 9:28:32 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 20 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

CLIENT: WPX Energy

Analytical Report Lab Order 1902B92

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: SP21

Project: LVP SWD **Collection Date:** 2/27/2019

Lab ID: 1902B92-021 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Qu	ial Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	Analyst: CLP				
Diesel Range Organics (DRO)	14	9.9	mg/Kg	1	3/1/2019 7:07:23 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/1/2019 7:07:23 PM
Surr: DNOP	115	70-130	%Rec	1	3/1/2019 7:07:23 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	3/1/2019 4:43:23 PM
Surr: BFB	94.3	73.8-119	%Rec	1	3/1/2019 4:43:23 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/1/2019 4:43:23 PM
Toluene	ND	0.049	mg/Kg	1	3/1/2019 4:43:23 PM
Ethylbenzene	ND	0.049	mg/Kg	1	3/1/2019 4:43:23 PM
Xylenes, Total	ND	0.097	mg/Kg	1	3/1/2019 4:43:23 PM
Surr: 4-Bromofluorobenzene	89.1	80-120	%Rec	1	3/1/2019 4:43:23 PM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	100	60	mg/Kg	20	3/1/2019 9:40:57 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 21 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP22

Collection Date: 2/27/2019

Lab ID: 1902B92-022 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE O	Analyst: CLP				
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	3/1/2019 7:31:25 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/1/2019 7:31:25 PM
Surr: DNOP	103	70-130	%Rec	1	3/1/2019 7:31:25 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	3/2/2019 1:20:41 AM
Surr: BFB	96.0	73.8-119	%Rec	1	3/2/2019 1:20:41 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/2/2019 1:20:41 AM
Toluene	ND	0.049	mg/Kg	1	3/2/2019 1:20:41 AM
Ethylbenzene	ND	0.049	mg/Kg	1	3/2/2019 1:20:41 AM
Xylenes, Total	ND	0.098	mg/Kg	1	3/2/2019 1:20:41 AM
Surr: 4-Bromofluorobenzene	90.3	80-120	%Rec	1	3/2/2019 1:20:41 AM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	85	60	mg/Kg	20	3/1/2019 9:53:21 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 22 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP23

Collection Date: 2/27/2019

Lab ID: 1902B92-023 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	
EPA METHOD 8015M/D: DIESEL RANGE OR	EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	3/1/2019 7:55:28 PM	
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/1/2019 7:55:28 PM	
Surr: DNOP	113	70-130	%Rec	1	3/1/2019 7:55:28 PM	
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB	
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	3/2/2019 1:44:12 AM	
Surr: BFB	95.1	73.8-119	%Rec	1	3/2/2019 1:44:12 AM	
EPA METHOD 8021B: VOLATILES					Analyst: NSB	
Benzene	ND	0.025	mg/Kg	1	3/2/2019 1:44:12 AM	
Toluene	ND	0.049	mg/Kg	1	3/2/2019 1:44:12 AM	
Ethylbenzene	ND	0.049	mg/Kg	1	3/2/2019 1:44:12 AM	
Xylenes, Total	ND	0.098	mg/Kg	1	3/2/2019 1:44:12 AM	
Surr: 4-Bromofluorobenzene	89.5	80-120	%Rec	1	3/2/2019 1:44:12 AM	
EPA METHOD 300.0: ANIONS					Analyst: smb	
Chloride	560	60	mg/Kg	20	3/1/2019 10:55:24 PM	

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 23 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP24

Collection Date: 2/27/2019

Lab ID: 1902B92-024 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	3/1/2019 8:19:24 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/1/2019 8:19:24 PM
Surr: DNOP	92.6	70-130	%Rec	1	3/1/2019 8:19:24 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	3/2/2019 2:07:44 AM
Surr: BFB	94.5	73.8-119	%Rec	1	3/2/2019 2:07:44 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	3/2/2019 2:07:44 AM
Toluene	ND	0.049	mg/Kg	1	3/2/2019 2:07:44 AM
Ethylbenzene	ND	0.049	mg/Kg	1	3/2/2019 2:07:44 AM
Xylenes, Total	ND	0.098	mg/Kg	1	3/2/2019 2:07:44 AM
Surr: 4-Bromofluorobenzene	89.1	80-120	%Rec	1	3/2/2019 2:07:44 AM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	520	59	mg/Kg	20	3/1/2019 11:07:49 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 24 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP25

Project: LVP SWD

Collection Date: 2/27/2019

Lab ID: 1902B92-025 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	3/1/2019 9:07:14 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/1/2019 9:07:14 PM
Surr: DNOP	106	70-130	%Rec	1	3/1/2019 9:07:14 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/2/2019 2:31:17 AM
Surr: BFB	95.5	73.8-119	%Rec	1	3/2/2019 2:31:17 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/2/2019 2:31:17 AM
Toluene	ND	0.048	mg/Kg	1	3/2/2019 2:31:17 AM
Ethylbenzene	ND	0.048	mg/Kg	1	3/2/2019 2:31:17 AM
Xylenes, Total	ND	0.096	mg/Kg	1	3/2/2019 2:31:17 AM
Surr: 4-Bromofluorobenzene	90.0	80-120	%Rec	1	3/2/2019 2:31:17 AM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	500	61	mg/Kg	20	3/1/2019 11:20:14 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 25 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

LVP SWD

Project:

Analytical Report Lab Order 1902B92

Collection Date: 2/27/2019

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP26

Lab ID: 1902B92-026 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	3/1/2019 10:18:49 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/1/2019 10:18:49 PM
Surr: DNOP	91.8	70-130	%Rec	1	3/1/2019 10:18:49 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/2/2019 2:54:47 AM
Surr: BFB	93.1	73.8-119	%Rec	1	3/2/2019 2:54:47 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/2/2019 2:54:47 AM
Toluene	ND	0.048	mg/Kg	1	3/2/2019 2:54:47 AM
Ethylbenzene	ND	0.048	mg/Kg	1	3/2/2019 2:54:47 AM
Xylenes, Total	ND	0.096	mg/Kg	1	3/2/2019 2:54:47 AM
Surr: 4-Bromofluorobenzene	87.7	80-120	%Rec	1	3/2/2019 2:54:47 AM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	580	60	mg/Kg	20	3/1/2019 11:32:39 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 26 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

LVP SWD

Project:

Analytical Report Lab Order 1902B92

Collection Date: 2/27/2019

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP27

Lab ID: 1902B92-027 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	3/1/2019 10:42:40 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/1/2019 10:42:40 PM
Surr: DNOP	109	70-130	%Rec	1	3/1/2019 10:42:40 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	3/2/2019 3:18:18 AM
Surr: BFB	93.4	73.8-119	%Rec	1	3/2/2019 3:18:18 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/2/2019 3:18:18 AM
Toluene	ND	0.049	mg/Kg	1	3/2/2019 3:18:18 AM
Ethylbenzene	ND	0.049	mg/Kg	1	3/2/2019 3:18:18 AM
Xylenes, Total	ND	0.098	mg/Kg	1	3/2/2019 3:18:18 AM
Surr: 4-Bromofluorobenzene	87.2	80-120	%Rec	1	3/2/2019 3:18:18 AM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	110	60	mg/Kg	20	3/1/2019 11:45:03 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 27 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP28

Project: LVP SWD

Collection Date: 2/27/2019

Lab ID: 1902B92-028 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	RGANICS				Analyst: CLP
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	3/1/2019 11:06:29 PM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	3/1/2019 11:06:29 PM
Surr: DNOP	106	70-130	%Rec	1	3/1/2019 11:06:29 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	3/2/2019 3:41:53 AM
Surr: BFB	95.7	73.8-119	%Rec	1	3/2/2019 3:41:53 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	3/2/2019 3:41:53 AM
Toluene	ND	0.049	mg/Kg	1	3/2/2019 3:41:53 AM
Ethylbenzene	ND	0.049	mg/Kg	1	3/2/2019 3:41:53 AM
Xylenes, Total	ND	0.099	mg/Kg	1	3/2/2019 3:41:53 AM
Surr: 4-Bromofluorobenzene	90.2	80-120	%Rec	1	3/2/2019 3:41:53 AM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	660	60	mg/Kg	20	3/1/2019 11:57:28 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 28 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

LVP SWD

Project:

Analytical Report Lab Order 1902B92

Collection Date: 2/27/2019

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP29

Lab ID: 1902B92-029 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analyst: CLP	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	3/1/2019 11:30:18 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/1/2019 11:30:18 PM
Surr: DNOP	134	70-130	S	%Rec	1	3/1/2019 11:30:18 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/2/2019 4:05:23 AM
Surr: BFB	93.5	73.8-119		%Rec	1	3/2/2019 4:05:23 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	3/2/2019 4:05:23 AM
Toluene	ND	0.050		mg/Kg	1	3/2/2019 4:05:23 AM
Ethylbenzene	ND	0.050		mg/Kg	1	3/2/2019 4:05:23 AM
Xylenes, Total	ND	0.10		mg/Kg	1	3/2/2019 4:05:23 AM
Surr: 4-Bromofluorobenzene	87.7	80-120		%Rec	1	3/2/2019 4:05:23 AM
EPA METHOD 300.0: ANIONS						Analyst: smb
Chloride	71	60		mg/Kg	20	3/2/2019 12:09:52 AM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 29 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP30

Collection Date: 2/27/2019

Lab ID: 1902B92-030 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	3/1/2019 11:54:05 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/1/2019 11:54:05 PM
Surr: DNOP	99.3	70-130	%Rec	1	3/1/2019 11:54:05 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/2/2019 5:02:32 PM
Surr: BFB	96.3	73.8-119	%Rec	1	3/2/2019 5:02:32 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/2/2019 5:02:32 PM
Toluene	ND	0.048	mg/Kg	1	3/2/2019 5:02:32 PM
Ethylbenzene	ND	0.048	mg/Kg	1	3/2/2019 5:02:32 PM
Xylenes, Total	ND	0.096	mg/Kg	1	3/2/2019 5:02:32 PM
Surr: 4-Bromofluorobenzene	89.3	80-120	%Rec	1	3/2/2019 5:02:32 PM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	400	60	mg/Kg	20	3/2/2019 12:22:17 AM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 30 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP31
Project: LVP SWD
Collection Date: 2/27/2019

Lab ID: 1902B92-031 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	3/2/2019 12:17:50 AM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/2/2019 12:17:50 AM
Surr: DNOP	109	70-130	%Rec	1	3/2/2019 12:17:50 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	3/2/2019 5:25:49 PM
Surr: BFB	94.8	73.8-119	%Rec	1	3/2/2019 5:25:49 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	3/2/2019 5:25:49 PM
Toluene	ND	0.050	mg/Kg	1	3/2/2019 5:25:49 PM
Ethylbenzene	ND	0.050	mg/Kg	1	3/2/2019 5:25:49 PM
Xylenes, Total	ND	0.10	mg/Kg	1	3/2/2019 5:25:49 PM
Surr: 4-Bromofluorobenzene	88.1	80-120	%Rec	1	3/2/2019 5:25:49 PM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	390	61	mg/Kg	20	3/2/2019 12:34:42 AM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 31 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP32

Project: LVP SWD

Collection Date: 2/27/2019

Lab ID: 1902B92-032 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: CLP				
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	3/2/2019 12:41:35 AM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/2/2019 12:41:35 AM
Surr: DNOP	105	70-130	%Rec	1	3/2/2019 12:41:35 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	3/2/2019 5:49:11 PM
Surr: BFB	94.6	73.8-119	%Rec	1	3/2/2019 5:49:11 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	3/2/2019 5:49:11 PM
Toluene	ND	0.049	mg/Kg	1	3/2/2019 5:49:11 PM
Ethylbenzene	ND	0.049	mg/Kg	1	3/2/2019 5:49:11 PM
Xylenes, Total	ND	0.098	mg/Kg	1	3/2/2019 5:49:11 PM
Surr: 4-Bromofluorobenzene	88.7	80-120	%Rec	1	3/2/2019 5:49:11 PM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	440	60	mg/Kg	20	3/2/2019 12:47:07 AM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 32 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP33
Project: LVP SWD
Collection Date: 2/27/2019

Lab ID: 1902B92-033 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	RGANICS					Analyst: CLP
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	3/2/2019 1:05:19 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/2/2019 1:05:19 AM
Surr: DNOP	138	70-130	S	%Rec	1	3/2/2019 1:05:19 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/2/2019 6:12:37 PM
Surr: BFB	93.8	73.8-119		%Rec	1	3/2/2019 6:12:37 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/2/2019 6:12:37 PM
Toluene	ND	0.049		mg/Kg	1	3/2/2019 6:12:37 PM
Ethylbenzene	ND	0.049		mg/Kg	1	3/2/2019 6:12:37 PM
Xylenes, Total	ND	0.097		mg/Kg	1	3/2/2019 6:12:37 PM
Surr: 4-Bromofluorobenzene	87.6	80-120		%Rec	1	3/2/2019 6:12:37 PM
EPA METHOD 300.0: ANIONS						Analyst: smb
Chloride	ND	60		mg/Kg	20	3/2/2019 1:24:21 AM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 33 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

LVP SWD

Project:

Analytical Report Lab Order 1902B92

Collection Date: 2/27/2019

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP34

Lab ID: 1902B92-034 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	3/2/2019 1:29:04 AM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/2/2019 1:29:04 AM
Surr: DNOP	110	70-130	%Rec	1	3/2/2019 1:29:04 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	3/2/2019 6:36:02 PM
Surr: BFB	94.0	73.8-119	%Rec	1	3/2/2019 6:36:02 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	3/2/2019 6:36:02 PM
Toluene	ND	0.047	mg/Kg	1	3/2/2019 6:36:02 PM
Ethylbenzene	ND	0.047	mg/Kg	1	3/2/2019 6:36:02 PM
Xylenes, Total	ND	0.093	mg/Kg	1	3/2/2019 6:36:02 PM
Surr: 4-Bromofluorobenzene	88.0	80-120	%Rec	1	3/2/2019 6:36:02 PM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	ND	60	mg/Kg	20	3/2/2019 1:36:45 AM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 34 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

LVP SWD

Project:

Analytical Report Lab Order 1902B92

Collection Date: 2/27/2019

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP35

Lab ID: 1902B92-035 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst: CLP
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	3/2/2019 1:52:49 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/2/2019 1:52:49 AM
Surr: DNOP	133	70-130	S	%Rec	1	3/2/2019 1:52:49 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/2/2019 6:59:22 PM
Surr: BFB	95.0	73.8-119		%Rec	1	3/2/2019 6:59:22 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/2/2019 6:59:22 PM
Toluene	ND	0.047		mg/Kg	1	3/2/2019 6:59:22 PM
Ethylbenzene	ND	0.047		mg/Kg	1	3/2/2019 6:59:22 PM
Xylenes, Total	ND	0.095		mg/Kg	1	3/2/2019 6:59:22 PM
Surr: 4-Bromofluorobenzene	88.6	80-120		%Rec	1	3/2/2019 6:59:22 PM
EPA METHOD 300.0: ANIONS						Analyst: smb
Chloride	130	60		mg/Kg	20	3/2/2019 1:49:09 AM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 35 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP36
Project: LVP SWD
Collection Date: 2/27/2019

Lab ID: 1902B92-036 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: CLP				
Diesel Range Organics (DRO)	44	9.8	mg/Kg	1	3/2/2019 2:16:31 AM
Motor Oil Range Organics (MRO)	110	49	mg/Kg	1	3/2/2019 2:16:31 AM
Surr: DNOP	120	70-130	%Rec	1	3/2/2019 2:16:31 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	3/2/2019 7:22:48 PM
Surr: BFB	95.0	73.8-119	%Rec	1	3/2/2019 7:22:48 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	3/2/2019 7:22:48 PM
Toluene	ND	0.050	mg/Kg	1	3/2/2019 7:22:48 PM
Ethylbenzene	ND	0.050	mg/Kg	1	3/2/2019 7:22:48 PM
Xylenes, Total	ND	0.10	mg/Kg	1	3/2/2019 7:22:48 PM
Surr: 4-Bromofluorobenzene	89.9	80-120	%Rec	1	3/2/2019 7:22:48 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	530	60	mg/Kg	20	3/1/2019 11:38:59 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 36 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP37

Project: LVP SWD

Collection Date: 2/27/2019

Lab ID: 1902B92-037 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	RGANICS				Analyst: CLP
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	3/2/2019 2:40:15 AM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	3/2/2019 2:40:15 AM
Surr: DNOP	98.9	70-130	%Rec	1	3/2/2019 2:40:15 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/2/2019 7:46:10 PM
Surr: BFB	96.7	73.8-119	%Rec	1	3/2/2019 7:46:10 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/2/2019 7:46:10 PM
Toluene	ND	0.048	mg/Kg	1	3/2/2019 7:46:10 PM
Ethylbenzene	ND	0.048	mg/Kg	1	3/2/2019 7:46:10 PM
Xylenes, Total	ND	0.097	mg/Kg	1	3/2/2019 7:46:10 PM
Surr: 4-Bromofluorobenzene	91.2	80-120	%Rec	1	3/2/2019 7:46:10 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	90	60	mg/Kg	20	3/2/2019 12:16:13 AM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 37 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP38

Project: LVP SWD

Collection Date: 2/27/2019

Lab ID: 1902B92-038 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: CLP
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	3/2/2019 3:03:56 AM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/2/2019 3:03:56 AM
Surr: DNOP	93.3	70-130	%Rec	1	3/2/2019 3:03:56 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	3/2/2019 9:43:25 PM
Surr: BFB	97.0	73.8-119	%Rec	1	3/2/2019 9:43:25 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/2/2019 9:43:25 PM
Toluene	ND	0.049	mg/Kg	1	3/2/2019 9:43:25 PM
Ethylbenzene	ND	0.049	mg/Kg	1	3/2/2019 9:43:25 PM
Xylenes, Total	ND	0.098	mg/Kg	1	3/2/2019 9:43:25 PM
Surr: 4-Bromofluorobenzene	91.1	80-120	%Rec	1	3/2/2019 9:43:25 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	270	60	mg/Kg	20	3/2/2019 12:28:37 AM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 38 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP39

Collection Date: 2/27/2019

Lab ID: 1902B92-039 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS				Analyst: CLP
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	3/2/2019 3:27:38 AM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/2/2019 3:27:38 AM
Surr: DNOP	100	70-130	%Rec	1	3/2/2019 3:27:38 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/2/2019 10:07:02 PM
Surr: BFB	93.4	73.8-119	%Rec	1	3/2/2019 10:07:02 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/2/2019 10:07:02 PM
Toluene	ND	0.048	mg/Kg	1	3/2/2019 10:07:02 PM
Ethylbenzene	ND	0.048	mg/Kg	1	3/2/2019 10:07:02 PM
Xylenes, Total	ND	0.097	mg/Kg	1	3/2/2019 10:07:02 PM
Surr: 4-Bromofluorobenzene	87.6	80-120	%Rec	1	3/2/2019 10:07:02 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	360	60	mg/Kg	20	3/2/2019 1:05:52 AM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 39 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Collection Date: 2/27/2019

Lab ID: 1902B92-040 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS				Analyst: CLP
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	3/2/2019 3:51:20 AM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/2/2019 3:51:20 AM
Surr: DNOP	125	70-130	%Rec	1	3/2/2019 3:51:20 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	3/1/2019 5:14:20 PM
Surr: BFB	92.5	73.8-119	%Rec	1	3/1/2019 5:14:20 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	3/1/2019 5:14:20 PM
Toluene	ND	0.050	mg/Kg	1	3/1/2019 5:14:20 PM
Ethylbenzene	ND	0.050	mg/Kg	1	3/1/2019 5:14:20 PM
Xylenes, Total	ND	0.099	mg/Kg	1	3/1/2019 5:14:20 PM
Surr: 4-Bromofluorobenzene	99.2	80-120	%Rec	1	3/1/2019 5:14:20 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	750	60	mg/Kg	20	3/2/2019 1:18:16 AM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 40 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP41
Project: LVP SWD
Collection Date: 2/27/2019

Lab ID: 1902B92-041 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Qu	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: CLP
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	3/2/2019 4:15:01 AM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	3/2/2019 4:15:01 AM
Surr: DNOP	104	70-130	%Rec	1	3/2/2019 4:15:01 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/1/2019 6:23:02 PM
Surr: BFB	90.1	73.8-119	%Rec	1	3/1/2019 6:23:02 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/1/2019 6:23:02 PM
Toluene	ND	0.048	mg/Kg	1	3/1/2019 6:23:02 PM
Ethylbenzene	ND	0.048	mg/Kg	1	3/1/2019 6:23:02 PM
Xylenes, Total	ND	0.096	mg/Kg	1	3/1/2019 6:23:02 PM
Surr: 4-Bromofluorobenzene	96.5	80-120	%Rec	1	3/1/2019 6:23:02 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	98	60	mg/Kg	20	3/2/2019 1:30:41 AM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 41 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP42

Collection Date: 2/27/2019

Lab ID: 1902B92-042 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: CLP
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	3/2/2019 4:38:42 AM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/2/2019 4:38:42 AM
Surr: DNOP	106	70-130	%Rec	1	3/2/2019 4:38:42 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	3/1/2019 11:42:17 PM
Surr: BFB	89.9	73.8-119	%Rec	1	3/1/2019 11:42:17 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	3/1/2019 11:42:17 PM
Toluene	ND	0.047	mg/Kg	1	3/1/2019 11:42:17 PM
Ethylbenzene	ND	0.047	mg/Kg	1	3/1/2019 11:42:17 PM
Xylenes, Total	ND	0.093	mg/Kg	1	3/1/2019 11:42:17 PM
Surr: 4-Bromofluorobenzene	94.2	80-120	%Rec	1	3/1/2019 11:42:17 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	77	60	mg/Kg	20	3/2/2019 1:43:06 AM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 42 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP43
Project: LVP SWD
Collection Date: 2/27/2019

Lab ID: 1902B92-043 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	GANICS				Analyst: CLP
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	3/2/2019 5:02:24 AM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/2/2019 5:02:24 AM
Surr: DNOP	122	70-130	%Rec	1	3/2/2019 5:02:24 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	3/2/2019 12:05:04 AM
Surr: BFB	92.9	73.8-119	%Rec	1	3/2/2019 12:05:04 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	3/2/2019 12:05:04 AM
Toluene	ND	0.046	mg/Kg	1	3/2/2019 12:05:04 AM
Ethylbenzene	ND	0.046	mg/Kg	1	3/2/2019 12:05:04 AM
Xylenes, Total	ND	0.093	mg/Kg	1	3/2/2019 12:05:04 AM
Surr: 4-Bromofluorobenzene	96.8	80-120	%Rec	1	3/2/2019 12:05:04 AM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	130	61	mg/Kg	20	3/2/2019 1:55:30 AM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 43 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP44
Project: LVP SWD
Collection Date: 2/27/2019

Lab ID: 1902B92-044 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: CLP
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	3/2/2019 5:26:06 AM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/2/2019 5:26:06 AM
Surr: DNOP	96.5	70-130	%Rec	1	3/2/2019 5:26:06 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	3/2/2019 12:27:49 AM
Surr: BFB	93.8	73.8-119	%Rec	1	3/2/2019 12:27:49 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	3/2/2019 12:27:49 AM
Toluene	ND	0.046	mg/Kg	1	3/2/2019 12:27:49 AM
Ethylbenzene	ND	0.046	mg/Kg	1	3/2/2019 12:27:49 AM
Xylenes, Total	ND	0.093	mg/Kg	1	3/2/2019 12:27:49 AM
Surr: 4-Bromofluorobenzene	97.8	80-120	%Rec	1	3/2/2019 12:27:49 AM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	63	60	mg/Kg	20	3/2/2019 2:07:55 AM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 44 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/5/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP45
Project: LVP SWD
Collection Date: 2/27/2019

Lab ID: 1902B92-045 **Matrix:** SOIL **Received Date:** 2/28/2019 8:55:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	RGANICS				Analyst: Irm
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	3/1/2019 9:56:13 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/1/2019 9:56:13 PM
Surr: DNOP	95.0	70-130	%Rec	1	3/1/2019 9:56:13 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/2/2019 1:58:56 AM
Surr: BFB	94.9	73.8-119	%Rec	1	3/2/2019 1:58:56 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/2/2019 1:58:56 AM
Toluene	ND	0.048	mg/Kg	1	3/2/2019 1:58:56 AM
Ethylbenzene	ND	0.048	mg/Kg	1	3/2/2019 1:58:56 AM
Xylenes, Total	ND	0.097	mg/Kg	1	3/2/2019 1:58:56 AM
Surr: 4-Bromofluorobenzene	98.2	80-120	%Rec	1	3/2/2019 1:58:56 AM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	130	60	mg/Kg	20	3/2/2019 2:20:19 AM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 45 of 57
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902B92**

05-Mar-19

Client: WPX Energy Project: LVP SWD

Sample ID: MB-43454 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 43454 RunNo: 58059

Prep Date: 3/1/2019 Analysis Date: 3/1/2019 SeqNo: 1945532 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride ND 1.5

Sample ID: LCS-43454 SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 43454 RunNo: 58059

Prep Date: 3/1/2019 Analysis Date: 3/1/2019 SeqNo: 1945533 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride 14 1.5 15.00 0 95.8 90 110

Sample ID: MB-43441 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: **PBS** Batch ID: **43441** RunNo: **58054**

Prep Date: 3/1/2019 Analysis Date: 3/1/2019 SeqNo: 1945592 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride ND 1.5

Sample ID: LCS-43441 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 43441 RunNo: 58054

Prep Date: 3/1/2019 Analysis Date: 3/1/2019 SeqNo: 1945593 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride 14 1.5 15.00 0 94.8 90 110

Sample ID: MB-43449 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 43449 RunNo: 58054

Prep Date: 3/1/2019 Analysis Date: 3/1/2019 SeqNo: 1945622 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride ND 1.5

Sample ID: LCS-43449 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 43449 RunNo: 58054

Prep Date: 3/1/2019 Analysis Date: 3/1/2019 SeqNo: 1945623 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride 14 1.5 15.00 0 94.2 90 110

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

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P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902B92** *05-Mar-19*

Client: WPX Energy
Project: LVP SWD

Sample ID: MB-43456 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 43456 RunNo: 58054

Prep Date: 3/1/2019 Analysis Date: 3/1/2019 SeqNo: 1945654 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride ND 1.5

Sample ID: LCS-43456 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 43456 RunNo: 58054

Prep Date: 3/1/2019 Analysis Date: 3/1/2019 SeqNo: 1945655 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride 14 1.5 15.00 0 92.7 90 110

Qualifiers:

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

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1902B92

05-Mar-19

Client: WPX Energy LVP SWD **Project:**

Project: LVPSW									
Sample ID: LCS-43407	SampType: L (cs	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	Organics	
Client ID: LCSS	Batch ID: 43	3407	F	RunNo: 58	8029				
Prep Date: 2/28/2019	Analysis Date: 3	/1/2019	S	SeqNo: 19	944671	Units: mg/K	(g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52 10	50.00	0	105	63.9	124			
Surr: DNOP	5.1	5.000		102	70	130			
Sample ID: MB-43407	SampType: M	BLK	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	Organics	
Client ID: PBS	Batch ID: 43	407	F	RunNo: 58	8029				
Prep Date: 2/28/2019	Analysis Date: 3	/1/2019	S	SeqNo: 19	944672	Units: mg/K	(g		
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	12	10.00		120	70	130			
Sample ID: MB-43435	SampType: M	BLK	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	Organics	
Client ID: PBS	Batch ID: 43	435	F	RunNo: 58	8029				
Client ID: PBS Prep Date: 3/1/2019	Batch ID: 43 Analysis Date: 3			RunNo: 58 SeqNo: 1 9		Units: %Red	c		
		/1/2019				Units: %Red	c %RPD	RPDLimit	Qual
Prep Date: 3/1/2019	Analysis Date: 3	/1/2019	S	SeqNo: 19	944687			RPDLimit	Qual
Prep Date: 3/1/2019 Analyte	Analysis Date: 3,	/1/2019 SPK value 10.00	SPK Ref Val	%REC 91.4	944687 LowLimit 70	HighLimit	%RPD		Qual
Prep Date: 3/1/2019 Analyte Surr: DNOP	Analysis Date: 3 Result PQL 9.1	SPK value 10.00	SPK Ref Val	%REC 91.4	LowLimit 70 PA Method	HighLimit 130	%RPD		Qual
Prep Date: 3/1/2019 Analyte Surr: DNOP Sample ID: LCS-43405	Analysis Date: 3 Result PQL 9.1 SampType: L0	SPK value 10.00 CS 4405	SPK Ref Val Tes	%REC 91.4 tCode: Ef	LowLimit 70 PA Method 8030	HighLimit 130	%RPD		Qual
Prep Date: 3/1/2019 Analyte Surr: DNOP Sample ID: LCS-43405 Client ID: LCSS	Analysis Date: 3 Result PQL 9.1 SampType: L0 Batch ID: 43	SPK value 10.00 CS 4405 /1/2019	SPK Ref Val Tes	%REC 91.4 tCode: ER RunNo: 56	LowLimit 70 PA Method 8030	HighLimit 130 8015M/D: Die	%RPD		Qual
Prep Date: 3/1/2019 Analyte Surr: DNOP Sample ID: LCS-43405 Client ID: LCSS Prep Date: 2/28/2019	Analysis Date: 3 Result PQL 9.1 SampType: L0 Batch ID: 43 Analysis Date: 3	SPK value 10.00 CS 4405 /1/2019 SPK value	SPK Ref Val Tes	%REC 91.4 tCode: ER RunNo: 56	2944687 LowLimit 70 2A Method 8030 945112	HighLimit 130 8015M/D: Did Units: mg/K	%RPD	e Organics	
Prep Date: 3/1/2019 Analyte Surr: DNOP Sample ID: LCS-43405 Client ID: LCSS Prep Date: 2/28/2019 Analyte	Analysis Date: 3 Result PQL 9.1 SampType: L0 Batch ID: 43 Analysis Date: 3 Result PQL	SPK value 10.00 CS 4405 /1/2019 SPK value	SPK Ref Val Tes F S SPK Ref Val	%REC 91.4 tCode: EF RunNo: 56 SeqNo: 19	244687 LowLimit 70 2A Method 8030 945112 LowLimit	HighLimit 130 8015M/D: Did Units: mg/K HighLimit	%RPD	e Organics	
Prep Date: 3/1/2019 Analyte Surr: DNOP Sample ID: LCS-43405 Client ID: LCSS Prep Date: 2/28/2019 Analyte Diesel Range Organics (DRO)	Analysis Date: 3 Result PQL 9.1 SampType: L0 Batch ID: 43 Analysis Date: 3 Result PQL 46 10	SPK value 10.00 CS 4405 /1/2019 SPK value 50.00 5.000	SPK Ref Val Tes F SPK Ref Val 0	REC 91.4 Code: EF RunNo: 56 SeqNo: 19 REC 92.0 97.4	244687 LowLimit 70 2A Method 8030 945112 LowLimit 63.9 70	HighLimit 130 8015M/D: Did Units: mg/K HighLimit 124	%RPD esel Range	e Organics RPDLimit	
Prep Date: 3/1/2019 Analyte Surr: DNOP Sample ID: LCS-43405 Client ID: LCSS Prep Date: 2/28/2019 Analyte Diesel Range Organics (DRO) Surr: DNOP	Analysis Date: 3 Result PQL 9.1 SampType: L0 Batch ID: 43 Analysis Date: 3 Result PQL 46 10 4.9	SPK value 10.00 CS 4405 /1/2019 SPK value 50.00 5.000	SPK Ref Val Tes SPK Ref Val 0	REC 91.4 Code: EF RunNo: 56 SeqNo: 19 REC 92.0 97.4	244687 LowLimit 70 PA Method 8030 945112 LowLimit 63.9 70 PA Method	HighLimit 130 8015M/D: Die Units: mg/K HighLimit 124 130	%RPD esel Range	e Organics RPDLimit	
Prep Date: 3/1/2019 Analyte Surr: DNOP Sample ID: LCS-43405 Client ID: LCSS Prep Date: 2/28/2019 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID: MB-43405	Analysis Date: 3 Result PQL 9.1 SampType: L0 Batch ID: 43 Analysis Date: 3 Result PQL 46 10 4.9 SampType: M	SPK value 10.00 CS 4405 /1/2019 SPK value 50.00 5.000	SPK Ref Val Tes SPK Ref Val 0 Tes	%REC 91.4 tCode: EF RunNo: 56 SeqNo: 19 %REC 92.0 97.4	244687 LowLimit 70 PA Method 8030 945112 LowLimit 63.9 70 PA Method 8030	HighLimit 130 8015M/D: Die Units: mg/K HighLimit 124 130	%RPD esel Range %RPD esel Range	e Organics RPDLimit	
Prep Date: 3/1/2019 Analyte Surr: DNOP Sample ID: LCS-43405 Client ID: LCSS Prep Date: 2/28/2019 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID: MB-43405 Client ID: PBS	Analysis Date: 3 Result PQL 9.1 SampType: LC Batch ID: 43 Analysis Date: 3 Result PQL 46 10 4.9 SampType: MI Batch ID: 43	SPK value 10.00 CS 4405 /1/2019 SPK value 50.00 5.000 BLK 4405 /1/2019	SPK Ref Val Tes SPK Ref Val 0 Tes	%REC 91.4 tCode: EF RunNo: 56 SeqNo: 19 %REC 92.0 97.4 tCode: EF RunNo: 56 SeqNo: 19	244687 LowLimit 70 PA Method 8030 945112 LowLimit 63.9 70 PA Method 8030	HighLimit 130 8015M/D: Did Units: mg/K HighLimit 124 130 8015M/D: Did	%RPD esel Range %RPD esel Range	e Organics RPDLimit	

Qualifiers:

Surr: DNOP

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix

Motor Oil Range Organics (MRO)

Η Holding times for preparation or analysis exceeded

ND

11

50

10.00

- ND Not Detected at the Reporting Limit
- Practical Quanitative Limit PQL
- % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank

70

130

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E Value above quantitation range

113

- J Analyte detected below quantitation limits
- P
- Sample pH Not In Range
- Reporting Detection Limit RL
- Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902B92**

05-Mar-19

Client: WPX Energy
Project: LVP SWD

Sample ID: LCS-43435 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: LCSS Batch ID: 43435 RunNo: 58029

Prep Date: 3/1/2019 Analysis Date: 3/1/2019 SeqNo: 1945196 Units: %Rec

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Surr: DNOP 4.5 5.000 89.8 70 130

Sample ID: 1902B92-004AMS SampType: MS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: **\$P4** Batch ID: **43405** RunNo: **58030**

Prep Date: 2/28/2019 Analysis Date: 3/1/2019 SeqNo: 1946261 Units: mg/Kg

%REC Analyte Result **PQL** SPK value SPK Ref Val LowLimit HighLimit %RPD **RPDLimit** Qual Diesel Range Organics (DRO) 56 9.7 48.64 4.629 105 53.5 126 Surr: DNOP 5.4 4.864 112 70 130

Sample ID: 1902B92-004AMSD SampType: MSD TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: **SP4** Batch ID: **43405** RunNo: **58030**

Prep Date: 2/28/2019 Analysis Date: 3/1/2019 SeqNo: 1946262 Units: mg/Kg

SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Qual Analyte Result **PQL** LowLimit 53 10 96.3 Diesel Range Organics (DRO) 49.80 4 629 53.5 126 5.79 21.7 Surr: DNOP 5.2 4.980 105 70 130 n

Sample ID: 1902B92-045AMS SampType: MS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: **SP45** Batch ID: **43408** RunNo: **58030**

Prep Date: 2/28/2019 Analysis Date: 3/1/2019 SeqNo: 1946277 Units: mg/Kg

SPK value SPK Ref Val %REC %RPD **RPDLimit** Analyte Result PQI LowLimit HighLimit Qual Diesel Range Organics (DRO) 3.286 46 9.5 47.66 89.2 53.5 126 Surr: DNOP 4.766 70 4.5 94.1 130

Sample ID: 1902B92-045AMSD SampType: MSD TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: SP45 Batch ID: 43408 RunNo: 58030

Prep Date: 2/28/2019 Analysis Date: 3/1/2019 SeqNo: 1946278 Units: mg/Kg

%REC LowLimit %RPD **RPDLimit PQL** SPK value SPK Ref Val HighLimit Analyte Result Qual Diesel Range Organics (DRO) 9.5 47.39 3.286 43 84.4 53.5 126 5.67 21.7 Surr: DNOP 4.739 4.4 93.1 70 130 0

 Surr: DNOP
 4.4
 4.739
 93.1
 70
 130
 0
 0

 Sample ID: LCS-43408
 SampType: LCS
 TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: **LCSS** Batch ID: **43408** RunNo: **58030**

Prep Date: 2/28/2019 Analysis Date: 3/1/2019 SeqNo: 1946279 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Diesel Range Organics (DRO) 54 10 50.00 0 108 63.9 124

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

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Hall Environmental Analysis Laboratory, Inc.

WO#: 1902B92

05-Mar-19

Client: WPX Energy **Project:** LVP SWD

Sample ID: LCS-43408 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: LCSS Batch ID: 43408 RunNo: 58030

Prep Date: Analysis Date: 3/1/2019 SeqNo: 1946279 2/28/2019 Units: mg/Kg

Analyte Result SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual

Surr: DNOP 5.000 70 5.5 111 130

Sample ID: MB-43408 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: PBS Batch ID: 43408 RunNo: 58030

Prep Date: 2/28/2019 Analysis Date: 3/1/2019 SeqNo: 1946280 Units: mg/Kg

SPK value SPK Ref Val %REC LowLimit Analyte Result **PQL** HighLimit %RPD **RPDLimit** Qual Diesel Range Organics (DRO) ND 10 Motor Oil Range Organics (MRO) ND 50 Surr: DNOP 10.00 12 118 70 130

Sample ID: MB-43406 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: PBS Batch ID: 43406 RunNo: 58083

Prep Date: 2/28/2019 Analysis Date: 3/1/2019 SeqNo: 1947125 Units: mg/Kg

SPK value SPK Ref Val %REC LowLimit %RPD **RPDLimit** Analyte Result **PQL** HighLimit Qual Diesel Range Organics (DRO) ND 10 ND 50

Motor Oil Range Organics (MRO)

Sample ID: LCS-43406

Surr: DNOP 12 10.00 119 70 130

Client ID: LCSS Batch ID: 43406 RunNo: 58083

SampType: LCS

Prep Date: 2/28/2019 Analysis Date: 3/1/2019 SeqNo: 1947143 Units: mg/Kg

%REC LowLimit %RPD **RPDLimit** Analyte Result POI SPK value SPK Ref Val HighLimit Qual Diesel Range Organics (DRO) 61 10 50.00 0 123 63.9 124

Surr: DNOP 6.2 5.000 70 130 124

Sample ID: 1902B92-005AMS TestCode: EPA Method 8015M/D: Diesel Range Organics SampType: MS

Client ID: SP5 Batch ID: 43406 RunNo: 58083

Prep Date: 2/28/2019 Analysis Date: 3/1/2019 SeqNo: 1947244 Units: mg/Kg

Result SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit PQL** LowLimit Qual

Diesel Range Organics (DRO) 55 9.9 49.41 105 53.5 126 Surr: DNOP 5.6 4.941 114 70 130

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- POL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank

TestCode: EPA Method 8015M/D: Diesel Range Organics

- Е Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1902B92**

05-Mar-19

Client: WPX Energy
Project: LVP SWD

Sample ID: 1902B92-005AMSD SampType: MSD TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: SP5 Batch ID: 43406 RunNo: 58083 Analysis Date: 3/1/2019 Prep Date: 2/28/2019 SeqNo: 1947245 Units: mg/Kg Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 2.951 Diesel Range Organics (DRO) 97.9 53.5 6.82 21.7 51 9.9 49.36 126 Surr: DNOP 5.6 4.936 113 70 130

Sample ID: 1902B92-025AMS SampType: MS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: SP25 Batch ID: 43407 RunNo: 58083 Prep Date: 2/28/2019 Analysis Date: 3/1/2019 SeqNo: 1947246 Units: mg/Kg Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Diesel Range Organics (DRO) 64 45.62 2.598 136 53.5 126 S S Surr: DNOP 6.5 4.562 142 70 130

Sample ID: 1902B92-025AMSD SampType: MSD TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: SP25 Batch ID: 43407 RunNo: 58083 Prep Date: 2/28/2019 Analysis Date: 3/1/2019 SeqNo: 1947247 Units: mg/Kg %REC %RPD SPK value SPK Ref Val HighLimit **RPDLimit** Analyte Result **PQL** LowLimit Qual Diesel Range Organics (DRO) 45 9.7 48.40 2.598 88.0 53.5 126 35.2 21.7 R Surr: DNOP 4.6 94.6 70 130 4.840 0 0

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- D C 1 HN 1 D
- P Sample pH Not In Range RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1902B92**

05-Mar-19

Client: WPX Energy Project: LVP SWD

Sample ID: MB-43403 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 43403 RunNo: 58044

Prep Date: 2/28/2019 Analysis Date: 3/1/2019 SeqNo: 1945345 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 930 1000 92.6 73.8 119

Sample ID: LCS-43403 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 43403 RunNo: 58044

Prep Date: 2/28/2019 Analysis Date: 3/1/2019 SeqNo: 1945346 Units: mg/Kg

RPDLimit Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD Qual Gasoline Range Organics (GRO) 25 5.0 25.00 0 100 80.1 123 1100 1000 112 73.8 Surr: BFB 119

Sample ID: 1902B92-040AMS SampType: MS TestCode: EPA Method 8015D: Gasoline Range

Client ID: **SP40** Batch ID: **43403** RunNo: **58044**

Prep Date: 2/28/2019 Analysis Date: 3/1/2019 SeqNo: 1945357 Units: mg/Kg

%RPD **RPDLimit** Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit Qual Gasoline Range Organics (GRO) 25 5.0 24.95 0 101 69.1 142 Surr: BFB 1100 998.0 109 73.8 119

Sample ID: 1902B92-040AMSD SampType: MSD TestCode: EPA Method 8015D: Gasoline Range

Client ID: **SP40** Batch ID: **43403** RunNo: **58044**

Prep Date: 2/28/2019 Analysis Date: 3/1/2019 SeqNo: 1945358 Units: mg/Kg

Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 23.99 26 4.8 107 69.1 1.94 20 142 Surr: BFB 1000 959.7 108 73.8 119 0 0

Sample ID: MB-43401 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 43401 RunNo: 58043

Prep Date: 2/28/2019 Analysis Date: 3/1/2019 SeqNo: 1945398 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 980 1000 98.0 73.8

Sample ID: LCS-43401 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 43401 RunNo: 58043

Prep Date: 2/28/2019 Analysis Date: 3/1/2019 SeqNo: 1945399 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

P

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

119

Page 52 of 57

E Value above quantitation range

J Analyte detected below quantitation limits

Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

Released to Imaging: 3/29/2023 12:27:58 PM

Hall Environmental Analysis Laboratory, Inc.

WO#: 1902B92

05-Mar-19

Client: WPX Energy **Project:** LVP SWD

Sample ID: LCS-43401 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 43401 RunNo: 58043

Analysis Date: 3/1/2019 Prep Date: 2/28/2019 SeqNo: 1945399 Units: mg/Kg

Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 0 80.1 26 5.0 25.00 104 123

Surr: BFB 1100 1000 108 73.8 119

Sample ID: 1902B92-001AMS SampType: MS TestCode: EPA Method 8015D: Gasoline Range

Client ID: SP1 Batch ID: 43401 RunNo: 58043

Prep Date: 2/28/2019 Analysis Date: 3/1/2019 SeqNo: 1945401 Units: mg/Kg

RPDLimit Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD Qual Gasoline Range Organics (GRO) 4.9 24.56 0 107 69.1 142 1000 982.3 106 73.8 Surr: BFB 119

SampType: MSD Sample ID: 1902B92-001AMSD TestCode: EPA Method 8015D: Gasoline Range

Client ID: Batch ID: 43401 RunNo: 58043

Prep Date: 2/28/2019 Analysis Date: 3/1/2019 SeqNo: 1945402 Units: mg/Kg

RPDLimit %RPD Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit Qual Gasoline Range Organics (GRO) 27 4.7 23.72 0 115 69.1 142 3.36 20 Surr: BFB 0 1000 948.8 110 73.8 119 0

Sample ID: MB-43402 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 43402 RunNo: 58043

Prep Date: 2/28/2019 Analysis Date: 3/1/2019 SeqNo: 1945421 Units: mg/Kg

Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual

Gasoline Range Organics (GRO) ND 5.0

Surr: BFB 950 1000 95.4 73.8 119

Sample ID: LCS-43402 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Batch ID: 43402 Client ID: LCSS RunNo: 58043

Prep Date: 2/28/2019 Analysis Date: 3/1/2019 SeqNo: 1945422 Units: mg/Kg

SPK value SPK Ref Val %REC Analyte Result LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 0 80.1 26 5.0 25.00 105 123 Surr: BFB 1200 1000 115 73.8 119

Sample ID: 1902B92-020AMS SampType: MS TestCode: EPA Method 8015D: Gasoline Range

Client ID: SP20 Batch ID: 43402 RunNo: 58043

Prep Date: 2/28/2019 Analysis Date: 3/1/2019 SeqNo: 1945424 Units: mg/Kg

SPK value SPK Ref Val HighLimit %RPD **RPDLimit** Analyte Result %REC LowLimit Qual

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Η Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

POL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix

В Analyte detected in the associated Method Blank

Е Value above quantitation range

J Analyte detected below quantitation limits

Page 53 of 57

P Sample pH Not In Range

RL Reporting Detection Limit

Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902B92** *05-Mar-19*

Client: WPX Energy Project: LVP SWD

Sample ID: 1902B92-020AMS SampType: MS TestCode: EPA Method 8015D: Gasoline Range

Client ID: SP20 Batch ID: 43402 RunNo: 58043

Prep Date: 2/28/2019 Analysis Date: 3/1/2019 SeqNo: 1945424 Units: mg/Kg

Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 4.8 0 69.1 28 24.11 118 142

 Surr: BFB
 1000
 964.3
 109
 73.8
 119

Sample ID: 1902B92-020AMSD SampType: MSD TestCode: EPA Method 8015D: Gasoline Range

Client ID: **SP20** Batch ID: **43402** RunNo: **58043**

Prep Date: 2/28/2019 Analysis Date: 3/1/2019 SeqNo: 1945425 Units: mg/Kg

Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 4.8 24.13 0 112 69.1 142 4.76 20 1100 Surr: BFB 965.3 110 73.8 0 119

Sample ID: MB-43429 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 43429 RunNo: 58062

Prep Date: 3/1/2019 Analysis Date: 3/2/2019 SeqNo: 1945851 Units: %Rec

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Surr: BFB 950 1000 95.4 73.8 119

Sample ID: LCS-43429 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 43429 RunNo: 58062

Prep Date: 3/1/2019 Analysis Date: 3/2/2019 SeqNo: 1945852 Units: %Rec

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Surr: BFB 1200 1000 115 73.8 119

Qualifiers:

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

Page 54 of 57

Hall Environmental Analysis Laboratory, Inc.

WO#: 1902B92

05-Mar-19

Client: WPX Energy **Project:** LVP SWD

Client ID:

LCSS

Sample ID: MB-43403 SampType: MBLK TestCode: EPA Method 8021B: Volatiles

Client ID: PBS Batch ID: 43403 RunNo: 58044

Batch ID: 43403

SeqNo: 1945376 Prep Date: Analysis Date: 3/1/2019 Units: mg/Kg 2/28/2019

Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Benzene ND 0.025 Toluene ND 0.050

0.050 Ethylbenzene ND Xylenes, Total ND 0.10

Surr: 4-Bromofluorobenzene 0.99 1.000 99.1 80 120

Sample ID: LCS-43403 SampType: LCS TestCode: EPA Method 8021B: Volatiles

Prep Date: 2/28/2019 Analysis Date: 3/1/2019 SeqNo: 1945377 Units: mg/Kg **PQL** SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Analyte LowLimit Qual 0.025 1.000 0 84.6 80 120 Benzene 0.85 Toluene 0.98 0.050 1.000 0 97.9 80 120 Ethylbenzene 0.050 1.000 0 101 80 120 1.0 Xylenes, Total 3.1 0.10 3.000 0 102 80 120 Surr: 4-Bromofluorobenzene 1.1 1.000 110 80 120

RunNo: 58044

Sample ID: 1902B92-041AMS SampType: MS TestCode: EPA Method 8021B: Volatiles

Client ID: SP41 Batch ID: 43403 RunNo: 58044

Prep Date: 2/28/2019 Analysis Date: 3/1/2019 SegNo: 1945389 Units: mg/Kg Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Benzene 0.85 0.024 0.9488 89.1 63.9 127 Λ Toluene 0.99 0.047 0.9488 0.007759 104 69.9 131 71 0.047 109 132 Ethylbenzene 1.0 0.9488 0 Xylenes, Total 3.1 0.095 2.846 0 108 71.8 131 Surr: 4-Bromofluorobenzene 1.0 0.9488 107 80 120

Sample ID: 1902B92-041AMSD SampType: MSD TestCode: EPA Method 8021B: Volatiles

Client ID: SP41 Batch ID: 43403 RunNo: 58044

Prep Date: 2/28/2019	Analysis D	oate: 3/	1/2019	8	SeqNo: 1	945390	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.024	0.9470	0	87.4	63.9	127	2.11	20	
Toluene	0.97	0.047	0.9470	0.007759	102	69.9	131	1.91	20	
Ethylbenzene	1.0	0.047	0.9470	0	107	71	132	1.95	20	
Xylenes, Total	3.0	0.095	2.841	0	106	71.8	131	2.68	20	
Surr: 4-Bromofluorobenzene	1.0		0.9470		106	80	120	0	0	

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Η Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

POL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit Sample container temperature is out of limit as specified Page 55 of 57

Hall Environmental Analysis Laboratory, Inc.

WO#: 1902B92

05-Mar-19

Client: WPX Energy **Project:** LVP SWD

Sample ID: MB-43401 SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: PBS Batch ID: 43401 RunNo: 58043

SeqNo: 1945439 Prep Date: Analysis Date: 3/1/2019 Units: mg/Kg 2/28/2019

Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Benzene ND 0.025 Toluene ND 0.050 0.050 Ethylbenzene ND Xylenes, Total ND 0.10

Surr: 4-Bromofluorobenzene 0.92 1.000 92.2 80 120

Sample ID: LCS-43401 SampType: LCS TestCode: EPA Method 8021B: Volatiles Client ID: LCSS Batch ID: 43401 RunNo: 58043 Units: mg/Kg Prep Date: 2/28/2019 Analysis Date: 3/1/2019 SeqNo: 1945440 **PQL** SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Analyte LowLimit Qual 0.025 1.000 0 87.9 80 120 Benzene 0.88 Toluene 0.91 0.050 1.000 0 91.5 80 120 Ethylbenzene 0.92 0.050 1.000 0 92.1 80 120 Xylenes, Total 2.8 0.10 3.000 0 93.2 80 120 Surr: 4-Bromofluorobenzene 0.93 1.000 93.3 80 120

Sample ID: 1902B92-002AMS SampType: MS TestCode: EPA Method 8021B: Volatiles

Client ID: SP2 Batch ID: 43401 RunNo: 58043

Prep Date: 2/28/2019	Analysis D	Date: 3/	1/2019	S	SeqNo: 19	945443	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.024	0.9737	0	97.3	63.9	127			
Toluene	0.99	0.049	0.9737	0	102	69.9	131			
Ethylbenzene	1.0	0.049	0.9737	0	104	71	132			
Xylenes, Total	3.1	0.097	2.921	0	105	71.8	131			
Surr: 4-Bromofluorobenzene	0.89		0.9737		91.7	80	120			

Sample ID: 1902B92-002AMSD SampType: MSD TestCode: EPA Method 8021B: Volatiles

Client ID: Batch ID: 43401 SP2 RunNo: 58043

Prep Date: Analysis Date: 3/1/2019 SeqNo: 1945444 2/28/2019 Units: mg/Kg SPK value SPK Ref Val %REC %RPD **RPDLimit** Analyte Result PQL LowLimit HighLimit Qual 0.93 0.025 0.9911 0 93.5 63.9 127 2.22 20 Benzene Toluene 0.96 0.050 0.9911 0 97.2 69.9 131 2.66 20 Ethylbenzene 0.99 0.050 0.9911 0 99.5 71 132 2 37 20 3.0 0.099 2.973 0 100 71.8 131 3.47 20 Xylenes, Total 0.91 0.9911 92.1 80 120 0 0 Surr: 4-Bromofluorobenzene

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Η Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

POL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix

В Analyte detected in the associated Method Blank

Е Value above quantitation range

J Analyte detected below quantitation limits

Page 56 of 57

P Sample pH Not In Range RL Reporting Detection Limit

Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#: **1902B92**

05-Mar-19

Client: WPX Energy Project: LVP SWD

Sample ID: MB-43402 SampType: MBLK TestCode: EPA Method 8021B: Volatiles

Client ID: PBS Batch ID: 43402 RunNo: 58043

Prep Date: 2/28/2019 Analysis Date: 3/1/2019 SeqNo: 1945462 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 0.90 1.000 90.0 80 120

Sample ID: LCS-43402 SampType: LCS TestCode: EPA Method 8021B: Volatiles

Client ID: LCSS Batch ID: 43402 RunNo: 58043

Prep Date: 2/28/2019	Analysis [Date: 3/	1/2019	S	SeqNo: 19	945463	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.025	1.000	0	86.4	80	120			
Toluene	0.90	0.050	1.000	0	90.4	80	120			
Ethylbenzene	0.91	0.050	1.000	0	90.8	80	120			
Xylenes, Total	2.8	0.10	3.000	0	92.3	80	120			
Surr: 4-Bromofluorobenzene	0.92		1.000		91.8	80	120			

Sample ID: 1902B92-021AMS SampType: MS TestCode: EPA Method 8021B: Volatiles

Client ID: **SP21** Batch ID: **43402** RunNo: **58043**

Prep Date: 2/28/2019	Analysis [Date: 3/	1/2019	S	SeqNo: 1	945466	Units: mg/K	ζg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.025	0.9833	0	91.6	63.9	127			
Toluene	0.94	0.049	0.9833	0	96.1	69.9	131			
Ethylbenzene	0.96	0.049	0.9833	0	97.6	71	132			
Xylenes, Total	2.9	0.098	2.950	0	99.3	71.8	131			
Surr: 4-Bromofluorobenzene	0.90		0.9833		914	80	120			

Sample ID: 1902B92-021AMSD SampType: MSD TestCode: EPA Method 8021B: Volatiles

0.9901

Client ID: **SP21** Batch ID: **43402** RunNo: **58043**

0.90

Prep Date: Analysis Date: 3/1/2019 SeqNo: 1945467 2/28/2019 Units: mg/Kg SPK value SPK Ref Val %REC **RPDLimit** Analyte Result PQL LowLimit HighLimit %RPD Qual 0.90 0.025 0.9901 0 91.2 63.9 127 0.297 20 Benzene Toluene 0.95 0.050 0.9901 0 96.3 69.9 131 0.951 20 Ethylbenzene 0.97 0.050 0.9901 0 97.8 71 132 0.977 20 2.9 0.099 2.970 0 98.7 71.8 131 0.00297 20 Xylenes, Total

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Surr: 4-Bromofluorobenzene

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

80

120

E Value above quantitation range

90.4

J Analyte detected below quantitation limits

Page 57 of 57

0

0

P Sample pH Not In Range

RL Reporting Detection Limit

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 CARLSB	Work Order Number	: 1902B92		RcptNo:	<u> </u>
Received By: Thom Maybee Completed By: Leah Baca Reviewed By: Son 2/29/1/9	2/28/2019 8:55:00 AM 2/28/2019 9:08:26 AM 7/28		Loub Bren		
Chain of Custody 1. Is Chain of Custody complete? 2. How was the sample delivered?		Yes 🗹	No 🗀	Not Present 🗌	
Log In 3. Was an attempt made to cool the samples?		Yes 🗸	No 🗌	NA 🗀	
4. Were all samples received at a temperature	of >0° C to 6.0°C	Yes 🗹	No 🗆	NA 🗌	
5. Sample(s) in proper container(s)?6. Sufficient sample volume for indicated test(s	12	Yes ✓ Yes ✓	No □		
7. Are samples (except VOA and ONG) proper 8. Was preservative added to bottles?	•	Yes 🗹 Yes 🗆	No □ No ☑	NA 🗆	
9. VOA vials have zero headspace? 10. Were any sample containers received broken.	in?	Yes 🗌 Yes 🗆	No ☐ No ☑ ☐	No VOA Vials	
11 Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🔽	No 🗆		2 unless noted)
12. Are matrices correctly identified on Chain of13. Is it clear what analyses were requested?14. Were all holding times able to be met? (If no, notify customer for authorization.)	Custody?	Yes Yes Yes	No 🗌 No 🗎 No 🗎	Adjusted2 Checked by: DA	D 2/28/19
Special Handling (if applicable) 15. Was client notified of all discrepancies with	this order?	Yes 🗌	No 🗆	NA 🗹	
Person Notified: By Whom: Regarding: Client Instructions:	Date Via: [eMail F	Phone Fax	☐ In Person	
16. Additional remarks: 17. Cooler Information Cooler No Temp °C Condition S 1 5.1 Good Ye		Seal Date	Signed By		
			-		

17 70 bd	HALL ENVIRONMENTAL	ANALYSIS LABORATORY	www.hallenvironmental.com	4901 Hawkins NE - Albuquerque, NM 87109		Analysis	(0)	NS)	ס ארם () () () () () () () () () () () () ()	(f.81) (r.40) 758 (70) 758 (70) 758 (70)	(GER)	BTEX + MTI TPH 1015B TPH (Methor PAH's (8310 RCRA 8 Methors (HC 8260B (VOA 8270 (Semi-											-	Remarks: Repart to Kris Bure	Nathalie Condon	Kevin Smith Debbit
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Chain-of-Custody Record Turn-Around Time: A day Turn-Around Time: Standard Rush Breitet Name
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4930/4	HALL ENVIRONMENTAL ANALYSIS LABORATORY	www.hallenvironmental.com	4901 Hawkins NE - Albuquerque, NM 87109	5 Fax 505-345-4107	(t	'os'	_р ОЧ,	2808 (808	al. \ sə \ AO\	stel Ng bioiti (AC V-irr	PAH's (83 ACRA 8 M Anions (F.) 8081 Pest 8260B (V0 8270 (Ser	*															Hans will be clearly notated on the analytical report.
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	-01-0- -01-0-	2	Mailing Address:		Phone #:	email or Fax#:	QA/QC Package:	Standard		□ EDD (Type)	Date Time Matrix		727.14											7	$\overline{}$	ol	2/20/19 1900 4

Turn-Around Time:	X Standard C Rush	www.hallenvironmental.com	LVP SWD 4901 Hawkins NE - Albuquerque, NM 87109	Project #: Tel. 505-345-3975 Fax 505-345-4107	Analysis	(O)	SO21	(OZ) (SIN) (OZ) (OZ) (OZ) (OZ) (OZ) (OZ) (OZ) (OZ	### ### ##############################	AO	MTBEE (CO)	Container Preservative HEAL No. Type and # Type + 19/17 R 97.	×	h20 -)			(Received by: Date Time	Received by Contract Date Time	100 Co. 100
Chain-of-Custody Record Turn-Art	Garls bad	TOPICI -	7	Project		Project I		☐ Level 4 (Full Validation)	Sample:		Sample	Matrix Sample Request ID Contai	Soil	SP34	\$P35	SP36	SP37	SP38	SP39	:		SP 42	SP 43	SP 44	57 54 95	Receiv	
Chain-c	Client: WPX		Mailing Address:		Phone #:	email or Fax#:	QA/QC Package:	☐ Standard	Accreditation ☐ NFI AP			Date Time	phalo								>	•				Date: Time: R	•



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

March 08, 2019

Kris Rowe WPX Energy 5315 Buena Vista Drive Carlsbad, NM 88220 TEL: (505) 386-9693

FAX

RE: LVP SWD OrderNo.: 1903003

Dear Kris Rowe:

Hall Environmental Analysis Laboratory received 86 sample(s) on 3/1/2019 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 #NM0901

Sincerely,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 46
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-001 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS				Analyst: Irm
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	3/4/2019 12:09:20 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/4/2019 12:09:20 PM
Surr: DNOP	87.8	70-130	%Rec	1	3/4/2019 12:09:20 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	3/2/2019 10:47:41 AM
Surr: BFB	94.6	73.8-119	%Rec	1	3/2/2019 10:47:41 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	3/2/2019 10:47:41 AM
Toluene	ND	0.046	mg/Kg	1	3/2/2019 10:47:41 AM
Ethylbenzene	ND	0.046	mg/Kg	1	3/2/2019 10:47:41 AM
Xylenes, Total	ND	0.092	mg/Kg	1	3/2/2019 10:47:41 AM
Surr: 4-Bromofluorobenzene	89.1	80-120	%Rec	1	3/2/2019 10:47:41 AM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	460	60	mg/Kg	20	3/5/2019 5:15:25 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP 47

Project: LVP SWD

Collection Date: 2/28/2019

Lab ID: 1903003-002 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: Irm
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	3/4/2019 1:15:26 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/4/2019 1:15:26 PM
Surr: DNOP	91.5	70-130	%Rec	1	3/4/2019 1:15:26 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	3/2/2019 11:58:29 AM
Surr: BFB	97.7	73.8-119	%Rec	1	3/2/2019 11:58:29 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	3/2/2019 11:58:29 AM
Toluene	ND	0.050	mg/Kg	1	3/2/2019 11:58:29 AM
Ethylbenzene	ND	0.050	mg/Kg	1	3/2/2019 11:58:29 AM
Xylenes, Total	ND	0.099	mg/Kg	1	3/2/2019 11:58:29 AM
Surr: 4-Bromofluorobenzene	91.9	80-120	%Rec	1	3/2/2019 11:58:29 AM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	320	60	mg/Kg	20	3/5/2019 5:27:50 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 48
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-003 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: Irm
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	3/4/2019 1:37:38 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/4/2019 1:37:38 PM
Surr: DNOP	94.0	70-130	%Rec	1	3/4/2019 1:37:38 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	3/2/2019 10:30:37 PM
Surr: BFB	94.5	73.8-119	%Rec	1	3/2/2019 10:30:37 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	3/2/2019 10:30:37 PM
Toluene	ND	0.050	mg/Kg	1	3/2/2019 10:30:37 PM
Ethylbenzene	ND	0.050	mg/Kg	1	3/2/2019 10:30:37 PM
Xylenes, Total	ND	0.10	mg/Kg	1	3/2/2019 10:30:37 PM
Surr: 4-Bromofluorobenzene	88.5	80-120	%Rec	1	3/2/2019 10:30:37 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	670	60	mg/Kg	20	3/5/2019 5:40:14 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Collection Date: 2/28/2019

Lab ID: 1903003-004 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	Analyst: Irm				
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	3/4/2019 2:22:04 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/4/2019 2:22:04 PM
Surr: DNOP	99.0	70-130	%Rec	1	3/4/2019 2:22:04 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	3/2/2019 10:54:14 PM
Surr: BFB	96.5	73.8-119	%Rec	1	3/2/2019 10:54:14 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	3/2/2019 10:54:14 PM
Toluene	ND	0.046	mg/Kg	1	3/2/2019 10:54:14 PM
Ethylbenzene	ND	0.046	mg/Kg	1	3/2/2019 10:54:14 PM
Xylenes, Total	ND	0.091	mg/Kg	1	3/2/2019 10:54:14 PM
Surr: 4-Bromofluorobenzene	90.3	80-120	%Rec	1	3/2/2019 10:54:14 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	390	60	mg/Kg	20	3/5/2019 5:52:39 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 4 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP 50

Project: LVP SWD

Collection Date: 2/28/2019

Lab ID: 1903003-005 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: Irm				
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	3/4/2019 2:44:10 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/4/2019 2:44:10 PM
Surr: DNOP	96.8	70-130	%Rec	1	3/4/2019 2:44:10 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	3/2/2019 11:17:38 PM
Surr: BFB	94.4	73.8-119	%Rec	1	3/2/2019 11:17:38 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	3/2/2019 11:17:38 PM
Toluene	ND	0.049	mg/Kg	1	3/2/2019 11:17:38 PM
Ethylbenzene	ND	0.049	mg/Kg	1	3/2/2019 11:17:38 PM
Xylenes, Total	ND	0.099	mg/Kg	1	3/2/2019 11:17:38 PM
Surr: 4-Bromofluorobenzene	88.5	80-120	%Rec	1	3/2/2019 11:17:38 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	350	60	mg/Kg	20	3/5/2019 6:29:52 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 5 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 51
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-006 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	Analyst: Irm				
Diesel Range Organics (DRO)	ND	9.2	mg/Kg	1	3/4/2019 3:06:26 PM
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	3/4/2019 3:06:26 PM
Surr: DNOP	99.8	70-130	%Rec	1	3/4/2019 3:06:26 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/2/2019 11:41:12 PM
Surr: BFB	95.6	73.8-119	%Rec	1	3/2/2019 11:41:12 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/2/2019 11:41:12 PM
Toluene	ND	0.048	mg/Kg	1	3/2/2019 11:41:12 PM
Ethylbenzene	ND	0.048	mg/Kg	1	3/2/2019 11:41:12 PM
Xylenes, Total	ND	0.096	mg/Kg	1	3/2/2019 11:41:12 PM
Surr: 4-Bromofluorobenzene	89.6	80-120	%Rec	1	3/2/2019 11:41:12 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	350	60	mg/Kg	20	3/5/2019 6:42:17 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 6 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 52
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-007 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	3/6/2019 1:54:52 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/6/2019 1:54:52 PM
Surr: DNOP	102	70-130	%Rec	1	3/6/2019 1:54:52 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	3/3/2019 12:04:49 AM
Surr: BFB	94.2	73.8-119	%Rec	1	3/3/2019 12:04:49 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/3/2019 12:04:49 AM
Toluene	ND	0.047	mg/Kg	1	3/3/2019 12:04:49 AM
Ethylbenzene	ND	0.047	mg/Kg	1	3/3/2019 12:04:49 AM
Xylenes, Total	ND	0.095	mg/Kg	1	3/3/2019 12:04:49 AM
Surr: 4-Bromofluorobenzene	87.9	80-120	%Rec	1	3/3/2019 12:04:49 AM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	120	60	mg/Kg	20	3/5/2019 6:54:41 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 7 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 53
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-008 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	3/6/2019 2:19:02 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/6/2019 2:19:02 PM
Surr: DNOP	100	70-130	%Rec	1	3/6/2019 2:19:02 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	3/3/2019 12:28:22 AM
Surr: BFB	93.6	73.8-119	%Rec	1	3/3/2019 12:28:22 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/3/2019 12:28:22 AM
Toluene	ND	0.047	mg/Kg	1	3/3/2019 12:28:22 AM
Ethylbenzene	ND	0.047	mg/Kg	1	3/3/2019 12:28:22 AM
Xylenes, Total	ND	0.095	mg/Kg	1	3/3/2019 12:28:22 AM
Surr: 4-Bromofluorobenzene	88.1	80-120	%Rec	1	3/3/2019 12:28:22 AM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	290	60	mg/Kg	20	3/5/2019 7:31:55 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 8 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 54
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-009 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: CLP
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	3/6/2019 2:43:14 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/6/2019 2:43:14 PM
Surr: DNOP	103	70-130	%Rec	1	3/6/2019 2:43:14 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	3/3/2019 12:51:54 AM
Surr: BFB	96.1	73.8-119	%Rec	1	3/3/2019 12:51:54 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/3/2019 12:51:54 AM
Toluene	ND	0.049	mg/Kg	1	3/3/2019 12:51:54 AM
Ethylbenzene	ND	0.049	mg/Kg	1	3/3/2019 12:51:54 AM
Xylenes, Total	ND	0.097	mg/Kg	1	3/3/2019 12:51:54 AM
Surr: 4-Bromofluorobenzene	89.2	80-120	%Rec	1	3/3/2019 12:51:54 AM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	130	60	mg/Kg	20	3/5/2019 8:09:08 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 9 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 55
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-010 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: CLP
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	3/6/2019 3:07:26 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/6/2019 3:07:26 PM
Surr: DNOP	102	70-130	%Rec	1	3/6/2019 3:07:26 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	3/3/2019 1:15:25 AM
Surr: BFB	95.9	73.8-119	%Rec	1	3/3/2019 1:15:25 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	3/3/2019 1:15:25 AM
Toluene	ND	0.049	mg/Kg	1	3/3/2019 1:15:25 AM
Ethylbenzene	ND	0.049	mg/Kg	1	3/3/2019 1:15:25 AM
Xylenes, Total	ND	0.099	mg/Kg	1	3/3/2019 1:15:25 AM
Surr: 4-Bromofluorobenzene	89.2	80-120	%Rec	1	3/3/2019 1:15:25 AM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	220	60	mg/Kg	20	3/5/2019 8:21:33 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 10 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 56
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-011 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	RGANICS				Analyst: CLP
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	3/6/2019 3:31:38 PM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	3/6/2019 3:31:38 PM
Surr: DNOP	100	70-130	%Rec	1	3/6/2019 3:31:38 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	3/3/2019 2:49:22 AM
Surr: BFB	95.0	73.8-119	%Rec	1	3/3/2019 2:49:22 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/3/2019 2:49:22 AM
Toluene	ND	0.049	mg/Kg	1	3/3/2019 2:49:22 AM
Ethylbenzene	ND	0.049	mg/Kg	1	3/3/2019 2:49:22 AM
Xylenes, Total	ND	0.098	mg/Kg	1	3/3/2019 2:49:22 AM
Surr: 4-Bromofluorobenzene	89.3	80-120	%Rec	1	3/3/2019 2:49:22 AM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	230	60	mg/Kg	20	3/5/2019 8:58:47 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 11 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 57
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-012 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: CLP
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	3/6/2019 3:55:47 PM
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	3/6/2019 3:55:47 PM
Surr: DNOP	103	70-130	%Rec	1	3/6/2019 3:55:47 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/3/2019 3:12:51 AM
Surr: BFB	93.0	73.8-119	%Rec	1	3/3/2019 3:12:51 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/3/2019 3:12:51 AM
Toluene	ND	0.048	mg/Kg	1	3/3/2019 3:12:51 AM
Ethylbenzene	ND	0.048	mg/Kg	1	3/3/2019 3:12:51 AM
Xylenes, Total	ND	0.097	mg/Kg	1	3/3/2019 3:12:51 AM
Surr: 4-Bromofluorobenzene	88.4	80-120	%Rec	1	3/3/2019 3:12:51 AM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	330	60	mg/Kg	20	3/5/2019 9:11:12 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 12 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 58
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-013 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: CLP				
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	3/6/2019 4:20:01 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/6/2019 4:20:01 PM
Surr: DNOP	102	70-130	%Rec	1	3/6/2019 4:20:01 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/3/2019 3:36:22 AM
Surr: BFB	93.8	73.8-119	%Rec	1	3/3/2019 3:36:22 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/3/2019 3:36:22 AM
Toluene	ND	0.048	mg/Kg	1	3/3/2019 3:36:22 AM
Ethylbenzene	ND	0.048	mg/Kg	1	3/3/2019 3:36:22 AM
Xylenes, Total	ND	0.096	mg/Kg	1	3/3/2019 3:36:22 AM
Surr: 4-Bromofluorobenzene	88.0	80-120	%Rec	1	3/3/2019 3:36:22 AM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	410	60	mg/Kg	20	3/5/2019 9:23:37 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 13 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Collection Date: 2/28/2019

Lab ID: 1903003-014 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	3/6/2019 4:44:17 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/6/2019 4:44:17 PM
Surr: DNOP	105	70-130	%Rec	1	3/6/2019 4:44:17 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	3/3/2019 3:59:54 AM
Surr: BFB	95.3	73.8-119	%Rec	1	3/3/2019 3:59:54 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/3/2019 3:59:54 AM
Toluene	ND	0.047	mg/Kg	1	3/3/2019 3:59:54 AM
Ethylbenzene	ND	0.047	mg/Kg	1	3/3/2019 3:59:54 AM
Xylenes, Total	ND	0.095	mg/Kg	1	3/3/2019 3:59:54 AM
Surr: 4-Bromofluorobenzene	89.2	80-120	%Rec	1	3/3/2019 3:59:54 AM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	290	60	mg/Kg	20	3/5/2019 9:36:01 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 14 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 60
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-015 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	3/6/2019 5:08:28 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/6/2019 5:08:28 PM
Surr: DNOP	104	70-130	%Rec	1	3/6/2019 5:08:28 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/3/2019 4:23:09 AM
Surr: BFB	94.5	73.8-119	%Rec	1	3/3/2019 4:23:09 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/3/2019 4:23:09 AM
Toluene	ND	0.048	mg/Kg	1	3/3/2019 4:23:09 AM
Ethylbenzene	ND	0.048	mg/Kg	1	3/3/2019 4:23:09 AM
Xylenes, Total	ND	0.096	mg/Kg	1	3/3/2019 4:23:09 AM
Surr: 4-Bromofluorobenzene	88.5	80-120	%Rec	1	3/3/2019 4:23:09 AM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	180	60	mg/Kg	20	3/5/2019 9:48:25 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 15 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 61
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-016 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	ial Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analyst: CLP
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	3/6/2019 5:32:45 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/6/2019 5:32:45 PM
Surr: DNOP	101	70-130	%Rec	1	3/6/2019 5:32:45 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	3/3/2019 4:46:39 AM
Surr: BFB	94.1	73.8-119	%Rec	1	3/3/2019 4:46:39 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	3/3/2019 4:46:39 AM
Toluene	ND	0.049	mg/Kg	1	3/3/2019 4:46:39 AM
Ethylbenzene	ND	0.049	mg/Kg	1	3/3/2019 4:46:39 AM
Xylenes, Total	ND	0.099	mg/Kg	1	3/3/2019 4:46:39 AM
Surr: 4-Bromofluorobenzene	88.6	80-120	%Rec	1	3/3/2019 4:46:39 AM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	260	60	mg/Kg	20	3/5/2019 10:00:50 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 16 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 62
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-017 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analyst: CLP
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	3/6/2019 5:57:04 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/6/2019 5:57:04 PM
Surr: DNOP	95.5	70-130	%Rec	1	3/6/2019 5:57:04 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	3/3/2019 5:10:09 AM
Surr: BFB	95.3	73.8-119	%Rec	1	3/3/2019 5:10:09 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/3/2019 5:10:09 AM
Toluene	ND	0.049	mg/Kg	1	3/3/2019 5:10:09 AM
Ethylbenzene	ND	0.049	mg/Kg	1	3/3/2019 5:10:09 AM
Xylenes, Total	ND	0.097	mg/Kg	1	3/3/2019 5:10:09 AM
Surr: 4-Bromofluorobenzene	89.4	80-120	%Rec	1	3/3/2019 5:10:09 AM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	240	60	mg/Kg	20	3/5/2019 10:13:15 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 17 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 63
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-018 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analyst: CLP
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	3/6/2019 6:21:19 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/6/2019 6:21:19 PM
Surr: DNOP	101	70-130	%Rec	1	3/6/2019 6:21:19 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/3/2019 5:33:41 AM
Surr: BFB	91.3	73.8-119	%Rec	1	3/3/2019 5:33:41 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/3/2019 5:33:41 AM
Toluene	ND	0.048	mg/Kg	1	3/3/2019 5:33:41 AM
Ethylbenzene	ND	0.048	mg/Kg	1	3/3/2019 5:33:41 AM
Xylenes, Total	ND	0.095	mg/Kg	1	3/3/2019 5:33:41 AM
Surr: 4-Bromofluorobenzene	85.2	80-120	%Rec	1	3/3/2019 5:33:41 AM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	88	60	mg/Kg	20	3/5/2019 10:25:39 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 18 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 64
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-019 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analyst: CLP
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	3/6/2019 6:45:37 PM
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	3/6/2019 6:45:37 PM
Surr: DNOP	99.0	70-130	%Rec	1	3/6/2019 6:45:37 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/3/2019 5:57:07 AM
Surr: BFB	90.6	73.8-119	%Rec	1	3/3/2019 5:57:07 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/3/2019 5:57:07 AM
Toluene	ND	0.048	mg/Kg	1	3/3/2019 5:57:07 AM
Ethylbenzene	ND	0.048	mg/Kg	1	3/3/2019 5:57:07 AM
Xylenes, Total	ND	0.095	mg/Kg	1	3/3/2019 5:57:07 AM
Surr: 4-Bromofluorobenzene	84.5	80-120	%Rec	1	3/3/2019 5:57:07 AM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	310	60	mg/Kg	20	3/5/2019 10:38:04 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 19 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 65
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-020 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS				Analyst: CLP	
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	3/6/2019 7:09:50 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/6/2019 7:09:50 PM
Surr: DNOP	100	70-130	%Rec	1	3/6/2019 7:09:50 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	3/3/2019 6:20:36 AM
Surr: BFB	92.0	73.8-119	%Rec	1	3/3/2019 6:20:36 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	3/3/2019 6:20:36 AM
Toluene	ND	0.046	mg/Kg	1	3/3/2019 6:20:36 AM
Ethylbenzene	ND	0.046	mg/Kg	1	3/3/2019 6:20:36 AM
Xylenes, Total	ND	0.092	mg/Kg	1	3/3/2019 6:20:36 AM
Surr: 4-Bromofluorobenzene	85.9	80-120	%Rec	1	3/3/2019 6:20:36 AM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	270	60	mg/Kg	20	3/5/2019 10:50:29 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 20 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 66
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-021 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analyst: Irm
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	3/4/2019 12:24:32 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/4/2019 12:24:32 PM
Surr: DNOP	88.4	70-130	%Rec	1	3/4/2019 12:24:32 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	3/2/2019 4:48:37 PM
Surr: BFB	92.4	73.8-119	%Rec	1	3/2/2019 4:48:37 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	3/2/2019 4:48:37 PM
Toluene	ND	0.050	mg/Kg	1	3/2/2019 4:48:37 PM
Ethylbenzene	ND	0.050	mg/Kg	1	3/2/2019 4:48:37 PM
Xylenes, Total	ND	0.10	mg/Kg	1	3/2/2019 4:48:37 PM
Surr: 4-Bromofluorobenzene	95.8	80-120	%Rec	1	3/2/2019 4:48:37 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	220	60	mg/Kg	20	3/5/2019 11:27:42 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 21 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 67
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-022 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: Irm				
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	3/4/2019 1:37:38 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/4/2019 1:37:38 PM
Surr: DNOP	78.9	70-130	%Rec	1	3/4/2019 1:37:38 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	3/2/2019 5:57:11 PM
Surr: BFB	91.6	73.8-119	%Rec	1	3/2/2019 5:57:11 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	3/2/2019 5:57:11 PM
Toluene	ND	0.047	mg/Kg	1	3/2/2019 5:57:11 PM
Ethylbenzene	ND	0.047	mg/Kg	1	3/2/2019 5:57:11 PM
Xylenes, Total	ND	0.093	mg/Kg	1	3/2/2019 5:57:11 PM
Surr: 4-Bromofluorobenzene	96.7	80-120	%Rec	1	3/2/2019 5:57:11 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	370	60	mg/Kg	20	3/5/2019 11:40:07 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 22 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 68
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-023 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: Irm				
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	3/4/2019 2:02:08 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/4/2019 2:02:08 PM
Surr: DNOP	76.1	70-130	%Rec	1	3/4/2019 2:02:08 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	3/2/2019 7:05:46 PM
Surr: BFB	87.3	73.8-119	%Rec	1	3/2/2019 7:05:46 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/2/2019 7:05:46 PM
Toluene	ND	0.047	mg/Kg	1	3/2/2019 7:05:46 PM
Ethylbenzene	ND	0.047	mg/Kg	1	3/2/2019 7:05:46 PM
Xylenes, Total	ND	0.094	mg/Kg	1	3/2/2019 7:05:46 PM
Surr: 4-Bromofluorobenzene	89.1	80-120	%Rec	1	3/2/2019 7:05:46 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	320	60	mg/Kg	20	3/5/2019 11:52:32 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 23 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Collection Date: 2/28/2019

Lab ID: 1903003-024 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: Irm				
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	3/4/2019 2:26:36 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/4/2019 2:26:36 PM
Surr: DNOP	83.8	70-130	%Rec	1	3/4/2019 2:26:36 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	3/2/2019 7:28:36 PM
Surr: BFB	91.5	73.8-119	%Rec	1	3/2/2019 7:28:36 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/2/2019 7:28:36 PM
Toluene	ND	0.047	mg/Kg	1	3/2/2019 7:28:36 PM
Ethylbenzene	ND	0.047	mg/Kg	1	3/2/2019 7:28:36 PM
Xylenes, Total	ND	0.094	mg/Kg	1	3/2/2019 7:28:36 PM
Surr: 4-Bromofluorobenzene	93.0	80-120	%Rec	1	3/2/2019 7:28:36 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	320	60	mg/Kg	20	3/6/2019 12:04:57 AM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 24 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Collection Date: 2/28/2019

Lab ID: 1903003-025 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: Irm				
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	3/4/2019 3:40:59 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/4/2019 3:40:59 PM
Surr: DNOP	84.8	70-130	%Rec	1	3/4/2019 3:40:59 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	3/2/2019 9:45:06 PM
Surr: BFB	96.1	73.8-119	%Rec	1	3/2/2019 9:45:06 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/2/2019 9:45:06 PM
Toluene	ND	0.047	mg/Kg	1	3/2/2019 9:45:06 PM
Ethylbenzene	ND	0.047	mg/Kg	1	3/2/2019 9:45:06 PM
Xylenes, Total	ND	0.095	mg/Kg	1	3/2/2019 9:45:06 PM
Surr: 4-Bromofluorobenzene	99.1	80-120	%Rec	1	3/2/2019 9:45:06 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	280	60	mg/Kg	20	3/6/2019 12:17:21 AM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 25 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 71
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-026 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: Irm				
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	3/4/2019 4:05:27 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/4/2019 4:05:27 PM
Surr: DNOP	84.7	70-130	%Rec	1	3/4/2019 4:05:27 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	3/2/2019 10:07:57 PM
Surr: BFB	92.9	73.8-119	%Rec	1	3/2/2019 10:07:57 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/2/2019 10:07:57 PM
Toluene	ND	0.047	mg/Kg	1	3/2/2019 10:07:57 PM
Ethylbenzene	ND	0.047	mg/Kg	1	3/2/2019 10:07:57 PM
Xylenes, Total	ND	0.095	mg/Kg	1	3/2/2019 10:07:57 PM
Surr: 4-Bromofluorobenzene	95.3	80-120	%Rec	1	3/2/2019 10:07:57 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	230	60	mg/Kg	20	3/6/2019 12:29:46 AM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 26 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP 72

Collection Date: 2/28/2019

Lab ID: 1903003-027 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analyst: Irm
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	3/4/2019 4:29:55 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/4/2019 4:29:55 PM
Surr: DNOP	77.6	70-130	%Rec	1	3/4/2019 4:29:55 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	3/2/2019 10:30:43 PM
Surr: BFB	92.1	73.8-119	%Rec	1	3/2/2019 10:30:43 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	3/2/2019 10:30:43 PM
Toluene	ND	0.049	mg/Kg	1	3/2/2019 10:30:43 PM
Ethylbenzene	ND	0.049	mg/Kg	1	3/2/2019 10:30:43 PM
Xylenes, Total	ND	0.098	mg/Kg	1	3/2/2019 10:30:43 PM
Surr: 4-Bromofluorobenzene	94.3	80-120	%Rec	1	3/2/2019 10:30:43 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	300	60	mg/Kg	20	3/6/2019 12:42:10 AM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 27 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 73
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-028 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG		Analyst: Irm			
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	3/4/2019 4:54:21 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/4/2019 4:54:21 PM
Surr: DNOP	75.1	70-130	%Rec	1	3/4/2019 4:54:21 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/2/2019 10:53:30 PM
Surr: BFB	89.0	73.8-119	%Rec	1	3/2/2019 10:53:30 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/2/2019 10:53:30 PM
Toluene	ND	0.048	mg/Kg	1	3/2/2019 10:53:30 PM
Ethylbenzene	ND	0.048	mg/Kg	1	3/2/2019 10:53:30 PM
Xylenes, Total	ND	0.096	mg/Kg	1	3/2/2019 10:53:30 PM
Surr: 4-Bromofluorobenzene	91.0	80-120	%Rec	1	3/2/2019 10:53:30 PM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	110	60	mg/Kg	20	3/6/2019 10:12:42 AM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 28 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP 74

Project: LVP SWD

Collection Date: 2/28/2019

Lab ID: 1903003-029 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	ial Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: Irm				
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	3/5/2019 8:59:12 AM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/5/2019 8:59:12 AM
Surr: DNOP	84.8	70-130	%Rec	1	3/5/2019 8:59:12 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/2/2019 11:16:07 PM
Surr: BFB	91.9	73.8-119	%Rec	1	3/2/2019 11:16:07 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/2/2019 11:16:07 PM
Toluene	ND	0.048	mg/Kg	1	3/2/2019 11:16:07 PM
Ethylbenzene	ND	0.048	mg/Kg	1	3/2/2019 11:16:07 PM
Xylenes, Total	ND	0.096	mg/Kg	1	3/2/2019 11:16:07 PM
Surr: 4-Bromofluorobenzene	94.8	80-120	%Rec	1	3/2/2019 11:16:07 PM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	180	60	mg/Kg	20	3/6/2019 10:25:07 AM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 29 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 75
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-030 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: Irm				
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	3/5/2019 9:26:47 AM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/5/2019 9:26:47 AM
Surr: DNOP	81.5	70-130	%Rec	1	3/5/2019 9:26:47 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/2/2019 11:38:56 PM
Surr: BFB	90.8	73.8-119	%Rec	1	3/2/2019 11:38:56 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/2/2019 11:38:56 PM
Toluene	ND	0.048	mg/Kg	1	3/2/2019 11:38:56 PM
Ethylbenzene	ND	0.048	mg/Kg	1	3/2/2019 11:38:56 PM
Xylenes, Total	ND	0.096	mg/Kg	1	3/2/2019 11:38:56 PM
Surr: 4-Bromofluorobenzene	93.0	80-120	%Rec	1	3/2/2019 11:38:56 PM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	ND	60	mg/Kg	20	3/6/2019 11:02:21 AM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 30 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 76
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-031 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	ial Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	Analyst: Irm				
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	3/4/2019 6:07:56 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/4/2019 6:07:56 PM
Surr: DNOP	74.4	70-130	%Rec	1	3/4/2019 6:07:56 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	3/3/2019 12:01:44 AM
Surr: BFB	93.4	73.8-119	%Rec	1	3/3/2019 12:01:44 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	3/3/2019 12:01:44 AM
Toluene	ND	0.049	mg/Kg	1	3/3/2019 12:01:44 AM
Ethylbenzene	ND	0.049	mg/Kg	1	3/3/2019 12:01:44 AM
Xylenes, Total	ND	0.099	mg/Kg	1	3/3/2019 12:01:44 AM
Surr: 4-Bromofluorobenzene	95.3	80-120	%Rec	1	3/3/2019 12:01:44 AM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	ND	60	mg/Kg	20	3/6/2019 11:14:46 AM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 31 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 77
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-032 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	Analyst: Irm				
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	3/4/2019 6:32:16 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/4/2019 6:32:16 PM
Surr: DNOP	72.0	70-130	%Rec	1	3/4/2019 6:32:16 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	3/3/2019 12:24:32 AM
Surr: BFB	91.5	73.8-119	%Rec	1	3/3/2019 12:24:32 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	3/3/2019 12:24:32 AM
Toluene	ND	0.046	mg/Kg	1	3/3/2019 12:24:32 AM
Ethylbenzene	ND	0.046	mg/Kg	1	3/3/2019 12:24:32 AM
Xylenes, Total	ND	0.093	mg/Kg	1	3/3/2019 12:24:32 AM
Surr: 4-Bromofluorobenzene	94.0	80-120	%Rec	1	3/3/2019 12:24:32 AM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	69	60	mg/Kg	20	3/6/2019 11:27:11 AM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 32 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP 78

Project: LVP SWD

Collection Date: 2/28/2019

Lab ID: 1903003-033 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: Irm				
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	3/4/2019 6:56:43 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/4/2019 6:56:43 PM
Surr: DNOP	74.0	70-130	%Rec	1	3/4/2019 6:56:43 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/3/2019 12:47:19 AM
Surr: BFB	94.1	73.8-119	%Rec	1	3/3/2019 12:47:19 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/3/2019 12:47:19 AM
Toluene	ND	0.048	mg/Kg	1	3/3/2019 12:47:19 AM
Ethylbenzene	ND	0.048	mg/Kg	1	3/3/2019 12:47:19 AM
Xylenes, Total	ND	0.096	mg/Kg	1	3/3/2019 12:47:19 AM
Surr: 4-Bromofluorobenzene	96.5	80-120	%Rec	1	3/3/2019 12:47:19 AM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	200	60	mg/Kg	20	3/6/2019 11:39:36 AM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 33 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-034 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: Irm				
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	3/5/2019 9:50:56 AM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/5/2019 9:50:56 AM
Surr: DNOP	70.7	70-130	%Rec	1	3/5/2019 9:50:56 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	3/3/2019 1:10:08 AM
Surr: BFB	92.9	73.8-119	%Rec	1	3/3/2019 1:10:08 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/3/2019 1:10:08 AM
Toluene	ND	0.047	mg/Kg	1	3/3/2019 1:10:08 AM
Ethylbenzene	ND	0.047	mg/Kg	1	3/3/2019 1:10:08 AM
Xylenes, Total	ND	0.095	mg/Kg	1	3/3/2019 1:10:08 AM
Surr: 4-Bromofluorobenzene	95.1	80-120	%Rec	1	3/3/2019 1:10:08 AM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	ND	60	mg/Kg	20	3/6/2019 12:16:49 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 34 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Collection Date: 2/28/2019

Lab ID: 1903003-035 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: Irm				
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	3/4/2019 7:45:32 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/4/2019 7:45:32 PM
Surr: DNOP	78.1	70-130	%Rec	1	3/4/2019 7:45:32 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	3/3/2019 2:41:11 AM
Surr: BFB	94.5	73.8-119	%Rec	1	3/3/2019 2:41:11 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	3/3/2019 2:41:11 AM
Toluene	ND	0.049	mg/Kg	1	3/3/2019 2:41:11 AM
Ethylbenzene	ND	0.049	mg/Kg	1	3/3/2019 2:41:11 AM
Xylenes, Total	ND	0.098	mg/Kg	1	3/3/2019 2:41:11 AM
Surr: 4-Bromofluorobenzene	96.0	80-120	%Rec	1	3/3/2019 2:41:11 AM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	150	60	mg/Kg	20	3/6/2019 12:29:14 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 35 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 81
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-036 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: Irm				
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	3/4/2019 8:09:47 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/4/2019 8:09:47 PM
Surr: DNOP	71.8	70-130	%Rec	1	3/4/2019 8:09:47 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	3/3/2019 3:03:55 AM
Surr: BFB	95.2	73.8-119	%Rec	1	3/3/2019 3:03:55 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	3/3/2019 3:03:55 AM
Toluene	ND	0.050	mg/Kg	1	3/3/2019 3:03:55 AM
Ethylbenzene	ND	0.050	mg/Kg	1	3/3/2019 3:03:55 AM
Xylenes, Total	ND	0.10	mg/Kg	1	3/3/2019 3:03:55 AM
Surr: 4-Bromofluorobenzene	97.1	80-120	%Rec	1	3/3/2019 3:03:55 AM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	310	60	mg/Kg	20	3/6/2019 1:06:28 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 36 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP 82

Project: LVP SWD

Collection Date: 2/28/2019

Lab ID: 1903003-037 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: Irm				
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	3/5/2019 1:39:41 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/5/2019 1:39:41 PM
Surr: DNOP	82.6	70-130	%Rec	1	3/5/2019 1:39:41 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	3/3/2019 3:26:44 AM
Surr: BFB	92.9	73.8-119	%Rec	1	3/3/2019 3:26:44 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	3/3/2019 3:26:44 AM
Toluene	ND	0.046	mg/Kg	1	3/3/2019 3:26:44 AM
Ethylbenzene	ND	0.046	mg/Kg	1	3/3/2019 3:26:44 AM
Xylenes, Total	ND	0.092	mg/Kg	1	3/3/2019 3:26:44 AM
Surr: 4-Bromofluorobenzene	94.4	80-120	%Rec	1	3/3/2019 3:26:44 AM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	ND	60	mg/Kg	20	3/6/2019 1:18:52 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 37 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 83
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-038 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	Analyst: Irm				
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	3/5/2019 2:04:02 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/5/2019 2:04:02 PM
Surr: DNOP	82.2	70-130	%Rec	1	3/5/2019 2:04:02 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/3/2019 3:49:35 AM
Surr: BFB	94.9	73.8-119	%Rec	1	3/3/2019 3:49:35 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/3/2019 3:49:35 AM
Toluene	ND	0.048	mg/Kg	1	3/3/2019 3:49:35 AM
Ethylbenzene	ND	0.048	mg/Kg	1	3/3/2019 3:49:35 AM
Xylenes, Total	ND	0.097	mg/Kg	1	3/3/2019 3:49:35 AM
Surr: 4-Bromofluorobenzene	97.3	80-120	%Rec	1	3/3/2019 3:49:35 AM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	700	60	mg/Kg	20	3/6/2019 1:31:17 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 38 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 84
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-039 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	Analyst: Irm				
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	3/5/2019 2:28:32 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/5/2019 2:28:32 PM
Surr: DNOP	79.5	70-130	%Rec	1	3/5/2019 2:28:32 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	3/3/2019 4:12:24 AM
Surr: BFB	95.0	73.8-119	%Rec	1	3/3/2019 4:12:24 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	3/3/2019 4:12:24 AM
Toluene	ND	0.050	mg/Kg	1	3/3/2019 4:12:24 AM
Ethylbenzene	ND	0.050	mg/Kg	1	3/3/2019 4:12:24 AM
Xylenes, Total	ND	0.10	mg/Kg	1	3/3/2019 4:12:24 AM
Surr: 4-Bromofluorobenzene	98.0	80-120	%Rec	1	3/3/2019 4:12:24 AM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	110	60	mg/Kg	20	3/6/2019 1:43:41 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 39 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 85
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-040 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: Irm				
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	3/5/2019 2:53:02 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/5/2019 2:53:02 PM
Surr: DNOP	74.7	70-130	%Rec	1	3/5/2019 2:53:02 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	3/3/2019 4:35:12 AM
Surr: BFB	89.2	73.8-119	%Rec	1	3/3/2019 4:35:12 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/3/2019 4:35:12 AM
Toluene	ND	0.047	mg/Kg	1	3/3/2019 4:35:12 AM
Ethylbenzene	ND	0.047	mg/Kg	1	3/3/2019 4:35:12 AM
Xylenes, Total	ND	0.094	mg/Kg	1	3/3/2019 4:35:12 AM
Surr: 4-Bromofluorobenzene	91.2	80-120	%Rec	1	3/3/2019 4:35:12 AM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	210	60	mg/Kg	20	3/6/2019 1:56:06 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 40 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 86
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-041 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst: CLP
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	3/4/2019 2:49:34 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/4/2019 2:49:34 PM
Surr: DNOP	98.1	70-130	%Rec	1	3/4/2019 2:49:34 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/3/2019 11:35:49 AM
Surr: BFB	95.2	73.8-119	%Rec	1	3/3/2019 11:35:49 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/3/2019 11:35:49 AM
Toluene	ND	0.048	mg/Kg	1	3/3/2019 11:35:49 AM
Ethylbenzene	ND	0.048	mg/Kg	1	3/3/2019 11:35:49 AM
Xylenes, Total	ND	0.095	mg/Kg	1	3/3/2019 11:35:49 AM
Surr: 4-Bromofluorobenzene	89.3	80-120	%Rec	1	3/3/2019 11:35:49 AM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	120	60	mg/Kg	20	3/6/2019 2:08:30 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 41 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP 87

Project: LVP SWD

Collection Date: 2/28/2019

Lab ID: 1903003-042 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	3/4/2019 4:02:23 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/4/2019 4:02:23 PM
Surr: DNOP	97.5	70-130	%Rec	1	3/4/2019 4:02:23 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	3/3/2019 12:46:34 PM
Surr: BFB	96.2	73.8-119	%Rec	1	3/3/2019 12:46:34 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	3/3/2019 12:46:34 PM
Toluene	ND	0.047	mg/Kg	1	3/3/2019 12:46:34 PM
Ethylbenzene	ND	0.047	mg/Kg	1	3/3/2019 12:46:34 PM
Xylenes, Total	ND	0.093	mg/Kg	1	3/3/2019 12:46:34 PM
Surr: 4-Bromofluorobenzene	89.4	80-120	%Rec	1	3/3/2019 12:46:34 PM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	250	60	mg/Kg	20	3/6/2019 2:45:44 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 42 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 88
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-043 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: CLP
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	3/4/2019 4:26:41 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/4/2019 4:26:41 PM
Surr: DNOP	95.6	70-130	%Rec	1	3/4/2019 4:26:41 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	3/3/2019 1:56:29 PM
Surr: BFB	94.2	73.8-119	%Rec	1	3/3/2019 1:56:29 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	3/3/2019 1:56:29 PM
Toluene	ND	0.046	mg/Kg	1	3/3/2019 1:56:29 PM
Ethylbenzene	ND	0.046	mg/Kg	1	3/3/2019 1:56:29 PM
Xylenes, Total	ND	0.093	mg/Kg	1	3/3/2019 1:56:29 PM
Surr: 4-Bromofluorobenzene	87.3	80-120	%Rec	1	3/3/2019 1:56:29 PM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	280	59	mg/Kg	20	3/6/2019 2:58:09 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 43 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Collection Date: 2/28/2019

Lab ID: 1903003-044 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	ial Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	3/4/2019 4:51:00 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/4/2019 4:51:00 PM
Surr: DNOP	102	70-130	%Rec	1	3/4/2019 4:51:00 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	3/3/2019 2:19:47 PM
Surr: BFB	97.4	73.8-119	%Rec	1	3/3/2019 2:19:47 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	3/3/2019 2:19:47 PM
Toluene	ND	0.049	mg/Kg	1	3/3/2019 2:19:47 PM
Ethylbenzene	ND	0.049	mg/Kg	1	3/3/2019 2:19:47 PM
Xylenes, Total	ND	0.099	mg/Kg	1	3/3/2019 2:19:47 PM
Surr: 4-Bromofluorobenzene	90.8	80-120	%Rec	1	3/3/2019 2:19:47 PM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	260	60	mg/Kg	20	3/6/2019 3:10:33 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 44 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Collection Date: 2/28/2019

Lab ID: 1903003-045 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qı	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	3/4/2019 5:15:20 PM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	3/4/2019 5:15:20 PM
Surr: DNOP	102	70-130	%Rec	1	3/4/2019 5:15:20 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/3/2019 2:43:05 PM
Surr: BFB	96.1	73.8-119	%Rec	1	3/3/2019 2:43:05 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/3/2019 2:43:05 PM
Toluene	ND	0.048	mg/Kg	1	3/3/2019 2:43:05 PM
Ethylbenzene	ND	0.048	mg/Kg	1	3/3/2019 2:43:05 PM
Xylenes, Total	ND	0.097	mg/Kg	1	3/3/2019 2:43:05 PM
Surr: 4-Bromofluorobenzene	89.6	80-120	%Rec	1	3/3/2019 2:43:05 PM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	450	60	mg/Kg	20	3/6/2019 3:22:57 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 45 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Collection Date: 2/28/2019

Lab ID: 1903003-046 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qı	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	3/4/2019 5:39:35 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/4/2019 5:39:35 PM
Surr: DNOP	104	70-130	%Rec	1	3/4/2019 5:39:35 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	3/3/2019 3:06:26 PM
Surr: BFB	96.9	73.8-119	%Rec	1	3/3/2019 3:06:26 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/3/2019 3:06:26 PM
Toluene	ND	0.049	mg/Kg	1	3/3/2019 3:06:26 PM
Ethylbenzene	ND	0.049	mg/Kg	1	3/3/2019 3:06:26 PM
Xylenes, Total	ND	0.098	mg/Kg	1	3/3/2019 3:06:26 PM
Surr: 4-Bromofluorobenzene	90.5	80-120	%Rec	1	3/3/2019 3:06:26 PM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	320	60	mg/Kg	20	3/6/2019 3:35:22 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 46 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP 92

Collection Date: 2/28/2019

Lab ID: 1903003-047 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE O	Analyst: CLP				
Diesel Range Organics (DRO)	51	10	mg/Kg	1	3/4/2019 6:03:52 PM
Motor Oil Range Organics (MRO)	130	50	mg/Kg	1	3/4/2019 6:03:52 PM
Surr: DNOP	103	70-130	%Rec	1	3/4/2019 6:03:52 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/3/2019 3:29:46 PM
Surr: BFB	97.6	73.8-119	%Rec	1	3/3/2019 3:29:46 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/3/2019 3:29:46 PM
Toluene	ND	0.048	mg/Kg	1	3/3/2019 3:29:46 PM
Ethylbenzene	ND	0.048	mg/Kg	1	3/3/2019 3:29:46 PM
Xylenes, Total	ND	0.097	mg/Kg	1	3/3/2019 3:29:46 PM
Surr: 4-Bromofluorobenzene	90.9	80-120	%Rec	1	3/3/2019 3:29:46 PM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	320	60	mg/Kg	20	3/6/2019 3:47:46 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 47 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 93
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-048 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	3/4/2019 6:28:07 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/4/2019 6:28:07 PM
Surr: DNOP	102	70-130	%Rec	1	3/4/2019 6:28:07 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/3/2019 3:53:04 PM
Surr: BFB	95.7	73.8-119	%Rec	1	3/3/2019 3:53:04 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/3/2019 3:53:04 PM
Toluene	ND	0.048	mg/Kg	1	3/3/2019 3:53:04 PM
Ethylbenzene	ND	0.048	mg/Kg	1	3/3/2019 3:53:04 PM
Xylenes, Total	ND	0.097	mg/Kg	1	3/3/2019 3:53:04 PM
Surr: 4-Bromofluorobenzene	89.3	80-120	%Rec	1	3/3/2019 3:53:04 PM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	290	60	mg/Kg	20	3/6/2019 4:24:59 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 48 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Collection Date: 2/28/2019

Lab ID: 1903003-049 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	3/4/2019 7:16:23 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/4/2019 7:16:23 PM
Surr: DNOP	106	70-130	%Rec	1	3/4/2019 7:16:23 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	3/3/2019 4:16:21 PM
Surr: BFB	97.3	73.8-119	%Rec	1	3/3/2019 4:16:21 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	3/3/2019 4:16:21 PM
Toluene	ND	0.046	mg/Kg	1	3/3/2019 4:16:21 PM
Ethylbenzene	ND	0.046	mg/Kg	1	3/3/2019 4:16:21 PM
Xylenes, Total	ND	0.092	mg/Kg	1	3/3/2019 4:16:21 PM
Surr: 4-Bromofluorobenzene	90.7	80-120	%Rec	1	3/3/2019 4:16:21 PM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	360	60	mg/Kg	20	3/6/2019 4:37:24 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 49 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 95
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-050 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	3/4/2019 7:40:27 PM
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	3/4/2019 7:40:27 PM
Surr: DNOP	94.2	70-130	%Rec	1	3/4/2019 7:40:27 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	3/3/2019 4:39:39 PM
Surr: BFB	97.3	73.8-119	%Rec	1	3/3/2019 4:39:39 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	3/3/2019 4:39:39 PM
Toluene	ND	0.046	mg/Kg	1	3/3/2019 4:39:39 PM
Ethylbenzene	ND	0.046	mg/Kg	1	3/3/2019 4:39:39 PM
Xylenes, Total	ND	0.092	mg/Kg	1	3/3/2019 4:39:39 PM
Surr: 4-Bromofluorobenzene	90.1	80-120	%Rec	1	3/3/2019 4:39:39 PM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	330	60	mg/Kg	20	3/6/2019 5:39:26 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 50 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 96
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-051 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: CLP
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	3/4/2019 8:04:27 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/4/2019 8:04:27 PM
Surr: DNOP	95.7	70-130	%Rec	1	3/4/2019 8:04:27 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/3/2019 6:36:23 PM
Surr: BFB	95.8	73.8-119	%Rec	1	3/3/2019 6:36:23 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/3/2019 6:36:23 PM
Toluene	ND	0.048	mg/Kg	1	3/3/2019 6:36:23 PM
Ethylbenzene	ND	0.048	mg/Kg	1	3/3/2019 6:36:23 PM
Xylenes, Total	ND	0.096	mg/Kg	1	3/3/2019 6:36:23 PM
Surr: 4-Bromofluorobenzene	89.3	80-120	%Rec	1	3/3/2019 6:36:23 PM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	430	60	mg/Kg	20	3/6/2019 5:51:51 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 51 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-052 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	ial Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	3/4/2019 8:28:24 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/4/2019 8:28:24 PM
Surr: DNOP	95.0	70-130	%Rec	1	3/4/2019 8:28:24 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	3/3/2019 6:59:49 PM
Surr: BFB	92.7	73.8-119	%Rec	1	3/3/2019 6:59:49 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/3/2019 6:59:49 PM
Toluene	ND	0.047	mg/Kg	1	3/3/2019 6:59:49 PM
Ethylbenzene	ND	0.047	mg/Kg	1	3/3/2019 6:59:49 PM
Xylenes, Total	ND	0.094	mg/Kg	1	3/3/2019 6:59:49 PM
Surr: 4-Bromofluorobenzene	86.3	80-120	%Rec	1	3/3/2019 6:59:49 PM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	390	60	mg/Kg	20	3/6/2019 6:04:15 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 52 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP 98

Project: LVP SWD

Collection Date: 2/28/2019

Lab ID: 1903003-053 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	3/4/2019 8:52:19 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/4/2019 8:52:19 PM
Surr: DNOP	96.3	70-130	%Rec	1	3/4/2019 8:52:19 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/3/2019 7:23:18 PM
Surr: BFB	94.0	73.8-119	%Rec	1	3/3/2019 7:23:18 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/3/2019 7:23:18 PM
Toluene	ND	0.048	mg/Kg	1	3/3/2019 7:23:18 PM
Ethylbenzene	ND	0.048	mg/Kg	1	3/3/2019 7:23:18 PM
Xylenes, Total	ND	0.096	mg/Kg	1	3/3/2019 7:23:18 PM
Surr: 4-Bromofluorobenzene	86.8	80-120	%Rec	1	3/3/2019 7:23:18 PM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	390	60	mg/Kg	20	3/6/2019 6:16:40 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 53 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Collection Date: 2/28/2019

Lab ID: 1903003-054 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	3/4/2019 9:16:11 PM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	3/4/2019 9:16:11 PM
Surr: DNOP	97.3	70-130	%Rec	1	3/4/2019 9:16:11 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/3/2019 7:46:42 PM
Surr: BFB	93.0	73.8-119	%Rec	1	3/3/2019 7:46:42 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/3/2019 7:46:42 PM
Toluene	ND	0.048	mg/Kg	1	3/3/2019 7:46:42 PM
Ethylbenzene	ND	0.048	mg/Kg	1	3/3/2019 7:46:42 PM
Xylenes, Total	ND	0.097	mg/Kg	1	3/3/2019 7:46:42 PM
Surr: 4-Bromofluorobenzene	86.6	80-120	%Rec	1	3/3/2019 7:46:42 PM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	1300	60	mg/Kg	20	3/6/2019 6:29:04 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 54 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-055 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	ial Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	3/4/2019 9:40:04 PM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	3/4/2019 9:40:04 PM
Surr: DNOP	100	70-130	%Rec	1	3/4/2019 9:40:04 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	3/3/2019 8:10:09 PM
Surr: BFB	91.9	73.8-119	%Rec	1	3/3/2019 8:10:09 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	3/3/2019 8:10:09 PM
Toluene	ND	0.047	mg/Kg	1	3/3/2019 8:10:09 PM
Ethylbenzene	ND	0.047	mg/Kg	1	3/3/2019 8:10:09 PM
Xylenes, Total	ND	0.093	mg/Kg	1	3/3/2019 8:10:09 PM
Surr: 4-Bromofluorobenzene	85.0	80-120	%Rec	1	3/3/2019 8:10:09 PM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	320	60	mg/Kg	20	3/6/2019 6:41:29 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 55 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 101
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-056 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qı	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	3/4/2019 10:03:50 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/4/2019 10:03:50 PM
Surr: DNOP	101	70-130	%Rec	1	3/4/2019 10:03:50 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	3/3/2019 8:33:27 PM
Surr: BFB	92.5	73.8-119	%Rec	1	3/3/2019 8:33:27 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	3/3/2019 8:33:27 PM
Toluene	ND	0.049	mg/Kg	1	3/3/2019 8:33:27 PM
Ethylbenzene	ND	0.049	mg/Kg	1	3/3/2019 8:33:27 PM
Xylenes, Total	ND	0.098	mg/Kg	1	3/3/2019 8:33:27 PM
Surr: 4-Bromofluorobenzene	86.1	80-120	%Rec	1	3/3/2019 8:33:27 PM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	690	60	mg/Kg	20	3/6/2019 6:53:54 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 56 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Collection Date: 2/28/2019

Lab ID: 1903003-057 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	3/4/2019 10:27:37 PM
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	3/4/2019 10:27:37 PM
Surr: DNOP	94.3	70-130	%Rec	1	3/4/2019 10:27:37 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	3/3/2019 8:56:45 PM
Surr: BFB	91.6	73.8-119	%Rec	1	3/3/2019 8:56:45 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/3/2019 8:56:45 PM
Toluene	ND	0.047	mg/Kg	1	3/3/2019 8:56:45 PM
Ethylbenzene	ND	0.047	mg/Kg	1	3/3/2019 8:56:45 PM
Xylenes, Total	ND	0.095	mg/Kg	1	3/3/2019 8:56:45 PM
Surr: 4-Bromofluorobenzene	84.9	80-120	%Rec	1	3/3/2019 8:56:45 PM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	460	60	mg/Kg	20	3/6/2019 7:06:19 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 57 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP 103

Project: LVP SWD

Collection Date: 2/28/2019

Lab ID: 1903003-058 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analyst: CLP
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	3/4/2019 10:51:19 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/4/2019 10:51:19 PM
Surr: DNOP	101	70-130	%Rec	1	3/4/2019 10:51:19 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	3/3/2019 9:20:19 PM
Surr: BFB	89.4	73.8-119	%Rec	1	3/3/2019 9:20:19 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	3/3/2019 9:20:19 PM
Toluene	ND	0.046	mg/Kg	1	3/3/2019 9:20:19 PM
Ethylbenzene	ND	0.046	mg/Kg	1	3/3/2019 9:20:19 PM
Xylenes, Total	ND	0.093	mg/Kg	1	3/3/2019 9:20:19 PM
Surr: 4-Bromofluorobenzene	82.9	80-120	%Rec	1	3/3/2019 9:20:19 PM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	130	60	mg/Kg	20	3/6/2019 7:43:32 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 58 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 104
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-059 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analyst: CLP
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	3/4/2019 11:15:02 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/4/2019 11:15:02 PM
Surr: DNOP	98.1	70-130	%Rec	1	3/4/2019 11:15:02 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	3/3/2019 9:43:50 PM
Surr: BFB	92.4	73.8-119	%Rec	1	3/3/2019 9:43:50 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	3/3/2019 9:43:50 PM
Toluene	ND	0.047	mg/Kg	1	3/3/2019 9:43:50 PM
Ethylbenzene	ND	0.047	mg/Kg	1	3/3/2019 9:43:50 PM
Xylenes, Total	ND	0.094	mg/Kg	1	3/3/2019 9:43:50 PM
Surr: 4-Bromofluorobenzene	85.7	80-120	%Rec	1	3/3/2019 9:43:50 PM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	240	60	mg/Kg	20	3/6/2019 8:20:46 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 59 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 105
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-060 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst: CLP
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	3/4/2019 11:38:46 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/4/2019 11:38:46 PM
Surr: DNOP	98.5	70-130	%Rec	1	3/4/2019 11:38:46 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	3/3/2019 10:07:21 PM
Surr: BFB	93.9	73.8-119	%Rec	1	3/3/2019 10:07:21 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/3/2019 10:07:21 PM
Toluene	ND	0.047	mg/Kg	1	3/3/2019 10:07:21 PM
Ethylbenzene	ND	0.047	mg/Kg	1	3/3/2019 10:07:21 PM
Xylenes, Total	ND	0.095	mg/Kg	1	3/3/2019 10:07:21 PM
Surr: 4-Bromofluorobenzene	87.2	80-120	%Rec	1	3/3/2019 10:07:21 PM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	300	60	mg/Kg	20	3/6/2019 8:33:11 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 60 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 106
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-061 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: Irm				
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	3/5/2019 4:13:25 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/5/2019 4:13:25 PM
Surr: DNOP	74.2	70-130	%Rec	1	3/5/2019 4:13:25 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	3/3/2019 10:43:44 AM
Surr: BFB	90.4	73.8-119	%Rec	1	3/3/2019 10:43:44 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	3/3/2019 10:43:44 AM
Toluene	ND	0.049	mg/Kg	1	3/3/2019 10:43:44 AM
Ethylbenzene	ND	0.049	mg/Kg	1	3/3/2019 10:43:44 AM
Xylenes, Total	ND	0.099	mg/Kg	1	3/3/2019 10:43:44 AM
Surr: 4-Bromofluorobenzene	92.9	80-120	%Rec	1	3/3/2019 10:43:44 AM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	280	60	mg/Kg	20	3/6/2019 8:45:36 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 61 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-062 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	ial Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: Irm				
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	3/5/2019 5:26:33 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/5/2019 5:26:33 PM
Surr: DNOP	77.8	70-130	%Rec	1	3/5/2019 5:26:33 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	3/3/2019 11:52:10 AM
Surr: BFB	93.5	73.8-119	%Rec	1	3/3/2019 11:52:10 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	3/3/2019 11:52:10 AM
Toluene	ND	0.047	mg/Kg	1	3/3/2019 11:52:10 AM
Ethylbenzene	ND	0.047	mg/Kg	1	3/3/2019 11:52:10 AM
Xylenes, Total	ND	0.093	mg/Kg	1	3/3/2019 11:52:10 AM
Surr: 4-Bromofluorobenzene	98.0	80-120	%Rec	1	3/3/2019 11:52:10 AM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	330	60	mg/Kg	20	3/6/2019 8:58:00 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 62 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Collection Date: 2/28/2019

Lab ID: 1903003-063 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: Irm				
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	3/5/2019 5:51:03 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/5/2019 5:51:03 PM
Surr: DNOP	72.7	70-130	%Rec	1	3/5/2019 5:51:03 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/3/2019 1:00:44 PM
Surr: BFB	92.7	73.8-119	%Rec	1	3/3/2019 1:00:44 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/3/2019 1:00:44 PM
Toluene	ND	0.048	mg/Kg	1	3/3/2019 1:00:44 PM
Ethylbenzene	ND	0.048	mg/Kg	1	3/3/2019 1:00:44 PM
Xylenes, Total	ND	0.096	mg/Kg	1	3/3/2019 1:00:44 PM
Surr: 4-Bromofluorobenzene	95.3	80-120	%Rec	1	3/3/2019 1:00:44 PM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	230	60	mg/Kg	20	3/6/2019 9:10:25 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 63 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-064 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OI	Analyst: Irm				
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	3/5/2019 6:39:52 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/5/2019 6:39:52 PM
Surr: DNOP	80.3	70-130	%Rec	1	3/5/2019 6:39:52 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	3/3/2019 1:23:39 PM
Surr: BFB	93.1	73.8-119	%Rec	1	3/3/2019 1:23:39 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	3/3/2019 1:23:39 PM
Toluene	ND	0.050	mg/Kg	1	3/3/2019 1:23:39 PM
Ethylbenzene	ND	0.050	mg/Kg	1	3/3/2019 1:23:39 PM
Xylenes, Total	ND	0.10	mg/Kg	1	3/3/2019 1:23:39 PM
Surr: 4-Bromofluorobenzene	95.4	80-120	%Rec	1	3/3/2019 1:23:39 PM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	270	60	mg/Kg	20	3/6/2019 9:22:49 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 64 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-065 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: Irm				
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	3/5/2019 7:04:15 PM
Motor Oil Range Organics (MRO)	ND	51	mg/Kg	1	3/5/2019 7:04:15 PM
Surr: DNOP	78.9	70-130	%Rec	1	3/5/2019 7:04:15 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/3/2019 1:46:33 PM
Surr: BFB	91.9	73.8-119	%Rec	1	3/3/2019 1:46:33 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/3/2019 1:46:33 PM
Toluene	ND	0.048	mg/Kg	1	3/3/2019 1:46:33 PM
Ethylbenzene	ND	0.048	mg/Kg	1	3/3/2019 1:46:33 PM
Xylenes, Total	ND	0.097	mg/Kg	1	3/3/2019 1:46:33 PM
Surr: 4-Bromofluorobenzene	94.4	80-120	%Rec	1	3/3/2019 1:46:33 PM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	260	60	mg/Kg	20	3/6/2019 9:35:14 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 65 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 111
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-066 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qı	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: Irm				
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	3/5/2019 7:28:38 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/5/2019 7:28:38 PM
Surr: DNOP	79.9	70-130	%Rec	1	3/5/2019 7:28:38 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/3/2019 2:09:28 PM
Surr: BFB	92.2	73.8-119	%Rec	1	3/3/2019 2:09:28 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/3/2019 2:09:28 PM
Toluene	ND	0.048	mg/Kg	1	3/3/2019 2:09:28 PM
Ethylbenzene	ND	0.048	mg/Kg	1	3/3/2019 2:09:28 PM
Xylenes, Total	ND	0.096	mg/Kg	1	3/3/2019 2:09:28 PM
Surr: 4-Bromofluorobenzene	93.9	80-120	%Rec	1	3/3/2019 2:09:28 PM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	290	60	mg/Kg	20	3/6/2019 10:12:29 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 66 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Collection Date: 2/28/2019

Lab ID: 1903003-067 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS				Analyst: Irm
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	3/6/2019 9:44:04 AM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/6/2019 9:44:04 AM
Surr: DNOP	77.0	70-130	%Rec	1	3/6/2019 9:44:04 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	3/3/2019 2:32:21 PM
Surr: BFB	90.8	73.8-119	%Rec	1	3/3/2019 2:32:21 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	3/3/2019 2:32:21 PM
Toluene	ND	0.049	mg/Kg	1	3/3/2019 2:32:21 PM
Ethylbenzene	ND	0.049	mg/Kg	1	3/3/2019 2:32:21 PM
Xylenes, Total	ND	0.098	mg/Kg	1	3/3/2019 2:32:21 PM
Surr: 4-Bromofluorobenzene	92.9	80-120	%Rec	1	3/3/2019 2:32:21 PM
EPA METHOD 300.0: ANIONS					Analyst: smb
Chloride	270	60	mg/Kg	20	3/6/2019 10:24:54 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 67 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 113
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-068 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: CLP				
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	3/6/2019 7:58:13 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/6/2019 7:58:13 PM
Surr: DNOP	87.8	70-130	%Rec	1	3/6/2019 7:58:13 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/3/2019 2:55:13 PM
Surr: BFB	93.7	73.8-119	%Rec	1	3/3/2019 2:55:13 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/3/2019 2:55:13 PM
Toluene	ND	0.048	mg/Kg	1	3/3/2019 2:55:13 PM
Ethylbenzene	ND	0.048	mg/Kg	1	3/3/2019 2:55:13 PM
Xylenes, Total	ND	0.097	mg/Kg	1	3/3/2019 2:55:13 PM
Surr: 4-Bromofluorobenzene	94.4	80-120	%Rec	1	3/3/2019 2:55:13 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	340	60	mg/Kg	20	3/7/2019 12:29:48 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 68 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 114
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-069 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	3/6/2019 8:22:20 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/6/2019 8:22:20 PM
Surr: DNOP	89.6	70-130	%Rec	1	3/6/2019 8:22:20 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	3/3/2019 3:18:05 PM
Surr: BFB	92.5	73.8-119	%Rec	1	3/3/2019 3:18:05 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	3/3/2019 3:18:05 PM
Toluene	ND	0.047	mg/Kg	1	3/3/2019 3:18:05 PM
Ethylbenzene	ND	0.047	mg/Kg	1	3/3/2019 3:18:05 PM
Xylenes, Total	ND	0.093	mg/Kg	1	3/3/2019 3:18:05 PM
Surr: 4-Bromofluorobenzene	94.2	80-120	%Rec	1	3/3/2019 3:18:05 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	390	60	mg/Kg	20	3/7/2019 1:07:02 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 69 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 115
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-070 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	3/6/2019 8:46:25 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/6/2019 8:46:25 PM
Surr: DNOP	86.3	70-130	%Rec	1	3/6/2019 8:46:25 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	3/3/2019 3:40:56 PM
Surr: BFB	92.0	73.8-119	%Rec	1	3/3/2019 3:40:56 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	3/3/2019 3:40:56 PM
Toluene	ND	0.046	mg/Kg	1	3/3/2019 3:40:56 PM
Ethylbenzene	ND	0.046	mg/Kg	1	3/3/2019 3:40:56 PM
Xylenes, Total	ND	0.092	mg/Kg	1	3/3/2019 3:40:56 PM
Surr: 4-Bromofluorobenzene	94.0	80-120	%Rec	1	3/3/2019 3:40:56 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	310	60	mg/Kg	20	3/7/2019 1:19:26 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 70 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 116
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-071 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: CLP
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	3/6/2019 9:10:29 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/6/2019 9:10:29 PM
Surr: DNOP	90.9	70-130	%Rec	1	3/6/2019 9:10:29 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	3/3/2019 5:35:17 PM
Surr: BFB	92.3	73.8-119	%Rec	1	3/3/2019 5:35:17 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	3/3/2019 5:35:17 PM
Toluene	ND	0.050	mg/Kg	1	3/3/2019 5:35:17 PM
Ethylbenzene	ND	0.050	mg/Kg	1	3/3/2019 5:35:17 PM
Xylenes, Total	ND	0.099	mg/Kg	1	3/3/2019 5:35:17 PM
Surr: 4-Bromofluorobenzene	94.6	80-120	%Rec	1	3/3/2019 5:35:17 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	300	60	mg/Kg	20	3/7/2019 1:31:51 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 71 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP 117

Project: LVP SWD

Collection Date: 2/28/2019

Lab ID: 1903003-072 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR		Analyst: Irm			
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	3/5/2019 9:54:12 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/5/2019 9:54:12 PM
Surr: DNOP	73.0	70-130	%Rec	1	3/5/2019 9:54:12 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	3/3/2019 5:58:10 PM
Surr: BFB	89.7	73.8-119	%Rec	1	3/3/2019 5:58:10 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	3/3/2019 5:58:10 PM
Toluene	ND	0.049	mg/Kg	1	3/3/2019 5:58:10 PM
Ethylbenzene	ND	0.049	mg/Kg	1	3/3/2019 5:58:10 PM
Xylenes, Total	ND	0.098	mg/Kg	1	3/3/2019 5:58:10 PM
Surr: 4-Bromofluorobenzene	91.9	80-120	%Rec	1	3/3/2019 5:58:10 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	170	60	mg/Kg	20	3/7/2019 1:44:16 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 72 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP 118
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-073 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	3/6/2019 9:34:33 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/6/2019 9:34:33 PM
Surr: DNOP	84.0	70-130	%Rec	1	3/6/2019 9:34:33 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	3/3/2019 6:21:02 PM
Surr: BFB	90.7	73.8-119	%Rec	1	3/3/2019 6:21:02 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	3/3/2019 6:21:02 PM
Toluene	ND	0.046	mg/Kg	1	3/3/2019 6:21:02 PM
Ethylbenzene	ND	0.046	mg/Kg	1	3/3/2019 6:21:02 PM
Xylenes, Total	ND	0.093	mg/Kg	1	3/3/2019 6:21:02 PM
Surr: 4-Bromofluorobenzene	92.1	80-120	%Rec	1	3/3/2019 6:21:02 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	300	60	mg/Kg	20	3/7/2019 2:21:30 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 73 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-074 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR		Analyst: CLP			
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	3/6/2019 9:58:33 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/6/2019 9:58:33 PM
Surr: DNOP	88.7	70-130	%Rec	1	3/6/2019 9:58:33 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/3/2019 6:43:54 PM
Surr: BFB	89.6	73.8-119	%Rec	1	3/3/2019 6:43:54 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/3/2019 6:43:54 PM
Toluene	ND	0.048	mg/Kg	1	3/3/2019 6:43:54 PM
Ethylbenzene	ND	0.048	mg/Kg	1	3/3/2019 6:43:54 PM
Xylenes, Total	ND	0.095	mg/Kg	1	3/3/2019 6:43:54 PM
Surr: 4-Bromofluorobenzene	91.9	80-120	%Rec	1	3/3/2019 6:43:54 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	480	59	mg/Kg	20	3/7/2019 2:33:55 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 74 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-075 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	3/6/2019 10:22:32 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/6/2019 10:22:32 PM
Surr: DNOP	95.4	70-130	%Rec	1	3/6/2019 10:22:32 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	3/3/2019 7:06:44 PM
Surr: BFB	91.4	73.8-119	%Rec	1	3/3/2019 7:06:44 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	3/3/2019 7:06:44 PM
Toluene	ND	0.050	mg/Kg	1	3/3/2019 7:06:44 PM
Ethylbenzene	ND	0.050	mg/Kg	1	3/3/2019 7:06:44 PM
Xylenes, Total	ND	0.10	mg/Kg	1	3/3/2019 7:06:44 PM
Surr: 4-Bromofluorobenzene	93.4	80-120	%Rec	1	3/3/2019 7:06:44 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	590	59	mg/Kg	20	3/7/2019 2:46:20 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 75 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP 121

Project: LVP SWD

Collection Date: 2/28/2019

Lab ID: 1903003-076 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	Analyst: CLP				
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	3/6/2019 10:46:30 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/6/2019 10:46:30 PM
Surr: DNOP	95.9	70-130	%Rec	1	3/6/2019 10:46:30 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	3/3/2019 7:29:37 PM
Surr: BFB	90.5	73.8-119	%Rec	1	3/3/2019 7:29:37 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	3/3/2019 7:29:37 PM
Toluene	ND	0.046	mg/Kg	1	3/3/2019 7:29:37 PM
Ethylbenzene	ND	0.046	mg/Kg	1	3/3/2019 7:29:37 PM
Xylenes, Total	ND	0.093	mg/Kg	1	3/3/2019 7:29:37 PM
Surr: 4-Bromofluorobenzene	92.8	80-120	%Rec	1	3/3/2019 7:29:37 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	290	60	mg/Kg	20	3/7/2019 2:58:44 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 76 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP 122

Collection Date: 2/28/2019

Lab ID: 1903003-077 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst: CLP
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	3/6/2019 11:10:26 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/6/2019 11:10:26 PM
Surr: DNOP	91.1	70-130	%Rec	1	3/6/2019 11:10:26 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/3/2019 7:52:30 PM
Surr: BFB	92.4	73.8-119	%Rec	1	3/3/2019 7:52:30 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/3/2019 7:52:30 PM
Toluene	ND	0.048	mg/Kg	1	3/3/2019 7:52:30 PM
Ethylbenzene	ND	0.048	mg/Kg	1	3/3/2019 7:52:30 PM
Xylenes, Total	ND	0.096	mg/Kg	1	3/3/2019 7:52:30 PM
Surr: 4-Bromofluorobenzene	94.4	80-120	%Rec	1	3/3/2019 7:52:30 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	440	60	mg/Kg	20	3/7/2019 3:11:08 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 77 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP 123

Project: LVP SWD

Collection Date: 2/28/2019

Lab ID: 1903003-078 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: CLP
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	3/6/2019 11:34:22 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/6/2019 11:34:22 PM
Surr: DNOP	82.6	70-130	%Rec	1	3/6/2019 11:34:22 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	3/3/2019 8:15:19 PM
Surr: BFB	92.5	73.8-119	%Rec	1	3/3/2019 8:15:19 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/3/2019 8:15:19 PM
Toluene	ND	0.049	mg/Kg	1	3/3/2019 8:15:19 PM
Ethylbenzene	ND	0.049	mg/Kg	1	3/3/2019 8:15:19 PM
Xylenes, Total	ND	0.098	mg/Kg	1	3/3/2019 8:15:19 PM
Surr: 4-Bromofluorobenzene	93.9	80-120	%Rec	1	3/3/2019 8:15:19 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	230	60	mg/Kg	20	3/7/2019 3:23:33 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 78 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SW 1

Project: LVP SWD

Collection Date: 2/28/2019

Lab ID: 1903003-079 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: CLP
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	3/6/2019 11:58:15 PM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/6/2019 11:58:15 PM
Surr: DNOP	99.5	70-130	%Rec	1	3/6/2019 11:58:15 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	3/3/2019 8:38:07 PM
Surr: BFB	93.1	73.8-119	%Rec	1	3/3/2019 8:38:07 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	3/3/2019 8:38:07 PM
Toluene	ND	0.046	mg/Kg	1	3/3/2019 8:38:07 PM
Ethylbenzene	ND	0.046	mg/Kg	1	3/3/2019 8:38:07 PM
Xylenes, Total	ND	0.093	mg/Kg	1	3/3/2019 8:38:07 PM
Surr: 4-Bromofluorobenzene	94.5	80-120	%Rec	1	3/3/2019 8:38:07 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	70	60	mg/Kg	20	3/7/2019 3:35:58 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 79 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Collection Date: 2/28/2019

Lab ID: 1903003-080 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: CLP
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	3/7/2019 12:22:06 AM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/7/2019 12:22:06 AM
Surr: DNOP	99.1	70-130	%Rec	1	3/7/2019 12:22:06 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/3/2019 9:00:46 PM
Surr: BFB	94.2	73.8-119	%Rec	1	3/3/2019 9:00:46 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/3/2019 9:00:46 PM
Toluene	ND	0.048	mg/Kg	1	3/3/2019 9:00:46 PM
Ethylbenzene	ND	0.048	mg/Kg	1	3/3/2019 9:00:46 PM
Xylenes, Total	ND	0.096	mg/Kg	1	3/3/2019 9:00:46 PM
Surr: 4-Bromofluorobenzene	96.4	80-120	%Rec	1	3/3/2019 9:00:46 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	72	59	mg/Kg	20	3/7/2019 3:48:22 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 80 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SW 3
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-081 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OF	Analyst: Irm				
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	3/6/2019 11:12:56 AM
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/6/2019 11:12:56 AM
Surr: DNOP	76.8	70-130	%Rec	1	3/6/2019 11:12:56 AM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/4/2019 2:18:34 PM
Surr: BFB	94.3	73.8-119	%Rec	1	3/4/2019 2:18:34 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/4/2019 2:18:34 PM
Toluene	ND	0.048	mg/Kg	1	3/4/2019 2:18:34 PM
Ethylbenzene	ND	0.048	mg/Kg	1	3/4/2019 2:18:34 PM
Xylenes, Total	ND	0.096	mg/Kg	1	3/4/2019 2:18:34 PM
Surr: 4-Bromofluorobenzene	87.6	80-120	%Rec	1	3/4/2019 2:18:34 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	550	60	mg/Kg	20	3/7/2019 4:00:47 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 81 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SW 4

Project: LVP SWD

Collection Date: 2/28/2019

Lab ID: 1903003-082 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: Irm
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	3/5/2019 8:48:19 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/5/2019 8:48:19 PM
Surr: DNOP	84.5	70-130	%Rec	1	3/5/2019 8:48:19 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/4/2019 2:41:56 PM
Surr: BFB	93.5	73.8-119	%Rec	1	3/4/2019 2:41:56 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/4/2019 2:41:56 PM
Toluene	ND	0.048	mg/Kg	1	3/4/2019 2:41:56 PM
Ethylbenzene	ND	0.048	mg/Kg	1	3/4/2019 2:41:56 PM
Xylenes, Total	ND	0.095	mg/Kg	1	3/4/2019 2:41:56 PM
Surr: 4-Bromofluorobenzene	86.6	80-120	%Rec	1	3/4/2019 2:41:56 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	560	59	mg/Kg	20	3/7/2019 4:13:11 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 82 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SW 5
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-083 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	RGANICS				Analyst: Irm
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	3/5/2019 9:10:15 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/5/2019 9:10:15 PM
Surr: DNOP	78.5	70-130	%Rec	1	3/5/2019 9:10:15 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	3/4/2019 3:05:19 PM
Surr: BFB	93.4	73.8-119	%Rec	1	3/4/2019 3:05:19 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/4/2019 3:05:19 PM
Toluene	ND	0.049	mg/Kg	1	3/4/2019 3:05:19 PM
Ethylbenzene	ND	0.049	mg/Kg	1	3/4/2019 3:05:19 PM
Xylenes, Total	ND	0.097	mg/Kg	1	3/4/2019 3:05:19 PM
Surr: 4-Bromofluorobenzene	87.7	80-120	%Rec	1	3/4/2019 3:05:19 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	600	60	mg/Kg	20	3/7/2019 4:50:25 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 83 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SW 6
Project: LVP SWD
Collection Date: 2/28/2019

Lab ID: 1903003-084 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: Irm
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	3/5/2019 9:32:27 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/5/2019 9:32:27 PM
Surr: DNOP	86.3	70-130	%Rec	1	3/5/2019 9:32:27 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	3/4/2019 3:28:38 PM
Surr: BFB	93.2	73.8-119	%Rec	1	3/4/2019 3:28:38 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.025	mg/Kg	1	3/4/2019 3:28:38 PM
Toluene	ND	0.050	mg/Kg	1	3/4/2019 3:28:38 PM
Ethylbenzene	ND	0.050	mg/Kg	1	3/4/2019 3:28:38 PM
Xylenes, Total	ND	0.10	mg/Kg	1	3/4/2019 3:28:38 PM
Surr: 4-Bromofluorobenzene	86.7	80-120	%Rec	1	3/4/2019 3:28:38 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	850	60	mg/Kg	20	3/7/2019 5:02:50 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 84 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SW 7

Project: LVP SWD

Collection Date: 2/28/2019

Lab ID: 1903003-085 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: Irm
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	3/5/2019 9:54:21 PM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/5/2019 9:54:21 PM
Surr: DNOP	80.3	70-130	%Rec	1	3/5/2019 9:54:21 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	3/4/2019 3:51:53 PM
Surr: BFB	92.9	73.8-119	%Rec	1	3/4/2019 3:51:53 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.023	mg/Kg	1	3/4/2019 3:51:53 PM
Toluene	ND	0.047	mg/Kg	1	3/4/2019 3:51:53 PM
Ethylbenzene	ND	0.047	mg/Kg	1	3/4/2019 3:51:53 PM
Xylenes, Total	ND	0.094	mg/Kg	1	3/4/2019 3:51:53 PM
Surr: 4-Bromofluorobenzene	86.8	80-120	%Rec	1	3/4/2019 3:51:53 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	570	60	mg/Kg	20	3/7/2019 5:15:14 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 85 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 3/8/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SW 8

Project: LVP SWD

Collection Date: 2/28/2019

Lab ID: 1903003-086 **Matrix:** SOIL **Received Date:** 3/1/2019 8:45:00 AM

Analyses	Result	RL Qu	ual Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst: Irm
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	3/5/2019 10:16:23 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/5/2019 10:16:23 PM
Surr: DNOP	77.4	70-130	%Rec	1	3/5/2019 10:16:23 PM
EPA METHOD 8015D: GASOLINE RANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	3/4/2019 5:48:12 PM
Surr: BFB	89.8	73.8-119	%Rec	1	3/4/2019 5:48:12 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.024	mg/Kg	1	3/4/2019 5:48:12 PM
Toluene	ND	0.049	mg/Kg	1	3/4/2019 5:48:12 PM
Ethylbenzene	ND	0.049	mg/Kg	1	3/4/2019 5:48:12 PM
Xylenes, Total	ND	0.097	mg/Kg	1	3/4/2019 5:48:12 PM
Surr: 4-Bromofluorobenzene	84.1	80-120	%Rec	1	3/4/2019 5:48:12 PM
EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	490	60	mg/Kg	20	3/7/2019 5:27:39 PM

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 86 of 101
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#: **1903003**

08-Mar-19

Client: WPX Energy
Project: LVP SWD

Sample ID: MB-43497 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 43497 RunNo: 58116

Prep Date: 3/5/2019 Analysis Date: 3/5/2019 SeqNo: 1949532 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride ND 1.5

Sample ID: LCS-43497 SampType: LCS TestCode: EPA Method 300.0: Anions Client ID: LCSS Batch ID: 43497 RunNo: 58116 Prep Date: 3/5/2019 Analysis Date: 3/5/2019 SeqNo: 1949533 Units: mg/Kg SPK value SPK Ref Val **RPDLimit** Analyte Result **PQL** %REC LowLimit HighLimit %RPD Qual

Chloride 14 1.5 15.00 0 92.1 90 110

Sample ID: MB-43521 SampType: MBLK TestCode: EPA Method 300.0: Anions Client ID: PBS Batch ID: 43521 RunNo: 58116 3/5/2019 Analysis Date: 3/5/2019 Prep Date: SeqNo: 1949571 Units: mg/Kg Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit %RPD **RPDLimit** HighLimit Qual

Chloride ND 1.5

Sample ID: LCS-43521 SampType: LCS TestCode: EPA Method 300.0: Anions Client ID: LCSS RunNo: 58116 Batch ID: 43521 Units: mg/Kg Prep Date: 3/5/2019 Analysis Date: 3/5/2019 SeqNo: 1949572 Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual

Chloride 14 1.5 15.00 0 91.8 90 110

Sample ID: MB-43527 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: **PBS** Batch ID: **43527** RunNo: **58179**

Prep Date: 3/6/2019 Analysis Date: 3/6/2019 SeqNo: 1951094 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride ND 1.5

Sample ID: LCS-43527 SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 43527 RunNo: 58179

Prep Date: 3/6/2019 Analysis Date: 3/6/2019 SeqNo: 1951095 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride 14 1.5 15.00 0 92.3 90 110

Qualifiers:

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

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1903003**

08-Mar-19

Client: WPX Energy Project: LVP SWD

Sample ID: MB-43532 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 43532 RunNo: 58179

Prep Date: 3/6/2019 Analysis Date: 3/6/2019 SeqNo: 1951124 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride ND 1.5

 Sample ID: LCS-43532
 SampType: LCS
 TestCode: EPA Method 300.0: Anions

 Client ID: LCSS
 Batch ID: 43532
 RunNo: 58179

 Prep Date: 3/6/2019
 Analysis Date: 3/6/2019
 SeqNo: 1951125
 Units: mg/Kg

Frep Date. 3/6/2019 Analysis Date. 3/6/2019 Sequito. 1931123 Offics. mg/kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Chloride 14 1.5 15.00 0 93.1 90 110

Sample ID: MB-43555 SampType: mblk TestCode: EPA Method 300.0: Anions Client ID: PBS Batch ID: 43555 RunNo: 58187 Prep Date: 3/7/2019 Analysis Date: 3/7/2019 Units: mg/Kg SeqNo: 1952520 SPK value SPK Ref Val %REC LowLimit **RPDLimit** Analyte Result **PQL** HighLimit %RPD Qual

Chloride ND 1.5

Sample ID: LCS-43555 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 43555 RunNo: 58187

Prep Date: 3/7/2019 Analysis Date: 3/7/2019 SeqNo: 1952521 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride 14 1.5 15.00 0 95.0 90 110

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
 - S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
 - Carrata all Nat In Danas

Sample container temperature is out of limit as specified

- P Sample pH Not In Range
- RL Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1903003**

08-Mar-19

Client: WPX Energy Project: LVP SWD

Sample ID: LCS-43436	SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics									
Client ID: LCSS	Batch	ID: 43 4	436	F	RunNo: 5	8076				
Prep Date: 3/1/2019	Analysis Da	ate: 3/	4/2019	8	SeqNo: 1	947282	Units: mg/h	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	93.4	63.9	124			
Surr: DNOP	4.2		5.000		83.7	70	130			
Sample ID: MB-43436	SampT	ype: ME	BLK	Tes	tCode: E	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: PBS	Batch	ID: 43 4	436	F	RunNo: 5	8076				
Prep Date: 3/1/2019	Analysis Da	ate: 3/	4/2019	8	SeqNo: 1	947283	Units: mg/k	(g		
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	9.4		10.00		93.5	70	130			
Sample ID: 1903003-001AMS	SampT	уре: М S	3	Tes	tCode: E	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: SP 46	Batch	ID: 43 4	436	F	RunNo: 5	8076				
Prep Date: 3/1/2019	Analysis Da	ate: 3/	4/2019	8	SeqNo: 1	947285	Units: mg/h	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	9.8	49.16	0	101	53.5	126	_		_
Surr: DNOP	5.3		4.916		108	70	130			
Sample ID: 1903003-001AMSI	D SampT	ype: MS	### TestCode: EPA Method 8015				8015M/D: Di	esel Rang	e Organics	
Client ID: SP 46	Ratch	ID: 42	126	DunNo: F9076						

Client ID: SP 46	Batch	Batch ID: 43436 RunNo: 58076							_			
Prep Date: 3/1/2019	Analysis D	Analysis Date: 3/4/2019 SeqNo: 1947286						Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Diesel Range Organics (DRO)	44	9.8	48.78	0	90.9	53.5	126	11.4	21.7			
Surr: DNOP	4.3		4.878		88.2	70	130	0	0			

Sample ID: LCS-43437	SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organi							e Organics		
Client ID: LCSS	Batch	ID: 43	437	R	RunNo: 5	8090				
Prep Date: 3/1/2019	Analysis D	ate: 3/	4/2019	SeqNo: 1947500 Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	92.3	63.9	124			
Surr: DNOP	4.2		5.000		84.2	70	130			

Qualifiers:

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

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1903003**

08-Mar-19

Client: WPX Energy Project: LVP SWD

Sample ID: MB-43437	SampT	уре: МЕ	BLK	Tes	tCode: E	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: PBS	Batch	n ID: 43	437	F	RunNo: 58	8090				
Prep Date: 3/1/2019	Analysis D	ate: 3/	4/2019	S	SeqNo: 19	947501	Units: mg/K	(g		
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	8.5		10.00		84.5	70	130			
Sample ID: 1903003-021AMS	SampT	ype: M \$	3	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: SP 66	Batch	n ID: 43	437	F	RunNo: 58	8090				
Prep Date: 3/1/2019	Analysis D	ate: 3/	4/2019	S	SeqNo: 19	947503	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	9.2	45.96	5.984	82.0	53.5	126			
Surr: DNOP	3.7		4.596		79.8	70	130			
Sample ID: 1903003-021AMS	D SampT	ype: M \$	SD	Tes	tCode: E	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: SP 66	Batch	n ID: 43	437	F	RunNo: 58	8090				
Prep Date: 3/1/2019	Analysis D	ate: 3/	4/2019	S	SeqNo: 19	947504	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Analyte Diesel Range Organics (DRO)	Result 42	PQL 9.4	SPK value 47.13	SPK Ref Val 5.984	%REC 77.0	LowLimit 53.5	HighLimit 126	%RPD 3.27	RPDLimit 21.7	Qual
										Qual
Diesel Range Organics (DRO)	42 3.5		47.13 4.713	5.984	77.0 75.3	53.5 70	126	3.27 0	21.7 0	Qual
Diesel Range Organics (DRO) Surr: DNOP	42 3.5 SampT	9.4	47.13 4.713 BLK	5.984 Tes	77.0 75.3	53.5 70 PA Method	126 130	3.27 0	21.7 0	Qual
Diesel Range Organics (DRO) Surr: DNOP Sample ID: MB-43438	42 3.5 SampT	9.4 Type: ME	47.13 4.713 BLK 438	5.984 Tes	77.0 75.3 tCode: EF	53.5 70 PA Method 8124	126 130	3.27 0 esel Range	21.7 0	Qual
Diesel Range Organics (DRO) Surr: DNOP Sample ID: MB-43438 Client ID: PBS	42 3.5 SampT Batch	9.4 Type: ME	47.13 4.713 BLK 438 4/2019	5.984 Tes	77.0 75.3 tCode: EF RunNo: 5 8 SeqNo: 1 9	53.5 70 PA Method 8124 949046	126 130 8015M/D: Di e	3.27 0 esel Range	21.7 0	Qual
Diesel Range Organics (DRO) Surr: DNOP Sample ID: MB-43438 Client ID: PBS Prep Date: 3/1/2019	42 3.5 SampT Batch Analysis D	9.4 Type: ME on ID: 43 Pate: 3 /	47.13 4.713 BLK 438 4/2019	5.984 Tes F	77.0 75.3 tCode: EF RunNo: 5 8 SeqNo: 1 9	53.5 70 PA Method 8124 949046	126 130 8015M/D: Die Units: mg/K	3.27 0 esel Range	21.7 0 • Organics	
Diesel Range Organics (DRO) Surr: DNOP Sample ID: MB-43438 Client ID: PBS Prep Date: 3/1/2019 Analyte	42 3.5 SampT Batch Analysis D Result	9.4 Type: ME Till: 43 Date: 3/	47.13 4.713 BLK 438 4/2019	5.984 Tes F	77.0 75.3 tCode: EF RunNo: 5 6 SeqNo: 1 9 %REC	53.5 70 PA Method 8124 949046	126 130 8015M/D: Die Units: mg/K	3.27 0 esel Range	21.7 0 • Organics	
Diesel Range Organics (DRO) Surr: DNOP Sample ID: MB-43438 Client ID: PBS Prep Date: 3/1/2019 Analyte Diesel Range Organics (DRO)	42 3.5 SampT Batch Analysis D Result	9.4 Type: ME on ID: 43 Pate: 3/ PQL 10	47.13 4.713 BLK 438 4/2019	5.984 Tes F	77.0 75.3 tCode: EF RunNo: 5 8 SeqNo: 1 9	53.5 70 PA Method 8124 949046	126 130 8015M/D: Die Units: mg/K	3.27 0 esel Range	21.7 0 • Organics	
Diesel Range Organics (DRO) Surr: DNOP Sample ID: MB-43438 Client ID: PBS Prep Date: 3/1/2019 Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO)	42 3.5 SampT Batch Analysis D Result ND ND 9.1	9.4 Type: ME on ID: 43 Pate: 3/ PQL 10	47.13 4.713 BLK 438 4/2019 SPK value	5.984 Tes F S SPK Ref Val	77.0 75.3 tCode: EF RunNo: 5 SeqNo: 1 %REC	53.5 70 PA Method 8124 949046 LowLimit	126 130 8015M/D: Did Units: mg/K HighLimit	3.27 0 esel Range (g %RPD	21.7 0 e Organics	
Diesel Range Organics (DRO) Surr: DNOP Sample ID: MB-43438 Client ID: PBS Prep Date: 3/1/2019 Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP	42 3.5 SampT Batch Analysis D Result ND ND 9.1 SampT	9.4 Type: ME T	47.13 4.713 BLK 438 4/2019 SPK value	5.984 Tes SPK Ref Val	77.0 75.3 tCode: EF RunNo: 5 SeqNo: 1 %REC	53.5 70 PA Method 8124 949046 LowLimit 70	126 130 8015M/D: Did Units: mg/K HighLimit	3.27 0 esel Range (g %RPD	21.7 0 e Organics	

SPK value SPK Ref Val

0

50.00

5.000

Qualifiers:

Analyte

Surr: DNOP

Diesel Range Organics (DRO)

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded

Result

46

4.6

10

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank

LowLimit

63.9

70

HighLimit

124

130

%RPD

RPDLimit

E Value above quantitation range

%REC

92.1

92.1

- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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Qual

Hall Environmental Analysis Laboratory, Inc.

WO#: **1903003**

08-Mar-19

Client: WPX Energy Project: LVP SWD

Sample ID: 1903003-041AMS	SampT	SampType: MS TestCode: EPA Method						od 8015M/D: Diesel Range Organics				
Client ID: SP 86	Batch	Batch ID: 43438 RunNo: 58124										
Prep Date: 3/1/2019	Analysis D	ate: 3/	4/2019	8	SeqNo: 1	949049	Units: mg/K	(g				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Diesel Range Organics (DRO)	41	9.7	48.26	0	85.3	53.5	126					
Surr: DNOP	4.6		4.826		95.0	70	130					
Sample ID: 1903003-041AMSI	D SampT	уре: М \$	SD	Tes	tCode: E	PA Method	8015M/D: Die	esel Range	e Organics			
Client ID: SP 86	Batch	ID: 43	438	F	RunNo: 5	8124						
Prep Date: 3/1/2019	Analysis D	ate: 3/	4/2019	5	SegNo: 1	949050	Units: mg/K	(q				

Client ID: SP 86	Batch	Batch ID: 43438 Ru				RunNo: 58124				
Prep Date: 3/1/2019	Analysis D	ate: 3/	4/2019	S	SeqNo: 1	949050	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	9.5	47.53	0	89.1	53.5	126	2.75	21.7	
Surr: DNOP	4.6		4.753		96.0	70	130	0	0	

Sample ID: LCS-43439	SampT	ype: LC	S	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: LCSS	Batch	n ID: 43	439	F	RunNo: 5	8108				
Prep Date: 3/1/2019	Analysis D	ate: 3/	5/2019	S	SeqNo: 1	949467	67 Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	10	50.00	0	88.9	63.9	124			
Surr: DNOP	3.0		5.000		60.8	70	130			S

Sample ID: MB-43439	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch	ID: 43 4	439	F	RunNo: 5	8108					
Prep Date: 3/1/2019	Analysis D	ate: 3/	5/2019	8	SeqNo: 1	949468	Units: mg/K	ίg			
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	7.5		10.00		74.8	70	130				

Sample ID: 1903003-061AMS SampType: MS			TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: SP 106	Batch	ID: 43	439	F	RunNo: 5	8108					
Prep Date: 3/1/2019	Analysis D	ate: 3/	5/2019	S	SeqNo: 1	949471	Units: mg/K	(g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	53	9.9	49.65	3.521	98.8	53.5	126				
Surr: DNOP	4.4		4.965		89.5	70	130				

Qualifiers:

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

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Hall Environmental Analysis Laboratory, Inc.

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WO#: **1903003**

08-Mar-19

Client: WPX Energy
Project: LVP SWD

Sample ID: 1903003-061AMS	D SampT	ype: M \$	SD	Tes	TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID: SP 106	Batch	ID: 43	439	F	RunNo: 5	8108				
Prep Date: 3/1/2019	Analysis D	ate: 3/	5/2019	5	SeqNo: 1	949472	Units: mg/K	ζg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	9.5	47.30	3.521	81.7	53.5	126	22.0	21.7	R
Surr: DNOP	3.3		4.730		69.7	70	130	0	0	S
Sample ID: LCS-43440	SampT	ype: LC	s	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: LCSS	Batch	ID: 43	440	F	RunNo: 5	8110				
Prep Date: 3/1/2019	Analysis D	ate: 3/	5/2019	5	SeqNo: 1	949927	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	102	63.9	124			
Surr: DNOP	4.3		5.000		85.7	70	130			
Sample ID: MB-43440	SampT	уре: МЕ	BLK	Tes	tCode: EI	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: PBS	Batch	ID: 43	440	F	RunNo: 5	8110				
Prep Date: 3/1/2019	Analysis D	ate: 3/	5/2019	5	SeqNo: 1	949928	Units: mg/k	(g		
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								

Sample ID: 1903003-081AMS	SampType: MS			TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: SW 3	Batch	ID: 43 4	440	F	RunNo: 5	8110				
Prep Date: 3/4/2019	Analysis D	ate: 3/	5/2019	S	SeqNo: 1	950144	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	90.7	53.5	126			
Surr: DNOP	3.3		5.000		66.4	70	130			S

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70

130

10.00

Sample ID. 1903003-06 [AWISI	Sampi	ype. IVIS	טט	168	icode. Ei	A Wethou	וט :טוואוכו טס	esei Kange	e Organics	
Client ID: SW 3	Batch	ID: 43	440	F	RunNo: 5	8110				
Prep Date: 3/4/2019	Analysis Da	ate: 3/	5/2019	S	SeqNo: 1	950145	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	49.80	0	92.6	53.5	126	1.63	21.7	
Surr: DNOP	3.5		4.980		70.1	70	130	0	0	

Qualifiers:

Surr: DNOP

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

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Hall Environmental Analysis Laboratory, Inc.

SampType: MSD

WO#: **1903003**

08-Mar-19

Client: WPX Energy
Project: LVP SWD

Sample ID: MB-43430	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	е	
Client ID: PBS	Batch	1D: 43 4	130	F	RunNo: 5	8061				
Prep Date: 3/1/2019	Analysis D	ate: 3/2	2/2019	8	SeqNo: 1	945780	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		99.5	73.8	119			
Sample ID: LCS-43430	SampType: LCS TestCode: EPA Method 801					8015D: Gaso	line Rang	e	·	

Client ID: LCSS	Batch ID: 43430			F	RunNo: 58	8061				
Prep Date: 3/1/2019	Analysis Date: 3/2/2019			S	SeqNo: 19	945781	g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	111	80.1	123			
Surr: BFB	1100		1000		108	73.8	119			

Sample ID: 1903003-001AMS	SampType: MS			TestCode: EPA Method 8015D: Gasoline Range							
Client ID: SP 46	Batch	ID: 43 4	430	F	RunNo: 5	8061					
Prep Date: 3/1/2019	Analysis Date: 3/2/2019			SeqNo: 1945783			Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	30	4.8	24.18	0	122	69.1	142				
Surr: BFB	1100		967.1		112	73.8	119				

Client ID: SP 46	Batch ID: 43430			F	RunNo: 5	8061				
Prep Date: 3/1/2019	Analysis Date: 3/2/2019			SeqNo: 1945784			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	4.8	23.85	0	120	69.1	142	2.93	20	
Surr: BFB	1100		954.2		111	73.8	119	0	0	

Sample ID: MB-43431	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	е	
Client ID: PBS	Batch	ID: 43 4	431	F	RunNo: 5	8062				
Prep Date: 3/1/2019	Analysis D	ate: 3/	2/2019	S	SeqNo: 1	945862	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	970		1000		97.0	73.8	119			

Sample ID: LCS-43431	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSS	Batch ID: 43431	RunNo: 58062						
Prep Date: 3/1/2019	Analysis Date: 3/2/2019	SeqNo: 1945863	Units: mg/Kg					
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual					

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix

Sample ID: 1903003-001AMSD

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank

TestCode: EPA Method 8015D: Gasoline Range

- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1903003**

08-Mar-19

Client: WPX Energy Project: LVP SWD

Sample ID: LCS-43431	SampT	ype: LC	S	Tes	TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSS	Batch ID: 43431			F	RunNo: 5	8062					
Prep Date: 3/1/2019	Analysis D	oate: 3/	2/2019	SeqNo: 1945			1945863 Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	28	5.0	25.00	0	110	80.1	123				
Surr: BFB	1100		1000		113	73.8	119				
Sample ID: 1903003-021AMS	SampType: MS TestCode: FPA Method 8015D: Gasoline Range										

Sample ID. 1903003-021AWS	Sampi	ype. wis	•	165	resicode. EPA Method 6013D: Gasoline Range						
Client ID: SP 66	Batch	ID: 43	431	F	RunNo: 5	8062					
Prep Date: 3/1/2019	Analysis D	ate: 3/	2/2019	S	SeqNo: 1	945865	Units: mg/K	g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	28	4.8	23.85	0	116	69.1	142				
Surr: BFB	1100		954.2		112	73.8	119				

Sample ID: 1903003-021AMSD	SampType: MSD TestCode: EPA Method 8015D: Gasoline Range										
Client ID: SP 66	Batch ID: 43431 RunNo: 58062										
Prep Date: 3/1/2019	Analysis D	ate: 3/	2/2019	S	945866	Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	27	4.9	24.68	0	109	69.1	142	2.44	20		
Surr: BFB	1100		987.2		112	73.8	119	0	0		

Sample ID: MB-43433	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	е	
Client ID: PBS	Batch	1D: 43 4	433	F	RunNo: 5	8068				
Prep Date: 3/1/2019	Analysis D	ate: 3/	3/2019	S	SeqNo: 1	946027	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	930		1000		93.4	73.8	119			

Sample ID: LCS-43433	SampType: LCS			TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch	n ID: 43 4	433	R	RunNo: 5	8068					
Prep Date: 3/1/2019	Analysis Date: 3/3/2019			SeqNo: 1946028			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	105	80.1	123				
Surr: BFB	1100		1000		113	73.8	119				

Sample ID: 1903003-061AMS	SampType: MS	TestCode: EPA Method 8015D: Gasoline Range
Client ID: SP 106	Batch ID: 43433	RunNo: 58068
Prep Date: 3/1/2019	Analysis Date: 3/3/2019	SeqNo: 1946030 Units: mg/Kg
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Qualifiers:

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

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1903003**

08-Mar-19

Client:	WPX Energy
Project:	LVP SWD

Project: LVP SW	'D									
Sample ID: 1903003-061AMS	SampT	уре: М \$	3	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	е	
Client ID: SP 106	Batch	ID: 43	433	F	RunNo: 5	8068				
Prep Date: 3/1/2019	Analysis D	ate: 3/	3/2019	9	SeqNo: 1	946030	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	24.90	0	103	69.1	142			
Surr: BFB	1200		996.0		119	73.8	119			S
Sample ID: 1903003-061AMS	D SampT	уре: М \$	SD	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	е	
Client ID: SP 106	Batch	ID: 43	433	F	RunNo: 5	8068				
Prep Date: 3/1/2019	Analysis D	ate: 3/	3/2019	9	SeqNo: 1	946031	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	4.8	23.95	0	105	69.1	142	1.52	20	
Surr: BFB	1100		957.9		113	73.8	119	0	0	
Sample ID: MB-43432	SampT	уре: МЕ	BLK	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	е	
Client ID: PBS	Batch	ID: 43	432	F	RunNo: 5	8067				
Prep Date: 3/1/2019	Analysis D	Analysis Date: 3/3/2019 SeqNo: 1946081 Units: mg/Kg						(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0	4000							
Surr: BFB	960		1000		95.6	73.8	119			
Sample ID: LCS-43432	SampT	ype: LC	s	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	е	
Client ID: LCSS	Batch	ID: 43	432	F	RunNo: 5	8067				
Prep Date: 3/1/2019	Analysis D	ate: 3/	3/2019	5	SeqNo: 1	946082	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	109	80.1	123			
Surr: BFB	1100		1000		107	73.8	119			
Sample ID: 1903003-041AMS	SampT	уре: М \$	6	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	е	
Client ID: SP 86	Batch	ID: 43	432	F	RunNo: 5	8067				
Prep Date: 3/1/2019	Analysis D	ate: 3/	3/2019	5	SeqNo: 1	946084	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	4.7	23.70	0	82.8	69.1	142			
Surr: BFB	1000		947.9		108	73.8	119			
Sample ID: 1903003-041AMS	D SampT	уре: М \$	SD	TestCode: EPA Method 8015D: Gasoline Range					е	
Client ID: SP 86	Batch	Batch ID: 43432			RunNo: 58067					

Qualifiers:

Analyte

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded

Result

PQL

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank

HighLimit

- E Value above quantitation range
- J Analyte detected below quantitation limits
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%RPD

RPDLimit

P Sample pH Not In Range

SPK value SPK Ref Val %REC LowLimit

- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Qual

Hall Environmental Analysis Laboratory, Inc.

WO#: 1903003 08-Mar-19

Client: WPX Energy **Project:** LVP SWD

Sample ID: 1903003-041AMSD SampType: MSD TestCode: EPA Method 8015D: Gasoline Range Client ID: SP 86 Batch ID: 43432 RunNo: 58067 Prep Date: 3/1/2019 Analysis Date: 3/3/2019 SeqNo: 1946085 Units: mg/Kg Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 4.8 0 94.4 69.1 14.4 20 23 24.02 142 Surr: BFB 1100 960.6 110 73.8 119 0

Sample ID: MB-43434 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: PBS Batch ID: 43434 RunNo: 58093 Prep Date: Analysis Date: 3/4/2019 3/1/2019 SeqNo: 1947558 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) ND 5.0 950 1000 Surr: BFB 95.4 73.8 119

Sample ID: LCS-43434 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: 43434 RunNo: 58093 Analysis Date: 3/4/2019 Prep Date: 3/1/2019 SeqNo: 1947559 Units: mg/Kg %RPD SPK value SPK Ref Val %REC **RPDLimit** Analyte Result **PQL** LowLimit HighLimit Qual Gasoline Range Organics (GRO) 26 5.0 25.00 0 106 80.1 123 Surr: BFB 1000 1000 105 73.8

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- POL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank

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- Е Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range RLReporting Detection Limit
- Sample container temperature is out of limit as specified

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Hall Environmental Analysis Laboratory, Inc.

WO#: 1903003

08-Mar-19

Client: WPX Energy **Project:** LVP SWD

Sample ID: MB-43430 SampType: MBLK TestCode: EPA Method 8021B: Volatiles

Client ID: PBS Batch ID: 43430 RunNo: 58061

Prep Date: 3/1/2019 Analysis Date: 3/2/2019 SeqNo: 1945818 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 0.050 Ethylbenzene ND Xylenes, Total ND 0.10

Surr: 4-Bromofluorobenzene 0.94 1.000 94.2 80 120

Sample ID: LCS-43430 SampType: LCS TestCode: EPA Method 8021B: Volatiles Client ID: LCSS Batch ID: 43430 RunNo: 58061 Analysis Date: 3/2/2019 Prep Date: 3/1/2019 SeqNo: 1945819 Units: mg/Kg Analyte **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 0.87 0.025 1.000 0 86.6 80 120 Benzene Toluene 0.90 0.050 1.000 0 90.0 80 120 Ethylbenzene 0.91 0.050 1.000 0 91.4 80 120 Xylenes, Total 2.8 0.10 3.000 0 92.3 80 120 92.2 Surr: 4-Bromofluorobenzene 0.92 1.000 80 120

Sample ID: 1903003-002AMS SampType: MS TestCode: EPA Method 8021B: Volatiles

Client ID: SP 47 Batch ID: 43430 RunNo: 58061

Prep Date: 3/1/2019	Analysis Date: 3/2/2019			SeqNo: 1945822			Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.024	0.9542	0	92.9	63.9	127			
Toluene	0.94	0.048	0.9542	0.01228	97.1	69.9	131			
Ethylbenzene	0.95	0.048	0.9542	0	100	71	132			
Xylenes, Total	2.9	0.095	2.863	0.01624	101	71.8	131			
Surr: 4-Bromofluorobenzene	0.88		0.9542		91.7	80	120			

Sample ID: 1903003-002AMSD SampType: MSD TestCode: EPA Method 8021B: Volatiles

Client ID: SP 47 Batch ID: 43430 RunNo: 58061

Prep Date: 3/1/2019	Analysis Date: 3/2/2019			SeqNo: 1945823 Units: m				mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.87	0.024	0.9634	0	90.3	63.9	127	1.86	20		
Toluene	0.91	0.048	0.9634	0.01228	93.7	69.9	131	2.60	20		
Ethylbenzene	0.93	0.048	0.9634	0	96.5	71	132	2.66	20		
Xylenes, Total	2.8	0.096	2.890	0.01624	97.7	71.8	131	2.25	20		
Surr: 4-Bromofluorobenzene	0.87		0.9634		90.8	80	120	0	0		

Qualifiers:

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

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Hall Environmental Analysis Laboratory, Inc.

WO#: 1903003

08-Mar-19

Client: WPX Energy **Project:** LVP SWD

Sample ID: MB-43431 SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: PBS Batch ID: 43431 RunNo: 58062 SeqNo: 1945891 Prep Date: 3/1/2019 Analysis Date: 3/2/2019 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 0.050 Ethylbenzene ND Xylenes, Total ND 0.10

Surr: 4-Bromofluorobenzene 1.0 1.000 102 80 120

Sample ID: LCS-43431 SampType: LCS TestCode: EPA Method 8021B: Volatiles Client ID: LCSS Batch ID: 43431 RunNo: 58062 Prep Date: 3/1/2019 Analysis Date: 3/2/2019 SeqNo: 1945892 Units: mg/Kg Analyte **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 0.025 1.000 0 82.3 80 120 Benzene 0.82 Toluene 0.98 0.050 1.000 0 98.4 80 120 Ethylbenzene 0.050 1.000 0 102 80 120 1.0 Xylenes, Total 3.1 0.10 3.000 0 103 80 120 Surr: 4-Bromofluorobenzene 1.1 1.000 110 80 120

Sample ID: 1903003-022AMS SampType: MS TestCode: EPA Method 8021B: Volatiles Client ID: **SP 67** Batch ID: 43431 RunNo: 58062

Prep Date: 3/1/2019 Analysis Date: 3/2/2019 SegNo: 1945895 Units: mg/Kg Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Benzene 0.80 0.023 0.9320 85.8 63.9 127 Λ Toluene 0.94 0.047 0.9320 0.007556 100 69.9 131 71 0.97 0.047 0.9320 0 104 132 Ethylbenzene Xylenes, Total 2.9 0.093 2.796 0 103 71.8 131 Surr: 4-Bromofluorobenzene 0.98 0.9320 105 80 120

Sample ID: 1903003-022AMSD SampType: MSD TestCode: EPA Method 8021B: Volatiles

Client ID: SP 67 Batch ID: 43431 RunNo: 58062

Prep Date: 3/1/2019 Analysis Date: 3/2/2019 SeqNo: 1945896 Units: mg/Kg

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.80	0.023	0.9311	0	86.4	63.9	127	0.668	20	
Toluene	0.94	0.047	0.9311	0.007556	100	69.9	131	0.0684	20	
Ethylbenzene	0.97	0.047	0.9311	0	104	71	132	0.118	20	
Xylenes, Total	2.9	0.093	2.793	0	102	71.8	131	0.830	20	
Surr: 4-Bromofluorobenzene	0.96		0.9311		103	80	120	0	0	

Qualifiers:

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

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Hall Environmental Analysis Laboratory, Inc.

WO#: 1903003

08-Mar-19

Client: WPX Energy **Project:** LVP SWD

Surr: 4-Bromofluorobenzene

Sample ID: MB-43433 SampType: MBLK TestCode: EPA Method 8021B: Volatiles

Client ID: PBS Batch ID: 43433 RunNo: 58068

SeqNo: 1946054 Prep Date: 3/1/2019 Analysis Date: 3/3/2019 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

0.050 Ethylbenzene ND Xylenes, Total ND 0.10

Surr: 4-Bromofluorobenzene 0.96 1.000 96.2 80 120

Sample ID: LCS-43433 SampType: LCS TestCode: EPA Method 8021B: Volatiles Client ID: LCSS Batch ID: 43433 RunNo: 58068 Prep Date: 3/1/2019 Analysis Date: 3/3/2019 SeqNo: 1946055 Units: mg/Kg Analyte **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 0.81 0.025 1.000 0 80.6 80 120 Benzene Toluene 0.94 0.050 1.000 0 93.8 80 120 Ethylbenzene 0.97 0.050 1.000 0 96.6 80 120 Xylenes, Total 2.9 0.10 3.000 0 96.7 80 120

108

80

120

Sample ID: 1903003-062AMS SampType: MS TestCode: EPA Method 8021B: Volatiles

1.000

Client ID: SP 107 Batch ID: 43433 RunNo: 58068

1.1

Prep Date: 3/1/2019 Analysis Date: 3/3/2019 SegNo: 1946058 Units: mg/Kg Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Benzene 0.76 0.024 0.9425 80.4 63.9 127 Λ Toluene 0.90 0.047 0.9425 0.007912 95.1 69.9 131 71 0.93 0.047 0.9425 0 98.9 132 Ethylbenzene Xylenes, Total 2.8 0.094 2.828 0 97.5 71.8 131 Surr: 4-Bromofluorobenzene 0.9425 1.0 107 80 120

Sample ID: 1903003-062AMSD SampType: MSD TestCode: EPA Method 8021B: Volatiles

Client ID: SP 107 Batch ID: 43433 RunNo: 58068

0		.00	•		5000					
Prep Date: 3/1/2019	ate: 3/1/2019 Analysis Date: 3/3/2019			S	SeqNo: 1	946059	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.74	0.023	0.9285	0	79.9	63.9	127	2.09	20	
Toluene	0.88	0.046	0.9285	0.007912	94.3	69.9	131	2.40	20	
Ethylbenzene	0.90	0.046	0.9285	0	97.3	71	132	3.17	20	
Xylenes, Total	2.7	0.093	2.786	0	95.8	71.8	131	3.27	20	
Surr: 4-Bromofluorobenzene	0.97		0.9285		104	80	120	0	0	

Qualifiers:

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

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Hall Environmental Analysis Laboratory, Inc.

WO#: 1903003

08-Mar-19

Qual

Client: WPX Energy **Project:** LVP SWD

Sample ID: MB-43432 SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: PBS Batch ID: 43432 RunNo: 58067

SeqNo: 1946108 Prep Date: 3/1/2019 Analysis Date: 3/3/2019 Units: mg/Kg

Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Benzene ND 0.025 Toluene ND 0.050 0.050 Ethylbenzene ND Xylenes, Total ND 0.10

Surr: 4-Bromofluorobenzene 0.89 1.000 89.4 80 120

Sample ID: LCS-43432 SampType: LCS TestCode: EPA Method 8021B: Volatiles Client ID: LCSS Batch ID: 43432 RunNo: 58067 Prep Date: 3/1/2019 Analysis Date: 3/3/2019 SeqNo: 1946109 Units: mg/Kg Analyte **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 0.83 0.025 1.000 0 83.1 80 120 Benzene Toluene 0.87 0.050 1.000 0 86.6 80 120 Ethylbenzene 0.88 0.050 1.000 0 87.8 80 120 Xylenes, Total 2.7 0.10 3.000 0 88.5 80 120 Surr: 4-Bromofluorobenzene 0.93 1.000 93.0 80 120

Sample ID: 1903003-042AMS SampType: MS TestCode: EPA Method 8021B: Volatiles Client ID: **SP 87** Batch ID: 43432 RunNo: 58067

Prep Date: 3/1/2019 Analysis Date: 3/3/2019 SegNo: 1946112 Units: mg/Kg Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Benzene 0.84 0.025 0.9891 84.6 63.9 127 Toluene 0.89 0.049 0.9891 0.009346 89.4 69.9 131 71 0.91 0.049 0.9891 0 92.0 132 Ethylbenzene 92.8 Xylenes, Total 2.8 0.099 2.967 0 71.8 131 Surr: 4-Bromofluorobenzene 0.9891 91.0 0.90 80 120

Sample ID: 1903003-042AMSD SampType: MSD TestCode: EPA Method 8021B: Volatiles

Client ID: SP 87 Batch ID: 43432 RunNo: 58067

		_	-		_					
Prep Date: 3/1/2019	Analysis [Date: 3/	3/2019	5	SeqNo: 1	946113	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.81	0.024	0.9737	0	83.3	63.9	127	3.08	20	
Toluene	0.86	0.049	0.9737	0.009346	87.6	69.9	131	3.58	20	
Ethylbenzene	0.88	0.049	0.9737	0	90.2	71	132	3.49	20	
Xylenes, Total	2.7	0.097	2.921	0	91.4	71.8	131	3.09	20	
Surr: 4-Bromofluorobenzene	0.89		0.9737		91.1	80	120	0	0	

Qualifiers:

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

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Hall Environmental Analysis Laboratory, Inc.

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WO#: 1903003

08-Mar-19

Client: WPX Energy **Project:** LVP SWD

Surr: 4-Bromofluorobenzene

Sample ID: MB-43434	SampT	уре: МЕ	BLK	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: PBS	Batcl	n ID: 43 4	434	F	RunNo: 5	8093				
Prep Date: 3/1/2019	Analysis D	oate: 3/	4/2019	8	SeqNo: 1	947575	Units: mg/K	(g		
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								
Xvlenes, Total	ND	0.10								

89.8

120

80

1.000

Sample ID: LCS-43434	Samp	Гуре: LC	s	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID: LCSS	Batc	h ID: 43	434	F	RunNo: 5	8093				
Prep Date: 3/1/2019	Analysis [Date: 3/	4/2019	S	SeqNo: 1	947576	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.85	0.025	1.000	0	84.9	80	120			
Toluene	0.88	0.050	1.000	0	88.2	80	120			
Ethylbenzene	0.88	0.050	1.000	0	88.2	80	120			
Xylenes, Total	2.7	0.10	3.000	0	90.0	80	120			
Surr: 4-Bromofluorobenzene	0.87		1.000		87.4	80	120			

Qualifiers:

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

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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

C	lient Name:	WPX ENE	RGY CARLSB	Work	Order Number	: 190:	3003			RcptNo	: 1	
R	eceived By:	Leah Bac	a	3/1/2019	8:45:00 AM			/_/	Raea	3		
C	ompleted By:	Leah Bac	a vvz 3/1/		9:15:27 AM			Law)Ba <i>ea</i> [Baea	_		
	eviewed By: \	NZ -	21 8/11	11a	7.10.27			Loah) Taea	ξ.		
2	Abeled Dain of Cus	by DE	NO 3/1/1	•								
	is Chain of Cu		lete?			Yes	V	No		Not Present		
2.	How was the	sample deliv	ered?			Cou	<u>ier</u>					
1	og In											
	Was an attem	pt made to o	cool the sample	es?		Yes	V	No		NA 🗆		
4.	Were all samp	les received	at a temperat	ure of >0°C to	6.0°C	Yes	V	No		NA 🗆		
5.	Sample(s) in p	oroper contai	iner(s)?			Yes	V	No				
6.	Sufficient sam	ple volume f	or indicated te	st(s)?		Yes	~	No				
7.	Are samples (e	except VOA	and ONG) pro	perly preserved	d?	Yes	V	No				
8.	Was preservat	ive added to	bottles?			Yes		No	Y	NA 🗌		
	VOA vials have							No	_	No VOA Vials 🗹		
10.	Were any sam	iple containe	ers received br	oken?		Yes		No		# of preserved		/
	Does paperwo (Note discrepa					Yes	V	No		bottles checked for pH:	√ 12 uni	ess noted)
	Are matrices c		• /	of Custody?		Yes	V	No		Adjusted		
13.	ls it clear what	analyses we	ere requested?			Yes	✓	No		_		
	Were all holdin (If no, notify cu					Yes	✓	No		Checked by: 1	DAD	3/1/19
	cial Handli											
	Was client not			ith this order?		Yes		No		NA 🗹		
	Person I	Notified:			Date	************	······································		***************************************]	
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	Client In	structions:										
16.	Additional ren	narks:								1000	_	
17	Cooler Inform	nation										
	Cooler No	Temp °C	Condition	Seal Intact	Seal No S	eal Da	ite	Signed	Bv			
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Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

March 13, 2019

Kris Rowe WPX Energy 5315 Buena Vista Drive Carlsbad, NM 88220 TEL: (505) 386-9693

FAX

RE: LVP SWD OrderNo.: 1903503

Dear Kris Rowe:

Hall Environmental Analysis Laboratory received 11 sample(s) on 3/12/2019 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 #NM0901

Sincerely,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

LVP SWD

Project:

Analytical Report

Collection Date: 3/11/2019

Lab Order **1903503**Date Reported: **3/13/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP2R

Lab ID: 1903503-001 **Matrix:** SOIL **Received Date:** 3/12/2019 8:35:00 AM

Analyses	Result	RL Qı	ıal Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS				Analys	t: Irm
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	3/12/2019 11:21:47 AN	A 43624
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/12/2019 11:21:47 AN	A 43624
Surr: DNOP	99.1	70-130	%Rec	1	3/12/2019 11:21:47 AN	43624

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

Qualifiers: Value exceeds Maximum Contaminant Level. Analyte detected in the associated Method Blank D Sample Diluted Due to Matrix Е Value above quantitation range Analyte detected below quantitation limits Page 1 of 13 Н Holding times for preparation or analysis exceeded J ND Not Detected at the Reporting Limit P Sample pH Not In Range PQL Practical Quanitative Limit RLReporting Detection Limit

% Recovery outside of range due to dilution or matrix W Sample container temperature is out of limit as specified

Surr: DNOP

Analytical Report

Lab Order **1903503**Date Reported: **3/13/2019**

3/12/2019 11:44:04 AM 43624

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP17R

 Project:
 LVP SWD
 Collection Date: 3/11/2019

 Lab ID:
 1903503-002
 Matrix: SOIL
 Received Date: 3/12/2019 8:35:00 AM

Analyses Result **RL Qual Units DF** Date Analyzed Batch **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: Irm 3/12/2019 11:44:04 AM 43624 Diesel Range Organics (DRO) ND 9.4 mg/Kg Motor Oil Range Organics (MRO) ND 47 mg/Kg 3/12/2019 11:44:04 AM 43624

70-130

%Rec

102

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

Qualifiers: * Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits Page 2 of 13

P Sample pH Not In Range

RL Reporting Detection Limit

Lab Order **1903503**Date Reported: **3/13/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP28R

Project: LVP SWD **Collection Date:** 3/11/2019

Lab ID: 1903503-003 **Matrix:** SOIL **Received Date:** 3/12/2019 8:35:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analy	st: MRA
Chloride	280	60	mg/Kg	20	3/12/2019 10:59:13 A	M 43627

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

Qualifiers: * Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits Page 3 of 13

P Sample pH Not In Range

RL Reporting Detection Limit

Lab Order **1903503**Date Reported: **3/13/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP36R

Project: LVP SWD

Collection Date: 3/11/2019

Lab ID: 1903503-004 **Matrix:** SOIL **Received Date:** 3/12/2019 8:35:00 AM

Analyses	Result	RL Qı	ıal Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS				Analys	t: Irm
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	3/12/2019 12:06:38 PM	A 43624
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/12/2019 12:06:38 PM	A 43624
Surr: DNOP	97.1	70-130	%Rec	1	3/12/2019 12:06:38 PM	A 43624

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

Qualifiers: * Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits Page 4 of 13

P Sample pH Not In Range

RL Reporting Detection Limit

Lab Order 1903503 Date Reported: 3/13/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP40R **Project:** LVP SWD Collection Date: 3/11/2019

Matrix: SOIL Lab ID: 1903503-005 **Received Date:** 3/12/2019 8:35:00 AM

Analyses	Result	RL Qu	ıal Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	st: MRA
Chloride	130	60	mg/Kg	20	3/12/2019 11:11:37 A	M 43627

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

Qualifiers: Value exceeds Maximum Contaminant Level. D

> Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Sample Diluted Due to Matrix

PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix

Analyte detected in the associated Method Blank

Е Value above quantitation range

Analyte detected below quantitation limits Page 5 of 13 J

P Sample pH Not In Range

RLReporting Detection Limit

CLIENT: WPX Energy

LVP SWD

Project:

Analytical Report

Lab Order **1903503**Date Reported: **3/13/2019**

Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: SP48R

Collection Date: 3/11/2019

Lab ID: 1903503-006 **Matrix:** SOIL **Received Date:** 3/12/2019 8:35:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analy	/st: MRA
Chloride	130	59	mg/Kg	20	3/12/2019 11:24:02	AM 43627

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

Qualifiers: * Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits Page 6 of 13

P Sample pH Not In Range

RL Reporting Detection Limit

1903503-007

Lab ID:

Analytical Report

Received Date: 3/12/2019 8:35:00 AM

Lab Order 1903503 Date Reported: 3/13/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP83R

Matrix: SOIL

Project: LVP SWD Collection Date: 3/11/2019

Analyses Result **RL Qual Units DF** Date Analyzed

Batch **EPA METHOD 300.0: ANIONS** Analyst: MRA Chloride 20 3/12/2019 11:36:27 AM 43627 160 60 mg/Kg

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

Qualifiers: Value exceeds Maximum Contaminant Level.

> D Sample Diluted Due to Matrix

Η Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit ND

PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix

Analyte detected in the associated Method Blank

Ε Value above quantitation range

Analyte detected below quantitation limits Page 7 of 13 J

P Sample pH Not In Range

RLReporting Detection Limit

Analytical Report Lab Order 1903503

Date Reported: 3/13/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy **Client Sample ID:** SP92R **Project:** LVP SWD Collection Date: 3/11/2019

Matrix: SOIL Lab ID: 1903503-008 **Received Date:** 3/12/2019 8:35:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGI	E ORGANICS				Analys	st: Irm
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	3/12/2019 12:28:56 PI	M 43624
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/12/2019 12:28:56 PI	M 43624
Surr: DNOP	93.6	70-130	%Rec	1	3/12/2019 12:28:56 PI	M 43624

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

Qualifiers: Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix

Analyte detected in the associated Method Blank

E Value above quantitation range

Analyte detected below quantitation limits Page 8 of 13 J

P Sample pH Not In Range

RLReporting Detection Limit

CLIENT: WPX Energy

LVP SWD

Project:

Analytical Report

Lab Order **1903503**Date Reported: **3/13/2019**

Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: SP99R

Collection Date: 3/11/2019

Lab ID: 1903503-009 **Matrix:** SOIL **Received Date:** 3/12/2019 8:35:00 AM

Analyses	Result	RL Qu	ial Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analy	/st: MRA
Chloride	340	60	mg/Kg	20	3/12/2019 11:48:51 A	AM 43627

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

Qualifiers: * Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits Page 9 of 13

P Sample pH Not In Range

RL Reporting Detection Limit

CLIENT: WPX Energy

LVP SWD

Project:

Analytical Report

Lab Order **1903503**Date Reported: **3/13/2019**

Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: SP101R

Collection Date: 3/11/2019

Lab ID: 1903503-010 **Matrix:** SOIL **Received Date:** 3/12/2019 8:35:00 AM

Analyses	Result	RL Qu	ıal Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analy	/st: MRA
Chloride	120	60	mg/Kg	20	3/12/2019 12:01:15 F	PM 43627

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

Qualifiers: * Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits Page 10 of 13

P Sample pH Not In Range

RL Reporting Detection Limit

Lab Order **1903503**Date Reported: **3/13/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SW6R
Project: LVP SWD
Collection Date: 3/11/2019

Lab ID: 1903503-011 **Matrix:** SOIL **Received Date:** 3/12/2019 8:35:00 AM

Analyses	Result	RL Qu	ıal Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	st: MRA
Chloride	220	60	mg/Kg	20	3/12/2019 12:13:40 P	M 43627

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 Page 11 of 13

 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.

WO#: **1903503**

13-Mar-19

Client: WPX Energy Project: LVP SWD

Sample ID: MB-43627 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 43627 RunNo: 58294

Prep Date: 3/12/2019 Analysis Date: 3/12/2019 SeqNo: 1956139 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride ND 1.5

Sample ID: LCS-43627 SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 43627 RunNo: 58294

Prep Date: 3/12/2019 Analysis Date: 3/12/2019 SeqNo: 1956140 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride 14 1.5 15.00 0 93.8 90 110

Qualifiers:

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

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Hall Environmental Analysis Laboratory, Inc.

Batch ID: 43617

Analysis Date: 3/12/2019

Result

5.2

WO#: **1903503**

13-Mar-19

Client: WPX Energy
Project: LVP SWD

Client ID: LCSS

Analyte

Surr: DNOP

Prep Date: 3/11/2019

Sample ID: LCS-43624	SampT	Type: LC	S	Tes	tCode: E l	PA Method	8015M/D: Di	esel Range	e Organics	
Client ID: LCSS	Batch	h ID: 430	624	F	RunNo: 5	8283				
Prep Date: 3/12/2019	Analysis D	Date: 3/	12/2019	S	SeqNo: 1	955221	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	39	10	50.00	0	77.9	63.9	124			
Surr: DNOP	4.7		5.000		94.7	70	130			
Sample ID: MB-43624	SampT	Гуре: МЕ	BLK	Tes	tCode: E	PA Method	8015M/D: Di	esel Range	e Organics	
Client ID: PBS	Batch	h ID: 43 0	624	F	RunNo: 5	8283				
Client ID: PBS Prep Date: 3/12/2019	Batch Analysis D				RunNo: 5 SeqNo: 1		Units: mg/k	K g		
			12/2019				Units: mg/k	(g %RPD	RPDLimit	Qual
Prep Date: 3/12/2019	Analysis D	Date: 3/	12/2019	S	SeqNo: 1	955222	J		RPDLimit	Qual
Prep Date: 3/12/2019 Analyte	Analysis D	PQL	12/2019	S	SeqNo: 1	955222	J		RPDLimit	Qual
Prep Date: 3/12/2019 Analyte Diesel Range Organics (DRO)	Analysis D Result ND	PQL 10	12/2019	S	SeqNo: 1	955222	J		RPDLimit	Qual

Sample ID: MB-43617	SampT	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: PBS	Batch	ID: 43	617	F	tunNo: 5	8283					
Prep Date: 3/11/2019	Analysis D	ate: 3/	12/2019	S	eqNo: 1	955418	Units: %Rec	;			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: DNOP	11		10.00		109	70	130				

SPK value SPK Ref Val %REC

5.000

RunNo: 58283

103

SeqNo: 1955417

LowLimit

70

Units: %Rec

HighLimit

130

%RPD

RPDLimit

Qual

Qualifiers:

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

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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 ENE	RGY CARLSE	3 Work	Order	Number: 190	350	3		RcptNo: 1
Received By:	Yazmine	Garduno	3/12/20	19	0835		afizació	a bejlenne	ş.
Completed By	Leah Bac	a	3/12/20	19 8:51	:31 AM		1,	Fig.	
Reviewed By:	I		3/12/		io i Airi		Lach	Dec	Α.
Labeled Chain of Cu		33121	11.7						
1. Is Chain of	44644660 A.a	lete?			Vo	V	No	П	Not Present
2. How was th	-04 0000 000000000000000000000000000000					urier	1 110		Not Plesent
Log In									
3. Was an atte	empt made to d	cool the sampl	les?		Yes	V	No		NA 🗆
4. Were all sar	mples received	at a temperat	ture of >0° C	to 6.0°C	Yes	V	No		NA 🗆
5. Sample(s) i	proper conta	iner(s)?			Yes	V	No		
6. Sufficient sa	mple volume f	or indicated te	est(s)?		Yes	~	No		
7. Are samples	(except VOA	and ONG) pro	perly preserve	d?	Yes	V	No		
8. Was preserv					Yes		No	V	NA 🗆
9. VOA vials ha	ave zero heads	space?			Yes		No		No VOA Vials 🗹
10. Were any s	ample containe	ers received bi	roken?		Yes		No	V	
									# of preserved bottles checked
11. Does paper (Note discre	vork match bot pancies on cha		i		Yes	V	No		for pH: (<2 g/ >12 unless no
2. Are matrices					Yes	~	No		Adjusted?
3. Is it clear wh					Yes	-	No		/
4. Were all hok		0.00			Yes	_	No	Acres 1	Checked by: YC 3 12
(If no, notify	customer for a	uthorization.)			3,21,25,25				/
Special Hand	lling (if app	olicable)							
15. Was client r	notified of all di	screpancies v	vith this order?	ę	Yes		No		NA 🗹
Perso	n Notified:				Date	-		_	
By Wi	nom:					lail	Phone	Fax	In Person
Regar	ding:						U		
Client	Instructions:								
16. Additional r	emarks:								
17. Cooler Info	rmation								
Cooler N	5000 ASS (0.1500)	Condition	Seal Intact	Seal N	No Seal D	ate	Signed I	Ву	
1	0.8	Good	Yes						
2	1.3	Good	Yes						

NTAL			THE PERSON NAMED IN				ı N)) (Y o	səlddu8 ii∧													Rtson	Nowe Smith
HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com kins NE - Albuquerque, NM 87109 Analysis Request		quest	(AOV) 808S8 (AOV-ima2) 07S8															Debbic Wetsor	(Cris Re				
LYSIS LAE allenvironmental.co - Albuquerque, NN i Fax 505-345-			RCRA 8 Metals Anions (FCANO ₃ ,NO ₂ ,PO ₄ ,SO ₄) 8081 Pesticides / 8082 PCB's				_			X		×	×	*		×	×	7	656	- 2			
YS YS HE																			. ·	30			
ALL VAL	4901 Hawkins NE -	Tel. 505-345-3975	A	EDB (Method 504.1) PAH's (8310 or 8270 SIMS)				-												Report:	Natelic Gorden		
IA .	vkins	345-		H			0.0000-0		orteM) H9T orteM) 803	1.0		_	_			Si						2	13
	Ha	505	4	(0)	HW/O	_	3177117		82108 H9T		X	×		×		7	X	X				-	42
	490	e e				_			TM + X3T8			_	-	_			6					arks:	-
MTBE + TMB's (8021)						_												Remarks:					
Same Day							44	3.1.8	HEAL NO.		-001	- 002	-003	155	- C(15	-00k	-(1/12	-00%	-009	010 -	110-	time	S 12 14 9:35
	P				9		No No	0														W.	20
K Rush	LVP SWID			ger:	nic Rowe		22.7 XVes	perature: () -\$	Preservative Type	ILE	•									>			COUNTRY (CARONALIA)
☐ Standard Project Name:	7	Project #:		Project Manager:	160		Sampler: On Ice:	Sample Temperature:	Container Type and #	402	-							_		>		Received by	Repeived by:
WPA Carlsbad	V FILE			>	Lavel 4 (Full Validation)	בפאפו לו מון אמווסמוסוו)			Sample Request ID		5P2 R	SP1-12	S P2 & R	SP36 R	SPueR	SP 48R	SP83R	SP92R	SP49 R	SP101 12		Z	.kc
WPA Co	20				C	1	□ Other		Matrix	1:05	1								>			Relinquished by	0.00
K lain	ddress			-ax#:	ickage;	tion a	50	Type)	Time													7. Z	Time: 150
Clent:	Mailing Address:		Phone #:	email or Fax#;	QA/QC Package:	Accreditation	□ NELAP	□ EDD (Type)	Date	3/11/2019	-	_			_	_	>		7	>		Date: Time: R	A(1) (9



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

April 09, 2019

Kris Rowe WPX Energy 5315 Buena Vista Drive Carlsbad, NM 88220 TEL: (505) 386-9693

FAX:

RE: LVP SWD OrderNo.: 1904160

Dear Kris Rowe:

Hall Environmental Analysis Laboratory received 41 sample(s) on 4/3/2019 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 #NM0901

Sincerely,

Andy Freeman

Laboratory Manager

andy

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report Lab Order 1904160

Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP124
Project: LVP SWD
Collection Date: 4/2/2019

Lab ID: 1904160-001 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	190	60	mg/Kg	20	4/6/2019 12:44:40 AM	44166
EPA METHOD 8015M/D: DIESEL RANGE ORG				Analyst	CLP	
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	4/4/2019 12:31:24 PM	44071
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/4/2019 12:31:24 PM	44071
Surr: DNOP	90.8	70-130	%Rec	1	4/4/2019 12:31:24 PM	44071
EPA METHOD 8015D: GASOLINE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/4/2019 9:35:13 PM	44079
Surr: BFB	90.8	73.8-119	%Rec	1	4/4/2019 9:35:13 PM	44079
EPA METHOD 8021B: VOLATILES					Analyst	RAA
Benzene	ND	0.023	mg/Kg	1	4/4/2019 9:35:13 PM	44079
Toluene	ND	0.047	mg/Kg	1	4/4/2019 9:35:13 PM	44079
Ethylbenzene	ND	0.047	mg/Kg	1	4/4/2019 9:35:13 PM	44079
Xylenes, Total	ND	0.093	mg/Kg	1	4/4/2019 9:35:13 PM	44079
Surr: 4-Bromofluorobenzene	91.8	80-120	%Rec	1	4/4/2019 9:35:13 PM	44079

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Analytical Report Lab Order 1904160

Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP125
Project: LVP SWD
Collection Date: 4/2/2019

Lab ID: 1904160-002 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	MRA
Chloride	170	60	mg/Kg	20	4/6/2019 1:21:55 AM	44166
EPA METHOD 8015M/D: DIESEL RANGE ORG				Analyst:	CLP	
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	4/4/2019 1:43:00 PM	44071
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	4/4/2019 1:43:00 PM	44071
Surr: DNOP	82.3	70-130	%Rec	1	4/4/2019 1:43:00 PM	44071
EPA METHOD 8015D: GASOLINE RANGE					Analyst:	RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/4/2019 10:46:00 PM	44079
Surr: BFB	91.2	73.8-119	%Rec	1	4/4/2019 10:46:00 PM	44079
EPA METHOD 8021B: VOLATILES					Analyst	RAA
Benzene	ND	0.025	mg/Kg	1	4/4/2019 10:46:00 PM	44079
Toluene	ND	0.049	mg/Kg	1	4/4/2019 10:46:00 PM	44079
Ethylbenzene	ND	0.049	mg/Kg	1	4/4/2019 10:46:00 PM	44079
Xylenes, Total	ND	0.098	mg/Kg	1	4/4/2019 10:46:00 PM	44079
Surr: 4-Bromofluorobenzene	93.3	80-120	%Rec	1	4/4/2019 10:46:00 PM	44079

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP126
Project: LVP SWD
Collection Date: 4/2/2019

Lab ID: 1904160-003 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	280	60	mg/Kg	20	4/6/2019 1:34:19 AM	44166
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	CLP
Diesel Range Organics (DRO)	ND	9.2	mg/Kg	1	4/4/2019 2:06:56 PM	44071
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	4/4/2019 2:06:56 PM	44071
Surr: DNOP	87.9	70-130	%Rec	1	4/4/2019 2:06:56 PM	44071
EPA METHOD 8015D: GASOLINE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/4/2019 11:09:29 PM	44079
Surr: BFB	92.6	73.8-119	%Rec	1	4/4/2019 11:09:29 PM	44079
EPA METHOD 8021B: VOLATILES					Analyst	RAA
Benzene	ND	0.023	mg/Kg	1	4/4/2019 11:09:29 PM	44079
Toluene	ND	0.047	mg/Kg	1	4/4/2019 11:09:29 PM	44079
Ethylbenzene	ND	0.047	mg/Kg	1	4/4/2019 11:09:29 PM	44079
Xylenes, Total	ND	0.093	mg/Kg	1	4/4/2019 11:09:29 PM	44079
Surr: 4-Bromofluorobenzene	93.9	80-120	%Rec	1	4/4/2019 11:09:29 PM	44079

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP127

Project: LVP SWD

Collection Date: 4/2/2019

Lab ID: 1904160-004 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	MRA
Chloride	200	60	mg/Kg	20	4/6/2019 1:46:44 AM	44166
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst:	CLP
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	4/4/2019 2:30:57 PM	44071
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	4/4/2019 2:30:57 PM	44071
Surr: DNOP	94.2	70-130	%Rec	1	4/4/2019 2:30:57 PM	44071
EPA METHOD 8015D: GASOLINE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/4/2019 11:33:00 PM	44079
Surr: BFB	91.6	73.8-119	%Rec	1	4/4/2019 11:33:00 PM	44079
EPA METHOD 8021B: VOLATILES					Analyst	RAA
Benzene	ND	0.024	mg/Kg	1	4/4/2019 11:33:00 PM	44079
Toluene	ND	0.047	mg/Kg	1	4/4/2019 11:33:00 PM	44079
Ethylbenzene	ND	0.047	mg/Kg	1	4/4/2019 11:33:00 PM	44079
Xylenes, Total	ND	0.095	mg/Kg	1	4/4/2019 11:33:00 PM	44079
Surr: 4-Bromofluorobenzene	93.6	80-120	%Rec	1	4/4/2019 11:33:00 PM	44079

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP128

Project: LVP SWD

Collection Date: 4/2/2019

Lab ID: 1904160-005 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	MRA
Chloride	130	60	mg/Kg	20	4/6/2019 1:59:09 AM	44166
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	CLP
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	4/4/2019 3:19:04 PM	44071
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	4/4/2019 3:19:04 PM	44071
Surr: DNOP	88.0	70-130	%Rec	1	4/4/2019 3:19:04 PM	44071
EPA METHOD 8015D: GASOLINE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/4/2019 11:56:36 PM	44079
Surr: BFB	92.6	73.8-119	%Rec	1	4/4/2019 11:56:36 PM	44079
EPA METHOD 8021B: VOLATILES					Analyst:	RAA
Benzene	ND	0.023	mg/Kg	1	4/4/2019 11:56:36 PM	44079
Toluene	ND	0.047	mg/Kg	1	4/4/2019 11:56:36 PM	44079
Ethylbenzene	ND	0.047	mg/Kg	1	4/4/2019 11:56:36 PM	44079
Xylenes, Total	ND	0.094	mg/Kg	1	4/4/2019 11:56:36 PM	44079
Surr: 4-Bromofluorobenzene	93.9	80-120	%Rec	1	4/4/2019 11:56:36 PM	44079

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP129

Collection Date: 4/2/2019

Lab ID: 1904160-006 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	150	60	mg/Kg	20	4/6/2019 2:11:34 AM	44166
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	CLP
Diesel Range Organics (DRO)	ND	9.2	mg/Kg	1	4/4/2019 3:43:06 PM	44071
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	4/4/2019 3:43:06 PM	44071
Surr: DNOP	96.9	70-130	%Rec	1	4/4/2019 3:43:06 PM	44071
EPA METHOD 8015D: GASOLINE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/5/2019 12:20:11 AM	44079
Surr: BFB	91.0	73.8-119	%Rec	1	4/5/2019 12:20:11 AM	44079
EPA METHOD 8021B: VOLATILES					Analyst	RAA
Benzene	ND	0.024	mg/Kg	1	4/5/2019 12:20:11 AM	44079
Toluene	ND	0.048	mg/Kg	1	4/5/2019 12:20:11 AM	44079
Ethylbenzene	ND	0.048	mg/Kg	1	4/5/2019 12:20:11 AM	44079
Xylenes, Total	ND	0.096	mg/Kg	1	4/5/2019 12:20:11 AM	44079
Surr: 4-Bromofluorobenzene	93.3	80-120	%Rec	1	4/5/2019 12:20:11 AM	44079

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP130
Project: LVP SWD
Collection Date: 4/2/2019

Lab ID: 1904160-007 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	MRA
Chloride	240	60	mg/Kg	20	4/6/2019 2:23:59 AM	44166
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst:	CLP
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	4/4/2019 4:07:08 PM	44071
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/4/2019 4:07:08 PM	44071
Surr: DNOP	94.5	70-130	%Rec	1	4/4/2019 4:07:08 PM	44071
EPA METHOD 8015D: GASOLINE RANGE					Analyst:	RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/5/2019 12:43:42 AM	44079
Surr: BFB	92.0	73.8-119	%Rec	1	4/5/2019 12:43:42 AM	44079
EPA METHOD 8021B: VOLATILES					Analyst	RAA
Benzene	ND	0.024	mg/Kg	1	4/5/2019 12:43:42 AM	44079
Toluene	ND	0.048	mg/Kg	1	4/5/2019 12:43:42 AM	44079
Ethylbenzene	ND	0.048	mg/Kg	1	4/5/2019 12:43:42 AM	44079
Xylenes, Total	ND	0.097	mg/Kg	1	4/5/2019 12:43:42 AM	44079
Surr: 4-Bromofluorobenzene	92.9	80-120	%Rec	1	4/5/2019 12:43:42 AM	44079

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP131
Project: LVP SWD
Collection Date: 4/2/2019

Lab ID: 1904160-008 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: MRA
Chloride	220	60	mg/Kg	20	4/6/2019 2:36:24 AM	44166
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: CLP
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	4/4/2019 4:31:11 PM	44071
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	4/4/2019 4:31:11 PM	44071
Surr: DNOP	84.9	70-130	%Rec	1	4/4/2019 4:31:11 PM	44071
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/5/2019 1:07:11 AM	44079
Surr: BFB	88.5	73.8-119	%Rec	1	4/5/2019 1:07:11 AM	44079
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.024	mg/Kg	1	4/5/2019 1:07:11 AM	44079
Toluene	ND	0.048	mg/Kg	1	4/5/2019 1:07:11 AM	44079
Ethylbenzene	ND	0.048	mg/Kg	1	4/5/2019 1:07:11 AM	44079
Xylenes, Total	ND	0.096	mg/Kg	1	4/5/2019 1:07:11 AM	44079
Surr: 4-Bromofluorobenzene	88.4	80-120	%Rec	1	4/5/2019 1:07:11 AM	44079

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP132
Project: LVP SWD
Collection Date: 4/2/2019

Lab ID: 1904160-009 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	130	60	mg/Kg	20	4/6/2019 3:13:37 AM	44166
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	CLP
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	4/4/2019 4:55:12 PM	44071
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	4/4/2019 4:55:12 PM	44071
Surr: DNOP	88.3	70-130	%Rec	1	4/4/2019 4:55:12 PM	44071
EPA METHOD 8015D: GASOLINE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/5/2019 1:30:27 AM	44079
Surr: BFB	90.6	73.8-119	%Rec	1	4/5/2019 1:30:27 AM	44079
EPA METHOD 8021B: VOLATILES					Analyst	RAA
Benzene	ND	0.025	mg/Kg	1	4/5/2019 1:30:27 AM	44079
Toluene	ND	0.049	mg/Kg	1	4/5/2019 1:30:27 AM	44079
Ethylbenzene	ND	0.049	mg/Kg	1	4/5/2019 1:30:27 AM	44079
Xylenes, Total	ND	0.099	mg/Kg	1	4/5/2019 1:30:27 AM	44079
Surr: 4-Bromofluorobenzene	90.4	80-120	%Rec	1	4/5/2019 1:30:27 AM	44079

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP133
Project: LVP SWD
Collection Date: 4/2/2019

Lab ID: 1904160-010 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	190	60	mg/Kg	20	4/6/2019 3:26:02 AM	44166
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	CLP
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	4/4/2019 5:19:16 PM	44071
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	4/4/2019 5:19:16 PM	44071
Surr: DNOP	81.2	70-130	%Rec	1	4/4/2019 5:19:16 PM	44071
EPA METHOD 8015D: GASOLINE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/5/2019 2:40:55 AM	44079
Surr: BFB	91.2	73.8-119	%Rec	1	4/5/2019 2:40:55 AM	44079
EPA METHOD 8021B: VOLATILES					Analyst	RAA
Benzene	ND	0.024	mg/Kg	1	4/5/2019 2:40:55 AM	44079
Toluene	ND	0.047	mg/Kg	1	4/5/2019 2:40:55 AM	44079
Ethylbenzene	ND	0.047	mg/Kg	1	4/5/2019 2:40:55 AM	44079
Xylenes, Total	ND	0.094	mg/Kg	1	4/5/2019 2:40:55 AM	44079
Surr: 4-Bromofluorobenzene	91.8	80-120	%Rec	1	4/5/2019 2:40:55 AM	44079

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP134
Project: LVP SWD
Collection Date: 4/2/2019

Lab ID: 1904160-011 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	120	60	mg/Kg	20	4/6/2019 3:38:26 AM	44166
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	CLP
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	4/4/2019 5:43:24 PM	44071
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/4/2019 5:43:24 PM	44071
Surr: DNOP	90.6	70-130	%Rec	1	4/4/2019 5:43:24 PM	44071
EPA METHOD 8015D: GASOLINE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/5/2019 3:04:26 AM	44079
Surr: BFB	92.4	73.8-119	%Rec	1	4/5/2019 3:04:26 AM	44079
EPA METHOD 8021B: VOLATILES					Analyst	RAA
Benzene	ND	0.024	mg/Kg	1	4/5/2019 3:04:26 AM	44079
Toluene	ND	0.048	mg/Kg	1	4/5/2019 3:04:26 AM	44079
Ethylbenzene	ND	0.048	mg/Kg	1	4/5/2019 3:04:26 AM	44079
Xylenes, Total	ND	0.096	mg/Kg	1	4/5/2019 3:04:26 AM	44079
Surr: 4-Bromofluorobenzene	93.1	80-120	%Rec	1	4/5/2019 3:04:26 AM	44079

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP135
Project: LVP SWD
Collection Date: 4/2/2019

Lab ID: 1904160-012 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: MRA
Chloride	150	60	mg/Kg	20	4/6/2019 3:50:51 AM	44166
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	CLP
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	4/4/2019 6:07:35 PM	44071
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/4/2019 6:07:35 PM	44071
Surr: DNOP	75.5	70-130	%Rec	1	4/4/2019 6:07:35 PM	44071
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/5/2019 3:27:37 AM	44079
Surr: BFB	92.1	73.8-119	%Rec	1	4/5/2019 3:27:37 AM	44079
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.024	mg/Kg	1	4/5/2019 3:27:37 AM	44079
Toluene	ND	0.047	mg/Kg	1	4/5/2019 3:27:37 AM	44079
Ethylbenzene	ND	0.047	mg/Kg	1	4/5/2019 3:27:37 AM	44079
Xylenes, Total	ND	0.094	mg/Kg	1	4/5/2019 3:27:37 AM	44079
Surr: 4-Bromofluorobenzene	93.4	80-120	%Rec	1	4/5/2019 3:27:37 AM	44079

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP136
Project: LVP SWD
Collection Date: 4/2/2019

Lab ID: 1904160-013 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	160	60	mg/Kg	20	4/6/2019 4:03:16 AM	44166
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	CLP
Diesel Range Organics (DRO)	ND	9.1	mg/Kg	1	4/4/2019 6:31:52 PM	44071
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	4/4/2019 6:31:52 PM	44071
Surr: DNOP	78.1	70-130	%Rec	1	4/4/2019 6:31:52 PM	44071
EPA METHOD 8015D: GASOLINE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/5/2019 3:51:01 AM	44079
Surr: BFB	90.1	73.8-119	%Rec	1	4/5/2019 3:51:01 AM	44079
EPA METHOD 8021B: VOLATILES					Analyst	RAA
Benzene	ND	0.024	mg/Kg	1	4/5/2019 3:51:01 AM	44079
Toluene	ND	0.048	mg/Kg	1	4/5/2019 3:51:01 AM	44079
Ethylbenzene	ND	0.048	mg/Kg	1	4/5/2019 3:51:01 AM	44079
Xylenes, Total	ND	0.096	mg/Kg	1	4/5/2019 3:51:01 AM	44079
Surr: 4-Bromofluorobenzene	92.2	80-120	%Rec	1	4/5/2019 3:51:01 AM	44079

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Project: LVP SWD
Client Sample ID: SP137
Collection Date: 4/2/2019

Lab ID: 1904160-014 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	180	60	mg/Kg	20	4/6/2019 4:15:40 AM	44166
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	CLP
Diesel Range Organics (DRO)	ND	9.1	mg/Kg	1	4/4/2019 6:56:07 PM	44071
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	4/4/2019 6:56:07 PM	44071
Surr: DNOP	90.6	70-130	%Rec	1	4/4/2019 6:56:07 PM	44071
EPA METHOD 8015D: GASOLINE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/5/2019 4:14:27 AM	44079
Surr: BFB	89.0	73.8-119	%Rec	1	4/5/2019 4:14:27 AM	44079
EPA METHOD 8021B: VOLATILES					Analyst	RAA
Benzene	ND	0.024	mg/Kg	1	4/5/2019 4:14:27 AM	44079
Toluene	ND	0.049	mg/Kg	1	4/5/2019 4:14:27 AM	44079
Ethylbenzene	ND	0.049	mg/Kg	1	4/5/2019 4:14:27 AM	44079
Xylenes, Total	ND	0.097	mg/Kg	1	4/5/2019 4:14:27 AM	44079
Surr: 4-Bromofluorobenzene	90.6	80-120	%Rec	1	4/5/2019 4:14:27 AM	44079

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP138

Collection Date: 4/2/2019

Lab ID: 1904160-015 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	210	60	mg/Kg	20	4/6/2019 4:28:05 AM	44166
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	CLP
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	4/4/2019 7:20:21 PM	44071
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	4/4/2019 7:20:21 PM	44071
Surr: DNOP	77.4	70-130	%Rec	1	4/4/2019 7:20:21 PM	44071
EPA METHOD 8015D: GASOLINE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/5/2019 4:37:55 AM	44079
Surr: BFB	91.0	73.8-119	%Rec	1	4/5/2019 4:37:55 AM	44079
EPA METHOD 8021B: VOLATILES					Analyst	RAA
Benzene	ND	0.024	mg/Kg	1	4/5/2019 4:37:55 AM	44079
Toluene	ND	0.048	mg/Kg	1	4/5/2019 4:37:55 AM	44079
Ethylbenzene	ND	0.048	mg/Kg	1	4/5/2019 4:37:55 AM	44079
Xylenes, Total	ND	0.096	mg/Kg	1	4/5/2019 4:37:55 AM	44079
Surr: 4-Bromofluorobenzene	92.7	80-120	%Rec	1	4/5/2019 4:37:55 AM	44079

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP139

Project: LVP SWD

Collection Date: 4/2/2019

Lab ID: 1904160-016 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	220	60	mg/Kg	20	4/6/2019 4:40:29 AM	44166
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	CLP
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	4/4/2019 7:44:35 PM	44071
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	4/4/2019 7:44:35 PM	44071
Surr: DNOP	84.4	70-130	%Rec	1	4/4/2019 7:44:35 PM	44071
EPA METHOD 8015D: GASOLINE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/5/2019 5:01:21 AM	44079
Surr: BFB	88.5	73.8-119	%Rec	1	4/5/2019 5:01:21 AM	44079
EPA METHOD 8021B: VOLATILES					Analyst	RAA
Benzene	ND	0.024	mg/Kg	1	4/5/2019 5:01:21 AM	44079
Toluene	ND	0.049	mg/Kg	1	4/5/2019 5:01:21 AM	44079
Ethylbenzene	ND	0.049	mg/Kg	1	4/5/2019 5:01:21 AM	44079
Xylenes, Total	ND	0.098	mg/Kg	1	4/5/2019 5:01:21 AM	44079
Surr: 4-Bromofluorobenzene	89.1	80-120	%Rec	1	4/5/2019 5:01:21 AM	44079

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP140

Project: LVP SWD

Collection Date: 4/2/2019

Lab ID: 1904160-017 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	MRA
Chloride	170	60	mg/Kg	20	4/6/2019 4:52:53 AM	44166
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst:	CLP
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	4/4/2019 8:08:54 PM	44071
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/4/2019 8:08:54 PM	44071
Surr: DNOP	90.4	70-130	%Rec	1	4/4/2019 8:08:54 PM	44071
EPA METHOD 8015D: GASOLINE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/5/2019 5:24:47 AM	44079
Surr: BFB	91.1	73.8-119	%Rec	1	4/5/2019 5:24:47 AM	44079
EPA METHOD 8021B: VOLATILES					Analyst	RAA
Benzene	ND	0.024	mg/Kg	1	4/5/2019 5:24:47 AM	44079
Toluene	ND	0.048	mg/Kg	1	4/5/2019 5:24:47 AM	44079
Ethylbenzene	ND	0.048	mg/Kg	1	4/5/2019 5:24:47 AM	44079
Xylenes, Total	ND	0.096	mg/Kg	1	4/5/2019 5:24:47 AM	44079
Surr: 4-Bromofluorobenzene	91.6	80-120	%Rec	1	4/5/2019 5:24:47 AM	44079

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP141
Project: LVP SWD
Collection Date: 4/2/2019

Lab ID: 1904160-018 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: CJS
Chloride	130	60	mg/Kg	20	4/6/2019 8:04:39 AM	44169
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analys	: CLP
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	4/4/2019 8:33:14 PM	44071
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	4/4/2019 8:33:14 PM	44071
Surr: DNOP	85.9	70-130	%Rec	1	4/4/2019 8:33:14 PM	44071
EPA METHOD 8015D: GASOLINE RANGE					Analys	t: RAA
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	4/5/2019 5:48:11 AM	44079
Surr: BFB	89.1	73.8-119	%Rec	1	4/5/2019 5:48:11 AM	44079
EPA METHOD 8021B: VOLATILES					Analys	t: RAA
Benzene	ND	0.025	mg/Kg	1	4/5/2019 5:48:11 AM	44079
Toluene	ND	0.050	mg/Kg	1	4/5/2019 5:48:11 AM	44079
Ethylbenzene	ND	0.050	mg/Kg	1	4/5/2019 5:48:11 AM	44079
Xylenes, Total	ND	0.10	mg/Kg	1	4/5/2019 5:48:11 AM	44079
Surr: 4-Bromofluorobenzene	89.1	80-120	%Rec	1	4/5/2019 5:48:11 AM	44079

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP142
Project: LVP SWD
Collection Date: 4/2/2019

Lab ID: 1904160-019 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: CJS
Chloride	150	60	mg/Kg	20	4/6/2019 8:41:52 AM	44169
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: CLP
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	4/4/2019 8:57:32 PM	44071
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	4/4/2019 8:57:32 PM	44071
Surr: DNOP	88.1	70-130	%Rec	1	4/4/2019 8:57:32 PM	44071
EPA METHOD 8015D: GASOLINE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/5/2019 6:11:36 AM	44079
Surr: BFB	88.2	73.8-119	%Rec	1	4/5/2019 6:11:36 AM	44079
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.024	mg/Kg	1	4/5/2019 6:11:36 AM	44079
Toluene	ND	0.049	mg/Kg	1	4/5/2019 6:11:36 AM	44079
Ethylbenzene	ND	0.049	mg/Kg	1	4/5/2019 6:11:36 AM	44079
Xylenes, Total	ND	0.098	mg/Kg	1	4/5/2019 6:11:36 AM	44079
Surr: 4-Bromofluorobenzene	89.2	80-120	%Rec	1	4/5/2019 6:11:36 AM	44079

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP143
Project: LVP SWD
Collection Date: 4/2/2019

Lab ID: 1904160-020 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	CJS
Chloride	270	60		mg/Kg	20	4/6/2019 8:54:16 AM	44169
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst:	CLP
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/5/2019 7:42:35 PM	44072
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/5/2019 7:42:35 PM	44072
Surr: DNOP	49.5	70-130	S	%Rec	1	4/5/2019 7:42:35 PM	44072
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/5/2019 12:45:12 PM	44080
Surr: BFB	92.3	73.8-119		%Rec	1	4/5/2019 12:45:12 PM	44080
EPA METHOD 8021B: VOLATILES						Analyst:	RAA
Benzene	ND	0.024		mg/Kg	1	4/5/2019 12:45:12 PM	44080
Toluene	ND	0.047		mg/Kg	1	4/5/2019 12:45:12 PM	44080
Ethylbenzene	ND	0.047		mg/Kg	1	4/5/2019 12:45:12 PM	44080
Xylenes, Total	ND	0.095		mg/Kg	1	4/5/2019 12:45:12 PM	44080
Surr: 4-Bromofluorobenzene	93.6	80-120		%Rec	1	4/5/2019 12:45:12 PM	44080

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT:WPX EnergyClient Sample ID: SP144Project:LVP SWDCollection Date: 4/2/2019

Lab ID: 1904160-021 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: CJS
Chloride	150	60		mg/Kg	20	4/6/2019 9:06:40 AM	44169
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst	CLP
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/5/2019 8:55:31 PM	44072
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/5/2019 8:55:31 PM	44072
Surr: DNOP	44.7	70-130	S	%Rec	1	4/5/2019 8:55:31 PM	44072
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/5/2019 1:56:14 PM	44080
Surr: BFB	101	73.8-119		%Rec	1	4/5/2019 1:56:14 PM	44080
EPA METHOD 8021B: VOLATILES						Analyst	: RAA
Benzene	ND	0.024		mg/Kg	1	4/5/2019 1:56:14 PM	44080
Toluene	ND	0.049		mg/Kg	1	4/5/2019 1:56:14 PM	44080
Ethylbenzene	ND	0.049		mg/Kg	1	4/5/2019 1:56:14 PM	44080
Xylenes, Total	ND	0.097		mg/Kg	1	4/5/2019 1:56:14 PM	44080
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	4/5/2019 1:56:14 PM	44080

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP145
Project: LVP SWD
Collection Date: 4/2/2019

Lab ID: 1904160-022 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: CJS
Chloride	73	60		mg/Kg	20	4/6/2019 9:19:04 AM	44169
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS					Analyst	CLP
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/5/2019 9:19:54 PM	44072
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/5/2019 9:19:54 PM	44072
Surr: DNOP	40.7	70-130	S	%Rec	1	4/5/2019 9:19:54 PM	44072
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/5/2019 3:06:31 PM	44080
Surr: BFB	93.9	73.8-119		%Rec	1	4/5/2019 3:06:31 PM	44080
EPA METHOD 8021B: VOLATILES						Analyst	: RAA
Benzene	ND	0.023		mg/Kg	1	4/5/2019 3:06:31 PM	44080
Toluene	ND	0.046		mg/Kg	1	4/5/2019 3:06:31 PM	44080
Ethylbenzene	ND	0.046		mg/Kg	1	4/5/2019 3:06:31 PM	44080
Xylenes, Total	ND	0.093		mg/Kg	1	4/5/2019 3:06:31 PM	44080
Surr: 4-Bromofluorobenzene	95.3	80-120		%Rec	1	4/5/2019 3:06:31 PM	44080

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP146
Project: LVP SWD
Collection Date: 4/2/2019

Lab ID: 1904160-023 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: CJS
Chloride	180	60		mg/Kg	20	4/6/2019 9:31:29 AM	44169
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	: CLP
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	4/5/2019 9:44:06 PM	44072
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/5/2019 9:44:06 PM	44072
Surr: DNOP	32.1	70-130	S	%Rec	1	4/5/2019 9:44:06 PM	44072
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/5/2019 3:29:49 PM	44080
Surr: BFB	93.0	73.8-119		%Rec	1	4/5/2019 3:29:49 PM	44080
EPA METHOD 8021B: VOLATILES						Analyst	: RAA
Benzene	ND	0.024		mg/Kg	1	4/5/2019 3:29:49 PM	44080
Toluene	ND	0.048		mg/Kg	1	4/5/2019 3:29:49 PM	44080
Ethylbenzene	ND	0.048		mg/Kg	1	4/5/2019 3:29:49 PM	44080
Xylenes, Total	ND	0.095		mg/Kg	1	4/5/2019 3:29:49 PM	44080
Surr: 4-Bromofluorobenzene	94.5	80-120		%Rec	1	4/5/2019 3:29:49 PM	44080

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP147
Project: LVP SWD
Collection Date: 4/2/2019

Lab ID: 1904160-024 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	CJS
Chloride	180	60		mg/Kg	20	4/6/2019 10:08:43 AM	44169
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS					Analyst	CLP
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	4/5/2019 10:08:27 PM	44072
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/5/2019 10:08:27 PM	44072
Surr: DNOP	32.2	70-130	S	%Rec	1	4/5/2019 10:08:27 PM	44072
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/5/2019 3:53:08 PM	44080
Surr: BFB	91.5	73.8-119		%Rec	1	4/5/2019 3:53:08 PM	44080
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.023		mg/Kg	1	4/5/2019 3:53:08 PM	44080
Toluene	ND	0.047		mg/Kg	1	4/5/2019 3:53:08 PM	44080
Ethylbenzene	ND	0.047		mg/Kg	1	4/5/2019 3:53:08 PM	44080
Xylenes, Total	ND	0.093		mg/Kg	1	4/5/2019 3:53:08 PM	44080
Surr: 4-Bromofluorobenzene	92.6	80-120		%Rec	1	4/5/2019 3:53:08 PM	44080

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP148
Project: LVP SWD
Collection Date: 4/2/2019

Lab ID: 1904160-025 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	CJS
Chloride	150	60		mg/Kg	20	4/6/2019 10:21:07 AM	44169
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	CLP
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/5/2019 10:57:00 PM	44072
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/5/2019 10:57:00 PM	44072
Surr: DNOP	26.2	70-130	S	%Rec	1	4/5/2019 10:57:00 PM	44072
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/5/2019 4:16:29 PM	44080
Surr: BFB	91.8	73.8-119		%Rec	1	4/5/2019 4:16:29 PM	44080
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.023		mg/Kg	1	4/5/2019 4:16:29 PM	44080
Toluene	ND	0.047		mg/Kg	1	4/5/2019 4:16:29 PM	44080
Ethylbenzene	ND	0.047		mg/Kg	1	4/5/2019 4:16:29 PM	44080
Xylenes, Total	ND	0.094		mg/Kg	1	4/5/2019 4:16:29 PM	44080
Surr: 4-Bromofluorobenzene	93.4	80-120		%Rec	1	4/5/2019 4:16:29 PM	44080

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP149

Collection Date: 4/2/2019

Lab ID: 1904160-026 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: CJS
Chloride	200	60		mg/Kg	20	4/6/2019 10:33:31 AM	44169
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	CLP
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/5/2019 11:21:11 PM	44072
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/5/2019 11:21:11 PM	44072
Surr: DNOP	27.3	70-130	S	%Rec	1	4/5/2019 11:21:11 PM	44072
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/5/2019 4:39:51 PM	44080
Surr: BFB	93.2	73.8-119		%Rec	1	4/5/2019 4:39:51 PM	44080
EPA METHOD 8021B: VOLATILES						Analyst	: RAA
Benzene	ND	0.023		mg/Kg	1	4/5/2019 4:39:51 PM	44080
Toluene	ND	0.046		mg/Kg	1	4/5/2019 4:39:51 PM	44080
Ethylbenzene	ND	0.046		mg/Kg	1	4/5/2019 4:39:51 PM	44080
Xylenes, Total	ND	0.093		mg/Kg	1	4/5/2019 4:39:51 PM	44080
Surr: 4-Bromofluorobenzene	94.7	80-120		%Rec	1	4/5/2019 4:39:51 PM	44080

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP150
Project: LVP SWD
Collection Date: 4/2/2019

Lab ID: 1904160-027 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	CJS
Chloride	220	60		mg/Kg	20	4/6/2019 10:45:55 AM	44169
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst	CLP
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	4/5/2019 11:45:28 PM	44072
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/5/2019 11:45:28 PM	44072
Surr: DNOP	32.0	70-130	S	%Rec	1	4/5/2019 11:45:28 PM	44072
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/5/2019 5:03:04 PM	44080
Surr: BFB	93.8	73.8-119		%Rec	1	4/5/2019 5:03:04 PM	44080
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.023		mg/Kg	1	4/5/2019 5:03:04 PM	44080
Toluene	ND	0.046		mg/Kg	1	4/5/2019 5:03:04 PM	44080
Ethylbenzene	ND	0.046		mg/Kg	1	4/5/2019 5:03:04 PM	44080
Xylenes, Total	ND	0.093		mg/Kg	1	4/5/2019 5:03:04 PM	44080
Surr: 4-Bromofluorobenzene	95.7	80-120		%Rec	1	4/5/2019 5:03:04 PM	44080

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP151
Project: LVP SWD
Collection Date: 4/2/2019

Lab ID: 1904160-028 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	CJS
Chloride	90	60		mg/Kg	20	4/6/2019 10:58:20 AM	44169
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS					Analyst	CLP
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/6/2019 12:09:34 AM	44072
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/6/2019 12:09:34 AM	44072
Surr: DNOP	26.1	70-130	S	%Rec	1	4/6/2019 12:09:34 AM	44072
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/5/2019 5:26:29 PM	44080
Surr: BFB	95.1	73.8-119		%Rec	1	4/5/2019 5:26:29 PM	44080
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.024		mg/Kg	1	4/5/2019 5:26:29 PM	44080
Toluene	ND	0.048		mg/Kg	1	4/5/2019 5:26:29 PM	44080
Ethylbenzene	ND	0.048		mg/Kg	1	4/5/2019 5:26:29 PM	44080
Xylenes, Total	ND	0.097		mg/Kg	1	4/5/2019 5:26:29 PM	44080
Surr: 4-Bromofluorobenzene	97.0	80-120		%Rec	1	4/5/2019 5:26:29 PM	44080

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP152
Project: LVP SWD
Collection Date: 4/2/2019

Lab ID: 1904160-029 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	CJS
Chloride	130	60		mg/Kg	20	4/6/2019 11:35:34 AM	44169
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst	CLP
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	4/6/2019 12:33:46 AM	44072
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/6/2019 12:33:46 AM	44072
Surr: DNOP	25.9	70-130	S	%Rec	1	4/6/2019 12:33:46 AM	44072
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/5/2019 5:49:51 PM	44080
Surr: BFB	93.3	73.8-119		%Rec	1	4/5/2019 5:49:51 PM	44080
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.024		mg/Kg	1	4/5/2019 5:49:51 PM	44080
Toluene	ND	0.048		mg/Kg	1	4/5/2019 5:49:51 PM	44080
Ethylbenzene	ND	0.048		mg/Kg	1	4/5/2019 5:49:51 PM	44080
Xylenes, Total	ND	0.096		mg/Kg	1	4/5/2019 5:49:51 PM	44080
Surr: 4-Bromofluorobenzene	95.2	80-120		%Rec	1	4/5/2019 5:49:51 PM	44080

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP153
Project: LVP SWD
Collection Date: 4/2/2019

Lab ID: 1904160-030 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	CJS
Chloride	190	60		mg/Kg	20	4/6/2019 11:47:57 AM	44169
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	CLP
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/6/2019 12:57:52 AM	44072
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/6/2019 12:57:52 AM	44072
Surr: DNOP	20.8	70-130	S	%Rec	1	4/6/2019 12:57:52 AM	44072
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/5/2019 7:00:38 PM	44080
Surr: BFB	93.3	73.8-119		%Rec	1	4/5/2019 7:00:38 PM	44080
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.025		mg/Kg	1	4/5/2019 7:00:38 PM	44080
Toluene	ND	0.049		mg/Kg	1	4/5/2019 7:00:38 PM	44080
Ethylbenzene	ND	0.049		mg/Kg	1	4/5/2019 7:00:38 PM	44080
Xylenes, Total	ND	0.099		mg/Kg	1	4/5/2019 7:00:38 PM	44080
Surr: 4-Bromofluorobenzene	95.8	80-120		%Rec	1	4/5/2019 7:00:38 PM	44080

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP154
Project: LVP SWD
Collection Date: 4/2/2019

Lab ID: 1904160-031 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	CJS
Chloride	190	60		mg/Kg	20	4/6/2019 12:00:23 PM	44169
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst:	CLP
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/6/2019 1:22:01 AM	44072
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/6/2019 1:22:01 AM	44072
Surr: DNOP	14.8	70-130	S	%Rec	1	4/6/2019 1:22:01 AM	44072
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/5/2019 7:24:12 PM	44080
Surr: BFB	94.3	73.8-119		%Rec	1	4/5/2019 7:24:12 PM	44080
EPA METHOD 8021B: VOLATILES						Analyst:	RAA
Benzene	ND	0.024		mg/Kg	1	4/5/2019 7:24:12 PM	44080
Toluene	ND	0.048		mg/Kg	1	4/5/2019 7:24:12 PM	44080
Ethylbenzene	ND	0.048		mg/Kg	1	4/5/2019 7:24:12 PM	44080
Xylenes, Total	ND	0.095		mg/Kg	1	4/5/2019 7:24:12 PM	44080
Surr: 4-Bromofluorobenzene	95.6	80-120		%Rec	1	4/5/2019 7:24:12 PM	44080

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP155
Project: LVP SWD
Collection Date: 4/2/2019

Lab ID: 1904160-032 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	CJS
Chloride	150	60		mg/Kg	20	4/6/2019 12:37:36 PM	44169
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	CLP
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	4/6/2019 1:46:04 AM	44072
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/6/2019 1:46:04 AM	44072
Surr: DNOP	15.2	70-130	S	%Rec	1	4/6/2019 1:46:04 AM	44072
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/5/2019 7:47:36 PM	44080
Surr: BFB	93.9	73.8-119		%Rec	1	4/5/2019 7:47:36 PM	44080
EPA METHOD 8021B: VOLATILES						Analyst	: RAA
Benzene	ND	0.024		mg/Kg	1	4/5/2019 7:47:36 PM	44080
Toluene	ND	0.048		mg/Kg	1	4/5/2019 7:47:36 PM	44080
Ethylbenzene	ND	0.048		mg/Kg	1	4/5/2019 7:47:36 PM	44080
Xylenes, Total	ND	0.097		mg/Kg	1	4/5/2019 7:47:36 PM	44080
Surr: 4-Bromofluorobenzene	95.8	80-120		%Rec	1	4/5/2019 7:47:36 PM	44080

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP156
Project: LVP SWD
Collection Date: 4/2/2019

Lab ID: 1904160-033 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	CJS
Chloride	120	60		mg/Kg	20	4/6/2019 12:50:00 PM	44169
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	CLP
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/6/2019 2:10:14 AM	44072
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/6/2019 2:10:14 AM	44072
Surr: DNOP	11.7	70-130	S	%Rec	1	4/6/2019 2:10:14 AM	44072
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/5/2019 8:10:56 PM	44080
Surr: BFB	95.4	73.8-119		%Rec	1	4/5/2019 8:10:56 PM	44080
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.025		mg/Kg	1	4/5/2019 8:10:56 PM	44080
Toluene	ND	0.050		mg/Kg	1	4/5/2019 8:10:56 PM	44080
Ethylbenzene	ND	0.050		mg/Kg	1	4/5/2019 8:10:56 PM	44080
Xylenes, Total	ND	0.10		mg/Kg	1	4/5/2019 8:10:56 PM	44080
Surr: 4-Bromofluorobenzene	97.9	80-120		%Rec	1	4/5/2019 8:10:56 PM	44080

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP157
Project: LVP SWD
Collection Date: 4/2/2019

Lab ID: 1904160-034 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: CJS
Chloride	130	60		mg/Kg	20	4/6/2019 1:02:25 PM	44169
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst	CLP
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	4/6/2019 2:34:17 AM	44072
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/6/2019 2:34:17 AM	44072
Surr: DNOP	13.7	70-130	S	%Rec	1	4/6/2019 2:34:17 AM	44072
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/5/2019 8:34:12 PM	44080
Surr: BFB	93.9	73.8-119		%Rec	1	4/5/2019 8:34:12 PM	44080
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.023		mg/Kg	1	4/5/2019 8:34:12 PM	44080
Toluene	ND	0.046		mg/Kg	1	4/5/2019 8:34:12 PM	44080
Ethylbenzene	ND	0.046		mg/Kg	1	4/5/2019 8:34:12 PM	44080
Xylenes, Total	ND	0.092		mg/Kg	1	4/5/2019 8:34:12 PM	44080
Surr: 4-Bromofluorobenzene	95.2	80-120		%Rec	1	4/5/2019 8:34:12 PM	44080

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT:WPX EnergyClient Sample ID: SP158Project:LVP SWDCollection Date: 4/2/2019

Lab ID: 1904160-035 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	CJS
Chloride	140	60		mg/Kg	20	4/6/2019 1:14:50 PM	44169
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	CLP
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	4/6/2019 2:58:27 AM	44072
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/6/2019 2:58:27 AM	44072
Surr: DNOP	17.8	70-130	S	%Rec	1	4/6/2019 2:58:27 AM	44072
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/5/2019 8:57:27 PM	44080
Surr: BFB	93.7	73.8-119		%Rec	1	4/5/2019 8:57:27 PM	44080
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.025		mg/Kg	1	4/5/2019 8:57:27 PM	44080
Toluene	ND	0.049		mg/Kg	1	4/5/2019 8:57:27 PM	44080
Ethylbenzene	ND	0.049		mg/Kg	1	4/5/2019 8:57:27 PM	44080
Xylenes, Total	ND	0.098		mg/Kg	1	4/5/2019 8:57:27 PM	44080
Surr: 4-Bromofluorobenzene	95.9	80-120		%Rec	1	4/5/2019 8:57:27 PM	44080

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP159
Project: LVP SWD
Collection Date: 4/2/2019

Lab ID: 1904160-036 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: CJS
Chloride	160	60		mg/Kg	20	4/6/2019 1:27:15 PM	44169
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	: CLP
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/6/2019 3:22:27 AM	44072
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/6/2019 3:22:27 AM	44072
Surr: DNOP	10.7	70-130	S	%Rec	1	4/6/2019 3:22:27 AM	44072
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/5/2019 9:20:42 PM	44080
Surr: BFB	96.9	73.8-119		%Rec	1	4/5/2019 9:20:42 PM	44080
EPA METHOD 8021B: VOLATILES						Analyst	: RAA
Benzene	ND	0.024		mg/Kg	1	4/5/2019 9:20:42 PM	44080
Toluene	ND	0.047		mg/Kg	1	4/5/2019 9:20:42 PM	44080
Ethylbenzene	ND	0.047		mg/Kg	1	4/5/2019 9:20:42 PM	44080
Xylenes, Total	ND	0.094		mg/Kg	1	4/5/2019 9:20:42 PM	44080
Surr: 4-Bromofluorobenzene	98.9	80-120		%Rec	1	4/5/2019 9:20:42 PM	44080

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP160
Project: LVP SWD
Collection Date: 4/2/2019

Lab ID: 1904160-037 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: CJS
Chloride	160	60		mg/Kg	20	4/6/2019 1:39:40 PM	44169
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	: CLP
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	4/6/2019 3:46:33 AM	44072
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/6/2019 3:46:33 AM	44072
Surr: DNOP	10.3	70-130	S	%Rec	1	4/6/2019 3:46:33 AM	44072
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/5/2019 9:43:56 PM	44080
Surr: BFB	95.4	73.8-119		%Rec	1	4/5/2019 9:43:56 PM	44080
EPA METHOD 8021B: VOLATILES						Analyst	: RAA
Benzene	ND	0.024		mg/Kg	1	4/5/2019 9:43:56 PM	44080
Toluene	ND	0.048		mg/Kg	1	4/5/2019 9:43:56 PM	44080
Ethylbenzene	ND	0.048		mg/Kg	1	4/5/2019 9:43:56 PM	44080
Xylenes, Total	ND	0.097		mg/Kg	1	4/5/2019 9:43:56 PM	44080
Surr: 4-Bromofluorobenzene	97.4	80-120		%Rec	1	4/5/2019 9:43:56 PM	44080

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP161
Project: LVP SWD
Collection Date: 4/2/2019

Lab ID: 1904160-038 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	CJS
Chloride	150	60		mg/Kg	20	4/6/2019 3:56:10 PM	44170
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	CLP
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/6/2019 4:10:29 AM	44072
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/6/2019 4:10:29 AM	44072
Surr: DNOP	9.35	70-130	S	%Rec	1	4/6/2019 4:10:29 AM	44072
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/5/2019 10:07:16 PM	44080
Surr: BFB	95.0	73.8-119		%Rec	1	4/5/2019 10:07:16 PM	44080
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.023		mg/Kg	1	4/5/2019 10:07:16 PM	44080
Toluene	ND	0.046		mg/Kg	1	4/5/2019 10:07:16 PM	44080
Ethylbenzene	ND	0.046		mg/Kg	1	4/5/2019 10:07:16 PM	44080
Xylenes, Total	ND	0.091		mg/Kg	1	4/5/2019 10:07:16 PM	44080
Surr: 4-Bromofluorobenzene	96.7	80-120		%Rec	1	4/5/2019 10:07:16 PM	44080

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP162
Project: LVP SWD
Collection Date: 4/2/2019

Lab ID: 1904160-039 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	CJS
Chloride	150	60		mg/Kg	20	4/6/2019 4:33:24 PM	44170
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	CLP
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/6/2019 4:34:35 AM	44072
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/6/2019 4:34:35 AM	44072
Surr: DNOP	13.1	70-130	S	%Rec	1	4/6/2019 4:34:35 AM	44072
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/5/2019 10:30:39 PM	44080
Surr: BFB	95.5	73.8-119		%Rec	1	4/5/2019 10:30:39 PM	44080
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.024		mg/Kg	1	4/5/2019 10:30:39 PM	44080
Toluene	ND	0.048		mg/Kg	1	4/5/2019 10:30:39 PM	44080
Ethylbenzene	ND	0.048		mg/Kg	1	4/5/2019 10:30:39 PM	44080
Xylenes, Total	ND	0.096		mg/Kg	1	4/5/2019 10:30:39 PM	44080
Surr: 4-Bromofluorobenzene	97.5	80-120		%Rec	1	4/5/2019 10:30:39 PM	44080

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP163
Project: LVP SWD
Collection Date: 4/2/2019

Lab ID: 1904160-040 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	CJS
Chloride	230	60	mg/Kg	20	4/6/2019 4:45:48 PM	44170
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	4/6/2019 1:21:25 PM	44110
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/6/2019 1:21:25 PM	44110
Surr: DNOP	79.5	70-130	%Rec	1	4/6/2019 1:21:25 PM	44110
EPA METHOD 8015D: GASOLINE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/6/2019 12:51:41 AM	44087
Surr: BFB	94.3	73.8-119	%Rec	1	4/6/2019 12:51:41 AM	44087
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.025	mg/Kg	1	4/6/2019 12:51:41 AM	44087
Toluene	ND	0.049	mg/Kg	1	4/6/2019 12:51:41 AM	44087
Ethylbenzene	ND	0.049	mg/Kg	1	4/6/2019 12:51:41 AM	44087
Xylenes, Total	ND	0.098	mg/Kg	1	4/6/2019 12:51:41 AM	44087
Surr: 4-Bromofluorobenzene	95.4	80-120	%Rec	1	4/6/2019 12:51:41 AM	44087

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP164
Project: LVP SWD
Collection Date: 4/2/2019

Lab ID: 1904160-041 **Matrix:** SOIL **Received Date:** 4/3/2019 8:50:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: CJS
Chloride	310	60	mg/Kg	20	4/6/2019 4:58:12 PM	44170
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: Irm
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	4/6/2019 2:28:07 PM	44110
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	4/6/2019 2:28:07 PM	44110
Surr: DNOP	77.8	70-130	%Rec	1	4/6/2019 2:28:07 PM	44110
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/6/2019 2:02:16 AM	44087
Surr: BFB	92.8	73.8-119	%Rec	1	4/6/2019 2:02:16 AM	44087
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.023	mg/Kg	1	4/6/2019 2:02:16 AM	44087
Toluene	ND	0.047	mg/Kg	1	4/6/2019 2:02:16 AM	44087
Ethylbenzene	ND	0.047	mg/Kg	1	4/6/2019 2:02:16 AM	44087
Xylenes, Total	ND	0.094	mg/Kg	1	4/6/2019 2:02:16 AM	44087
Surr: 4-Bromofluorobenzene	94.0	80-120	%Rec	1	4/6/2019 2:02:16 AM	44087

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1904160**

09-Apr-19

Client: WPX Energy
Project: LVP SWD

Sample ID: MB-44166 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 44166 RunNo: 58920

Prep Date: 4/5/2019 Analysis Date: 4/5/2019 SeqNo: 1982110 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride ND 1.5

Sample ID: LCS-44166 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: **LCSS** Batch ID: **44166** RunNo: **58920**

Prep Date: 4/5/2019 Analysis Date: 4/5/2019 SeqNo: 1982111 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride 14 1.5 15.00 0 93.2 90 110

Sample ID: MB-44169 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 44169 RunNo: 58961

Prep Date: 4/5/2019 Analysis Date: 4/6/2019 SeqNo: 1983308 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride ND 1.5

Sample ID: LCS-44169 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 44169 RunNo: 58961

Prep Date: 4/5/2019 Analysis Date: 4/6/2019 SeqNo: 1983310 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride 14 1.5 15.00 0 92.9 90 110

Sample ID: MB-44170 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: **PBS** Batch ID: **44170** RunNo: **58961**

Prep Date: 4/6/2019 Analysis Date: 4/6/2019 SeqNo: 1983371 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride ND 1.5

Sample ID: LCS-44170 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 44170 RunNo: 58961

Prep Date: 4/6/2019 Analysis Date: 4/6/2019 SeqNo: 1983373 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride 14 1.5 15.00 0 93.4 90 110

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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WPX Energy

Client:

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904160**

09-Apr-19

Project:	LVP SW	D									
Sample ID:	1904160-001AMS	SampTy	/pe: M \$	S	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID:	SP124	Batch	ID: 44	071	F	RunNo: 5	8884				
Prep Date:	4/3/2019	Analysis Da	ate: 4,	/4/2019	5	SeqNo: 1	979964	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range O	rganics (DRO)	46	9.2	45.79	2.046	96.0	53.5	126			
Surr: DNOP		4.4		4.579		97.1	70	130			
Sample ID:	1904160-001AMSD	SampTy	/pe: M \$	SD	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID:	SP124	Batch	ID: 44	071	F	RunNo: 5	8884				
Prep Date:	4/3/2019	Analysis Da	ate: 4/	/4/2019	9	SeqNo: 19	979965	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range O	rganics (DRO)	47	10	50.40	2.046	89.9	53.5	126	2.90	21.7	
Surr: DNOP		4.5		5.040		89.6	70	130	0	0	
Sample ID:	MB-44071	SampTy	/ре: М І	BLK	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID:	PBS	Batch	ID: 44	071	F	RunNo: 5	8884				
Prep Date:	4/3/2019	Analysis Da	ate: 4/	/4/2019	9	SeqNo: 19	980000	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range O	• , ,	ND	10								
_	Organics (MRO)	ND	50	40.00				400			
Surr: DNOP		10		10.00		104	70	130			
Sample ID:	LCS-44071	SampTy	pe: LC	S	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID:	LCSS	Batch	ID: 44	071	F	RunNo: 5	8884				
Prep Date:	4/3/2019	Analysis Da	ate: 4/	/4/2019	5	SeqNo: 19	980001	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range O	rganics (DRO)	48	10	50.00	0	95.8	63.9	124			
Surr: DNOP		4.8		5.000		95.0	70	130			
Sample ID:	LCS-44142	SampTy	/pe: LC	s	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID:	LCSS	Batch	ID: 44	142	F	RunNo: 5 8	8917				
Prep Date:	4/5/2019	Analysis Da	ate: 4/	/5/2019	5	SeqNo: 19	981087	Units: %Red	;		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

Analyte

Surr: DNOP

Client ID:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

Sample ID: MB-44142

Prep Date: 4/5/2019

PBS

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

87.5

RunNo: 58917

%REC

SeqNo: 1981088

70

130

TestCode: EPA Method 8015M/D: Diesel Range Organics

Units: %Rec

HighLimit

%RPD

RL Reporting Detection Limit

5.000

SPK value SPK Ref Val

4.4

Result

SampType: MBLK

Batch ID: 44142

Analysis Date: 4/5/2019

W Sample container temperature is out of limit as specified at testcode

LowLimit

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RPDLimit

Qual

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904160**

09-Apr-19

Client: WPX End Project: LVP SW	••								
Sample ID: MB-44142	SampType: Mi	BLK	Tes	tCode: EPA l	Method	8015M/D: Die	sel Range	e Organics	
Client ID: PBS	Batch ID: 44	142	F	RunNo: 5891	17				
Prep Date: 4/5/2019	Analysis Date: 4/	/5/2019	S	SeqNo: 1981	880	Units: %Rec	;		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC Lo	owLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10	10.00		101	70	130			
Sample ID: LCS-44128	SampType: LC	s	Tes	tCode: EPA I	Method	8015M/D: Die	sel Range	e Organics	
Client ID: LCSS	Batch ID: 44	128	F	RunNo: 5891	17				
Prep Date: 4/4/2019	Analysis Date: 4/	/5/2019	S	SeqNo: 1982	2023	Units: %Rec	;		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC Lo	owLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.3	5.000		86.1	70	130			
Sample ID: MB-44128	SampType: MI	BLK	Tes	tCode: EPA I	Method	8015M/D: Die	sel Range	Organics	
Client ID: PBS	Batch ID: 44	128	F	RunNo: 5891	17				
Prep Date: 4/4/2019	Analysis Date: 4/	/5/2019	S	SeqNo: 1982	2024	Units: %Rec	;		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC Lo	owLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.8	10.00		98.1	70	130			
Sample ID: LCS-44110	SampType: LC	s	Tes	tCode: EPA I	Method	8015M/D: Die	sel Range	Organics	
Client ID: LCSS	Batch ID: 44	110	F	RunNo: 5891	17				
Prep Date: 4/4/2019	Analysis Date: 4/	/6/2019	S	SeqNo: 1983	3117	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC Lo	owLimit	HighLimit	%RPD	RPDLimit	Qual
					C2 C	404			
Diesel Range Organics (DRO)	50 10	50.00	0	100	63.9	124			
Diesel Range Organics (DRO) Surr: DNOP	50 10 4.4	50.00 5.000	0	100 88.3	70	130			
		5.000		88.3	70		sel Range	e Organics	
Surr: DNOP	4.4	5.000 BLK	Tes	88.3	70	130	sel Range	e Organics	
Surr: DNOP Sample ID: MB-44110	4.4 SampType: MI	5.000 BLK 110	Tes	88.3 tCode: EPA I	70 Method	130		e Organics	
Surr: DNOP Sample ID: MB-44110 Client ID: PBS Prep Date: 4/4/2019 Analyte	4.4 SampType: MI Batch ID: 44	5.000 BLK .110 /6/2019	Tes	88.3 tCode: EPA I RunNo: 5891 SeqNo: 1983	70 Method	130 8015M/D: Die		e Organics RPDLimit	Qual
Surr: DNOP Sample ID: MB-44110 Client ID: PBS Prep Date: 4/4/2019 Analyte Diesel Range Organics (DRO)	SampType: MI Batch ID: 44 Analysis Date: 44 Result PQL ND 10	5.000 BLK .110 /6/2019	Tes F	88.3 tCode: EPA I RunNo: 5891 SeqNo: 1983	70 Method 8	130 8015M/D: Die Units: mg/K	g	·	Qual
Surr: DNOP Sample ID: MB-44110 Client ID: PBS Prep Date: 4/4/2019 Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO)	SampType: MI Batch ID: 44 Analysis Date: 44 Result PQL ND 10 ND 50	5.000 BLK 110 /6/2019 SPK value	Tes F	88.3 tCode: EPA l RunNo: 5891 SeqNo: 1983 %REC Lo	70 Method a 17 3118 owLimit	130 8015M/D: Die Units: mg/K HighLimit	g	·	Qual
Surr: DNOP Sample ID: MB-44110 Client ID: PBS Prep Date: 4/4/2019 Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP	SampType: MI Batch ID: 44 Analysis Date: 4/ Result PQL ND 10 ND 50 9.1	5.000 BLK 110 /6/2019 SPK value	Tes F S SPK Ref Val	88.3 tCode: EPA I RunNo: 5891 SeqNo: 1983 %REC Lo	70 Method 8 17 8118 owLimit	130 8015M/D: Die Units: mg/K HighLimit	g %RPD	RPDLimit	Qual
Surr: DNOP Sample ID: MB-44110 Client ID: PBS Prep Date: 4/4/2019 Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP Sample ID: 1904160-040AMS	SampType: MI Batch ID: 44 Analysis Date: 44 Result PQL ND 10 ND 50 9.1 SampType: M3	5.000 BLK 110 /6/2019 SPK value 10.00	Tes SPK Ref Val	88.3 tCode: EPA I RunNo: 5891 SeqNo: 1983 %REC Lo 90.9 tCode: EPA I	70 Method 3 17 3118 owLimit 70 Method 3	130 8015M/D: Die Units: mg/K HighLimit	g %RPD	RPDLimit	Qual
Surr: DNOP Sample ID: MB-44110 Client ID: PBS Prep Date: 4/4/2019 Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP Sample ID: 1904160-040AMS Client ID: SP163	SampType: MI Batch ID: 44 Analysis Date: 4/ Result PQL ND 10 ND 50 9.1 SampType: M3 Batch ID: 44	5.000 BLK 110 /6/2019 SPK value 10.00 S 110	Tes F SPK Ref Val	88.3 tCode: EPA RunNo: 5891 SeqNo: 1983 %REC Lo 90.9 tCode: EPA RunNo: 5891	70 Method 8 17 8118 owLimit 70 Method 8	130 8015M/D: Die Units: mg/K HighLimit 130 8015M/D: Die	g %RPD sel Range	RPDLimit	Qual
Surr: DNOP Sample ID: MB-44110 Client ID: PBS Prep Date: 4/4/2019 Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP Sample ID: 1904160-040AMS Client ID: SP163 Prep Date: 4/4/2019	SampType: MI Batch ID: 44 Analysis Date: 4/ Result PQL ND 10 ND 50 9.1 SampType: MS Batch ID: 44 Analysis Date: 4/	5.000 BLK 110 /6/2019 SPK value 10.00 S 110 /6/2019	Tes F SPK Ref Val	88.3 tCode: EPA RunNo: 5891 SeqNo: 1983 tCode: EPA RunNo: 5891 SeqNo: 1983	70 Method 8 17 8118 owLimit 70 Method 8 17 8123	130 8015M/D: Die Units: mg/K HighLimit 130 8015M/D: Die Units: mg/K	g %RPD sel Range	RPDLimit Property of the control of	
Surr: DNOP Sample ID: MB-44110 Client ID: PBS Prep Date: 4/4/2019 Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP Sample ID: 1904160-040AMS Client ID: SP163	SampType: MI Batch ID: 44 Analysis Date: 4/ Result PQL ND 10 ND 50 9.1 SampType: M3 Batch ID: 44	5.000 BLK 110 /6/2019 SPK value 10.00 S 110 /6/2019	Tes F SPK Ref Val	88.3 tCode: EPA RunNo: 5891 SeqNo: 1983 **REC Lo 90.9 tCode: EPA RunNo: 5891 SeqNo: 1983	70 Method 8 17 8118 owLimit 70 Method 8	130 8015M/D: Die Units: mg/K HighLimit 130 8015M/D: Die	g %RPD sel Range	RPDLimit	Qual

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1904160**

09-Apr-19

Client:	WPX Energy
Project:	LVP SWD

Sample ID: 1904160-040AMSI) SampT	ype: MS	SD	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: SP163	Batch	n ID: 44	110	F	RunNo: 5	8917				
Prep Date: 4/4/2019	Analysis D	ate: 4/	6/2019	S	SeqNo: 1	983124	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	9.2	45.79	4.058	91.7	53.5	126	2.44	21.7	
Surr: DNOP	3.4		4.579		73.7	70	130	0	0	
Sample ID: MB-44072	SampT	ype: ME	BLK	Tes	tCode: EI	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: PBS	Batch	n ID: 440	072	F	RunNo: 5	8918				
Prep Date: 4/3/2019	Analysis D	ate: 4/	5/2019	S	SeqNo: 1	983176	Units: mg/K	(g		
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	8.8		10.00		88.0	70	130			
Sample ID: LCS-44072	SampT	ype: LC	S	Tes	tCode: EI	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: LCSS	Batch	n ID: 440	072	F	RunNo: 5	8918				
Prep Date: 4/3/2019	Analysis D	ate: 4/	5/2019	S	SeqNo: 1	983177	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	98.0	63.9	124			
Surr: DNOP	4.1		F 000							
			5.000		81.3	70	130			
Sample ID: 1904160-020AMS		ype: MS		Tes			130 8015M/D: Di e	esel Range	e Organics	
Sample ID: 1904160-020AMS Client ID: SP143	SampT	ype: MS	<u> </u>			PA Method		esel Range	e Organics	
	SampT	n ID: 44	5 072	F	tCode: EI	PA Method 8918			e Organics	
Client ID: SP143	SampT Batch	n ID: 44	5 072 5/2019	F	tCode: EI	PA Method 8918	8015M/D: Die		e Organics RPDLimit	Qual
Client ID: SP143 Prep Date: 4/3/2019	SampT Batch Analysis D	n ID: 44 0 ate: 4/	5 072 5/2019	F	tCode: El RunNo: 5 SeqNo: 1	PA Method 8918 983565	8015M/D: Did	(g	·	Qual
Client ID: SP143 Prep Date: 4/3/2019 Analyte	SampT Batch Analysis D Result	n ID: 44 0 Pate: 4/	5 072 5/2019 SPK value	SPK Ref Val	tCode: EI RunNo: 58 SeqNo: 19	PA Method 8918 983565 LowLimit	8015M/D: Die Units: mg/K HighLimit	(g	·	Qual S
Client ID: SP143 Prep Date: 4/3/2019 Analyte Diesel Range Organics (DRO)	SampT Batch Analysis D Result 42 2.1	n ID: 44 0 Pate: 4/	5/2019 SPK value 47.57 4.757	SPK Ref Val	RunNo: 5 SeqNo: 1 %REC 88.2 44.2	PA Method 8918 983565 LowLimit 53.5 70	8015M/D: Die Units: mg/K HighLimit 126	Kg %RPD	RPDLimit	
Client ID: SP143 Prep Date: 4/3/2019 Analyte Diesel Range Organics (DRO) Surr: DNOP	SampT Batch Analysis D Result 42 2.1 D SampT	PQL 9.5	5072 5/2019 SPK value 47.57 4.757	SPK Ref Val 0	RunNo: 5 SeqNo: 1 %REC 88.2 44.2	PA Method 8918 983565 LowLimit 53.5 70	8015M/D: Die Units: mg/K HighLimit 126 130	Kg %RPD	RPDLimit	
Client ID: SP143 Prep Date: 4/3/2019 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID: 1904160-020AMSI	SampT Batch Analysis D Result 42 2.1 D SampT	PQL 9.5 Fype: MS	SPK value 47.57 4.757	SPK Ref Val 0	tCode: EI RunNo: 5 SeqNo: 1: %REC 88.2 44.2 tCode: EI	PA Method 8918 983565 LowLimit 53.5 70 PA Method 8918	8015M/D: Die Units: mg/K HighLimit 126 130	%RPD	RPDLimit	
Client ID: SP143 Prep Date: 4/3/2019 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID: 1904160-020AMSI Client ID: SP143	SampT Batch Analysis D Result 42 2.1 D SampT Batch	PQL 9.5 Fype: MS	SPK value 47.57 4.757 6D 072 5/2019	SPK Ref Val 0	tCode: El RunNo: 5 SeqNo: 1: %REC 88.2 44.2 tCode: El RunNo: 5 SeqNo: 1:	PA Method 8918 983565 LowLimit 53.5 70 PA Method 8918	8015M/D: Die Units: mg/K HighLimit 126 130 8015M/D: Die	%RPD	RPDLimit	
Client ID: SP143 Prep Date: 4/3/2019 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID: 1904160-020AMSI Client ID: SP143 Prep Date: 4/3/2019	SampT Batch Analysis D Result 42 2.1 D SampT Batch Analysis D	PQL 9.5 Type: MS TID: 440	SPK value 47.57 4.757 6D 072 5/2019	SPK Ref Val 0 Tes	tCode: El RunNo: 5 SeqNo: 1: %REC 88.2 44.2 tCode: El RunNo: 5 SeqNo: 1:	PA Method 8918 983565 LowLimit 53.5 70 PA Method 8918 983566	8015M/D: Did Units: mg/K HighLimit 126 130 8015M/D: Did Units: mg/K	Kg	RPDLimit e Organics	S

Qualifiers:

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H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

WPX Energy

LVP SWD

Client:

Project:

Hall Environmental Analysis Laboratory, Inc.

22

1000

4.8

24.20

968.1

WO#: **1904160**

09-Apr-19

Sample ID: LCS-44079	SampT	ype: LC	s	Tes	tCode: El	PA Method	8015D: Gasoline Range				
Client ID: LCSS	Batch	1D: 44	079	F	RunNo: 5 8	8896					
Prep Date: 4/3/2019	Analysis D	ate: 4/	4/2019	5	SeqNo: 1	980298	Units: mg/K	g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	20	5.0	25.00	0	81.1	80.1	123				
Surr: BFB	1000		1000		101	73.8	119				
Sample ID: MB-44079	SampT	уре: М	BLK	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e		
Client ID: PBS	Batch	1D: 44	079	F	RunNo: 5	8896					
Prep Date: 4/3/2019	Analysis D	ate: 4/	/4/2019	5	SeqNo: 19	980300	Units: mg/K	g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	ND	5.0									
Surr: BFB	920		1000		91.9	73.8	119				
Sample ID: 1904160-020AMS	SampT	уре: М \$	S	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	е		
Client ID: SP143	Batch	1D: 44	080	F	RunNo: 58	8948					
Prep Date: 4/3/2019	Analysis D	ate: 4/	/5/2019	5	SeqNo: 1	982432	Units: mg/K	g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	24	4.8	24.13	0	100	69.1	142				
Surr: BFB	1000		965.3		105	73.8	119				
Sample ID: 1904160-020AMSI	S ampT	уре: М \$	SD	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e		
Client ID: SP143	Batch	1D: 44	080	F	RunNo: 5 8	8948					
Prep Date: 4/3/2019	Analysis D	ate: 4/	/5/2019	5	SeqNo: 1	982433	Units: mg/K	g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Sample ID: 1904160-040AMS	D SampT	SampType: MSD TestCode: EPA Method 8						line Rang	е	
Client ID: SP163	Batch	n ID: 44 0	087	R	tunNo: 5	8948				
Prep Date: 4/3/2019	Analysis D	ate: 4/	6/2019	S	eqNo: 1	982455	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.9	24.41	0	92.0	69.1	142			
Surr: BFB	1100		976.6		109	73.8	119			

0

92.3

106

69.1

73.8

Sample ID: LCS-44080	SampType: LCS	TestCode: EPA Method	8015D: Gasoline Range
Client ID: LCSS	Batch ID: 44080	RunNo: 58948	
Prep Date: 4/3/2019	Analysis Date: 4/5/2019	SeqNo: 1982476	Units: mg/Kg
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

Gasoline Range Organics (GRO)

Surr: BFB

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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8.02

0

20

0

142

119

Hall Environmental Analysis Laboratory, Inc.

Analysis Date: 4/6/2019

PQL

5.0

1000

Result

ND

940

WO#: **1904160**

09-Apr-19

Client: WPX Energy
Project: LVP SWD

Sample ID: LCS-44080	SampType: LCS	TestCode: EPA Method	8015D: Gasoline Range
Client ID: LCSS	Batch ID: 44080	RunNo: 58948	
Prep Date: 4/3/2019	Analysis Date: 4/5/2019	SeqNo: 1982476	Units: mg/Kg
Analyte	Result PQL SPK va	ue SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual
Gasoline Range Organics (GRO)	23 5.0 25	00 0 92.8 80.1	123
Surr: BFB	1100 1	00 107 73.8	119
Sample ID: LCS-44087	SampType: LCS	TestCode: EPA Method	8015D: Gasoline Range
Client ID: LCSS	Batch ID: 44087	RunNo: 58948	
Prep Date: 4/3/2019	Analysis Date: 4/5/2019	SeqNo: 1982477	Units: mg/Kg
Analyte	Result PQL SPK va	ue SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual
Gasoline Range Organics (GRO)	23 5.0 25	00 0 92.4 80.1	123
Surr: BFB	1100 1	00 112 73.8	119
Sample ID: MB-44080	SampType: MBLK	TestCode: EPA Method	8015D: Gasoline Range
Client ID: PBS	Batch ID: 44080	RunNo: 58948	
Prep Date: 4/3/2019	Analysis Date: 4/5/2019	SeqNo: 1982478	Units: mg/Kg
Analyte	Result PQL SPK va	ue SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual
Gasoline Range Organics (GRO)	ND 5.0		
Surr: BFB	920 1	00 92.4 73.8	119
Sample ID: MB-44087	SampType: MBLK	TestCode: EPA Method	8015D: Gasoline Range
Client ID: PBS	Batch ID: 44087	RunNo: 58948	

SPK value SPK Ref Val %REC LowLimit

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

Prep Date: 4/3/2019

Gasoline Range Organics (GRO)

Analyte

Surr: BFB

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

SeqNo: 1982479

94.1

73.8

Units: mg/Kg

119

%RPD

RPDLimit

Qual

HighLimit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1904160**

09-Apr-19

Client: WPX Energy
Project: LVP SWD

Sample ID: LCS-44079	SampType: LCS TestCode: EPA Method 80					8021B: Volat	iles			
Client ID: LCSS	Batc	Batch ID: 44079 RunNo: 58896								
Prep Date: 4/3/2019	Analysis [Date: 4/	4/2019	8	SeqNo: 1	980315	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.025	1.000	0	83.3	80	120			
Toluene	0.95	0.050	1.000	0	94.5	80	120			
Ethylbenzene	0.88	0.050	1.000	0	88.0	80	120			
Xylenes, Total	2.7	0.10	3.000	0	90.4	80	120			
Surr: 4-Bromofluorobenzene	0.94		1.000		93.8	80	120			

Sample ID: MB-44079	SampT	уре: МЕ	BLK	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: PBS	Batch	n ID: 44	079	F	RunNo: 5	8896				
Prep Date: 4/3/2019	Analysis D)ate: 4/	4/2019	S	SeqNo: 1	980317	Units: mg/K	g		
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	0.93		1.000		93.0	80	120			

Sample ID: 1904160-001AMS	SampT	уре: МS	3	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: SP124	Batcl	n ID: 44 0	079	F	RunNo: 5	8896				
Prep Date: 4/3/2019	Analysis D	Date: 4/	4/2019	S	SeqNo: 19	980342	Units: mg/K	ίg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.024	0.9794	0	95.3	63.9	127			
Toluene	1.0	0.049	0.9794	0.01295	102	69.9	131			
Ethylbenzene	1.0	0.049	0.9794	0	102	71	132			
Xylenes, Total	3.1	0.098	2.938	0	104	71.8	131			
Surr: 4-Bromofluorobenzene	0.93		0.9794		95.0	80	120			

Sample ID: 1904160-001AMSI	Samp1	уре: М S	SD.	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: SP124	Batcl	n ID: 440	079	F	RunNo: 5	8896				
Prep Date: 4/3/2019	Analysis D	ate: 4/4	4/2019	S	SeqNo: 1	980343	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.023	0.9337	0	98.3	63.9	127	1.68	20	
Toluene	1.0	0.047	0.9337	0.01295	105	69.9	131	1.29	20	
Ethylbenzene	1.0	0.047	0.9337	0	108	71	132	0.914	20	
Xylenes, Total	3.1	0.093	2.801	0	109	71.8	131	0.322	20	
Surr: 4-Bromofluorobenzene	0.88		0.9337		94.8	80	120	0	0	

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1904160**

09-Apr-19

Client: WPX Energy
Project: LVP SWD

Sample ID: 1904160-021AMS	SampT	Гуре: М \$	3	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: SP144	Batcl	h ID: 44 0	080	F	RunNo: 5	8948				
Prep Date: 4/3/2019	Analysis D	Date: 4/	5/2019	9	SeqNo: 1	982482	Units: mg/K	ίg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.85	0.024	0.9479	0	89.7	63.9	127			
Toluene	0.94	0.047	0.9479	0.01689	97.4	69.9	131			
Ethylbenzene	0.94	0.047	0.9479	0	98.9	71	132			
Xylenes, Total	2.8	0.095	2.844	0.01456	99.7	71.8	131			
Surr: 4-Bromofluorobenzene	0.94		0.9479		98.7	80	120			

Sample ID: 1904160-021AMS	D SampT	ype: MS	SD	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: SP144	Batch	ID: 44 0	080	F	RunNo: 58	8948				
Prep Date: 4/3/2019	Analysis D	ate: 4/	5/2019	S	SeqNo: 1	982483	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.025	0.9930	0	89.0	63.9	127	3.84	20	
Toluene	0.97	0.050	0.9930	0.01689	95.5	69.9	131	2.59	20	
Ethylbenzene	0.97	0.050	0.9930	0	98.1	71	132	3.79	20	
Xylenes, Total	2.9	0.099	2.979	0.01456	98.2	71.8	131	3.16	20	
Surr: 4-Bromofluorobenzene	0.96		0.9930		97.0	80	120	0	0	

Sample ID: 1904160-041AMS	SampT	уре: МS	3	Tes	tCode: EI	PA Method	8021B: Volat	tiles		
Client ID: SP164	Batcl	n ID: 44 0	087	F	RunNo: 5	8948				
Prep Date: 4/3/2019	Analysis D	Date: 4/	6/2019	S	SeqNo: 1	982504	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.023	0.9381	0	91.5	63.9	127			
Toluene	0.93	0.047	0.9381	0.01202	97.9	69.9	131			
Ethylbenzene	0.93	0.047	0.9381	0	99.1	71	132			
Xylenes, Total	2.8	0.094	2.814	0	100	71.8	131			
Surr: 4-Bromofluorobenzene	0.93		0.9381		99.1	80	120			

Sample ID: 1904160-041AM	SD SampT	уре: МЅ	SD.	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: SP164	Batch	n ID: 44 0	087	F	RunNo: 5	8948				
Prep Date: 4/3/2019	Analysis D	ate: 4/	6/2019	S	SeqNo: 1	982505	Units: mg/k	ζg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.023	0.9225	0	93.4	63.9	127	0.402	20	
Toluene	0.93	0.046	0.9225	0.01202	99.6	69.9	131	0.0151	20	
Ethylbenzene	0.94	0.046	0.9225	0	102	71	132	0.944	20	
Xylenes, Total	2.8	0.092	2.768	0	102	71.8	131	0.265	20	
Surr: 4-Bromofluorobenzene	0.91		0.9225		99.0	80	120	0	0	

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Hall Environmental Analysis Laboratory, Inc.

ND

0.94

0.10

1.000

WO#: **1904160**

09-Apr-19

Client:	WPX Energy
Project:	LVP SWD

Sample ID: LCS-44080	Samp	Гуре: LC	s	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID: LCSS	Batc	h ID: 44 0	080	F	RunNo: 5	8948				
Prep Date: 4/3/2019	Analysis [Date: 4/	5/2019	5	SeqNo: 1	982524	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.025	1.000	0	85.6	80	120			
Toluene	0.96	0.050	1.000	0	95.6	80	120			
Ethylbenzene	0.91	0.050	1.000	0	90.7	80	120			
Xylenes, Total	2.8	0.10	3.000	0	92.6	80	120			
Surr: 4-Bromofluorobenzene	0.96		1.000		96.4	80	120			
Sample ID: LCS-44087	Samp	Гуре: LC	s	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID: LCSS	Batc	h ID: 44 0	087	F	RunNo: 5	8948				
Prep Date: 4/3/2019	Analysis [Date: 4/	6/2019	S	SeqNo: 1	982525	Units: mg/K	ζg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	91.0	80	120			
Toluene	0.97	0.050	1.000	0	97.1	80	120			
Ethylbenzene	0.96	0.050	1.000	0	96.2	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.8	80	120			
Surr: 4-Bromofluorobenzene	0.96		1.000		96.0	80	120			
Sample ID: MB-44080	Samp	Гуре: МЕ	BLK	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID: PBS	Batc	h ID: 44 0	080	F	RunNo: 5	8948				
Prep Date: 4/3/2019	Analysis [Date: 4/	5/2019	5	SeqNo: 1	982526	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND									
Ethylbenzene	ND	0.050								

Sample ID: MB-44087	SampT	уре: МЕ	BLK	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: PBS	Batch	n ID: 44 0	087	F	RunNo: 5	8948				
Prep Date: 4/3/2019	Analysis D	oate: 4/	6/2019	S	SeqNo: 1	982527	Units: mg/K	ίg		
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	0.96		1.000		95.9	80	120			

93.5

80

120

Qualifiers:

Xylenes, Total

Surr: 4-Bromofluorobenzene

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

Page 50 of 50



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 CARLSB Work Order Number: 1904160 RcptNo: 1 Received By: Yazmine Garduno 4/2/2019 8:50:00 AM Completed By: Isaiah Ortiz 4/3/2019 9:29:42 AM Reviewed By: YG 41314 Chain of Custody 1. Is Chain of Custody complete? Yes 🗸 No 🗌 Not Present 2. How was the sample delivered? Courier Log In 3. Was an attempt made to cool the samples? Yes 🗸 No 🗌 NA 🗌 No 🗌 4. Were all samples received at a temperature of >0° C to 6.0°C Yes 🗸 NA 🗌 Yes 🗸 Sample(s) in proper container(s)? No 🗌 6. Sufficient sample volume for indicated test(s)? Yes 🗸 No \square 7. Are samples (except VOA and ONG) properly preserved? Yes 🗸 No 🗌 8. Was preservative added to bottles? Yes 🗌 No 🗸 NA 🗌 9. VOA vials have zero headspace? Yes 🗌 No 🗌 No VOA Vials 🗸 Yes 🗆 10. Were any sample containers received broken? No 🗸 # of preserved bottles checked 11. Does paperwork match bottle labels? Yes 🗸 No 🗌 for pH: (Note discrepancies on chain of custody) (<2 or >12 unless noted) Adjusted? 12. Are matrices correctly identified on Chain of Custody? No \square Yes 🗸 **V** 13. Is it clear what analyses were requested? No 🗌 Checked by: DAD 14. Were all holding times able to be met? Yes 🗸 No 🗌 (If no, notify customer for authorization.) Special Handling (if applicable) 15. Was client notified of all discrepancies with this order? Yes No 🗌 NA V Person Notified: Date: [By Whom: Via: eMail Phone Fax In Person Regarding: Client Instructions: Additional remarks: 17. Cooler Information Cooler No Temp °C Condition Seal Intact Seal No Seal Date Signed By

Page 1 of 1

2

3

2.1

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5.6

Good

Good

Good

Yes

Yes

Yes

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

April 12, 2019

Kris Rowe WPX Energy 5315 Buena Vista Drive Carlsbad, NM 88220 TEL: (505) 386-9693

FAX

RE: LVP SWD OrderNo.: 1904256

Dear Kris Rowe:

Hall Environmental Analysis Laboratory received 92 sample(s) on 4/4/2019 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 #NM0901

Sincerely,

Andy Freeman

Laboratory Manager

Indes

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP165
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-001 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: CJS
Chloride	180	60	mg/Kg	20	4/6/2019 5:13:07 PM	44174
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: Irm
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	4/5/2019 11:36:52 PM	44128
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	4/5/2019 11:36:52 PM	44128
Surr: DNOP	79.6	70-130	%Rec	1	4/5/2019 11:36:52 PM	44128
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/6/2019 8:53:38 PM	44112
Surr: BFB	89.0	73.8-119	%Rec	1	4/6/2019 8:53:38 PM	44112
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.023	mg/Kg	1	4/6/2019 8:53:38 PM	44112
Toluene	ND	0.047	mg/Kg	1	4/6/2019 8:53:38 PM	44112
Ethylbenzene	ND	0.047	mg/Kg	1	4/6/2019 8:53:38 PM	44112
Xylenes, Total	ND	0.093	mg/Kg	1	4/6/2019 8:53:38 PM	44112
Surr: 4-Bromofluorobenzene	90.2	80-120	%Rec	1	4/6/2019 8:53:38 PM	44112

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP166
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-002 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: CJS
Chloride	250	60	mg/Kg	20	4/6/2019 5:50:20 PM	44174
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	4/5/2019 11:58:51 PM	44128
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/5/2019 11:58:51 PM	44128
Surr: DNOP	85.6	70-130	%Rec	1	4/5/2019 11:58:51 PM	44128
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/6/2019 9:17:14 PM	44112
Surr: BFB	91.8	73.8-119	%Rec	1	4/6/2019 9:17:14 PM	44112
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.024	mg/Kg	1	4/6/2019 9:17:14 PM	44112
Toluene	ND	0.048	mg/Kg	1	4/6/2019 9:17:14 PM	44112
Ethylbenzene	ND	0.048	mg/Kg	1	4/6/2019 9:17:14 PM	44112
Xylenes, Total	ND	0.097	mg/Kg	1	4/6/2019 9:17:14 PM	44112
Surr: 4-Bromofluorobenzene	92.6	80-120	%Rec	1	4/6/2019 9:17:14 PM	44112

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

Qualifiers:

Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Н

Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP167
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-003 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: CJS
Chloride	250	60	mg/Kg	20	4/6/2019 6:02:45 PM	44174
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	4/6/2019 12:20:57 AM	44128
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	4/6/2019 12:20:57 AM	44128
Surr: DNOP	98.2	70-130	%Rec	1	4/6/2019 12:20:57 AM	44128
EPA METHOD 8015D: GASOLINE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/6/2019 9:40:50 PM	44112
Surr: BFB	89.2	73.8-119	%Rec	1	4/6/2019 9:40:50 PM	44112
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.024	mg/Kg	1	4/6/2019 9:40:50 PM	44112
Toluene	ND	0.049	mg/Kg	1	4/6/2019 9:40:50 PM	44112
Ethylbenzene	ND	0.049	mg/Kg	1	4/6/2019 9:40:50 PM	44112
Xylenes, Total	ND	0.098	mg/Kg	1	4/6/2019 9:40:50 PM	44112
Surr: 4-Bromofluorobenzene	90.5	80-120	%Rec	1	4/6/2019 9:40:50 PM	44112

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP168
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-004 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: CJS
Chloride	210	59	mg/Kg	20	4/6/2019 6:15:09 PM	44174
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.2	mg/Kg	1	4/6/2019 12:42:53 AM	44128
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	4/6/2019 12:42:53 AM	44128
Surr: DNOP	89.4	70-130	%Rec	1	4/6/2019 12:42:53 AM	44128
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/6/2019 10:04:26 PM	44112
Surr: BFB	91.2	73.8-119	%Rec	1	4/6/2019 10:04:26 PM	44112
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.024	mg/Kg	1	4/6/2019 10:04:26 PM	44112
Toluene	ND	0.048	mg/Kg	1	4/6/2019 10:04:26 PM	44112
Ethylbenzene	ND	0.048	mg/Kg	1	4/6/2019 10:04:26 PM	44112
Xylenes, Total	ND	0.096	mg/Kg	1	4/6/2019 10:04:26 PM	44112
Surr: 4-Bromofluorobenzene	93.5	80-120	%Rec	1	4/6/2019 10:04:26 PM	44112

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP169
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-005 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: CJS
Chloride	230	60	mg/Kg	20	4/6/2019 6:27:33 PM	44174
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	4/6/2019 1:04:54 AM	44128
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/6/2019 1:04:54 AM	44128
Surr: DNOP	88.1	70-130	%Rec	1	4/6/2019 1:04:54 AM	44128
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/6/2019 11:14:50 PM	44112
Surr: BFB	90.5	73.8-119	%Rec	1	4/6/2019 11:14:50 PM	44112
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.024	mg/Kg	1	4/6/2019 11:14:50 PM	44112
Toluene	ND	0.048	mg/Kg	1	4/6/2019 11:14:50 PM	44112
Ethylbenzene	ND	0.048	mg/Kg	1	4/6/2019 11:14:50 PM	44112
Xylenes, Total	ND	0.096	mg/Kg	1	4/6/2019 11:14:50 PM	44112
Surr: 4-Bromofluorobenzene	93.2	80-120	%Rec	1	4/6/2019 11:14:50 PM	44112

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP170

Collection Date: 4/3/2019

Lab ID: 1904256-006 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	CJS
Chloride	200	60		mg/Kg	20	4/6/2019 7:29:36 PM	44176
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	4/6/2019 1:26:45 AM	44128
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	4/6/2019 1:26:45 AM	44128
Surr: DNOP	67.5	70-130	S	%Rec	1	4/6/2019 1:26:45 AM	44128
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/6/2019 11:38:05 PM	44112
Surr: BFB	90.5	73.8-119		%Rec	1	4/6/2019 11:38:05 PM	44112
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.024		mg/Kg	1	4/6/2019 11:38:05 PM	44112
Toluene	ND	0.048		mg/Kg	1	4/6/2019 11:38:05 PM	44112
Ethylbenzene	ND	0.048		mg/Kg	1	4/6/2019 11:38:05 PM	44112
Xylenes, Total	ND	0.097		mg/Kg	1	4/6/2019 11:38:05 PM	44112
Surr: 4-Bromofluorobenzene	92.8	80-120		%Rec	1	4/6/2019 11:38:05 PM	44112

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP171
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-007 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	CJS
Chloride	190	60		mg/Kg	20	4/6/2019 8:31:40 PM	44176
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/6/2019 1:48:59 AM	44128
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/6/2019 1:48:59 AM	44128
Surr: DNOP	69.9	70-130	S	%Rec	1	4/6/2019 1:48:59 AM	44128
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/7/2019 12:01:42 AM	44112
Surr: BFB	89.0	73.8-119		%Rec	1	4/7/2019 12:01:42 AM	44112
EPA METHOD 8021B: VOLATILES						Analyst	: RAA
Benzene	ND	0.024		mg/Kg	1	4/7/2019 12:01:42 AM	44112
Toluene	ND	0.048		mg/Kg	1	4/7/2019 12:01:42 AM	44112
Ethylbenzene	ND	0.048		mg/Kg	1	4/7/2019 12:01:42 AM	44112
Xylenes, Total	ND	0.096		mg/Kg	1	4/7/2019 12:01:42 AM	44112
Surr: 4-Bromofluorobenzene	90.3	80-120		%Rec	1	4/7/2019 12:01:42 AM	44112

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP172

Collection Date: 4/3/2019

Lab ID: 1904256-008 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: CJS
Chloride	180	60	mg/Kg	20	4/6/2019 8:44:04 PM	44176
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	4/6/2019 2:10:54 AM	44128
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/6/2019 2:10:54 AM	44128
Surr: DNOP	80.3	70-130	%Rec	1	4/6/2019 2:10:54 AM	44128
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	4/7/2019 12:25:11 AM	44112
Surr: BFB	88.4	73.8-119	%Rec	1	4/7/2019 12:25:11 AM	44112
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.023	mg/Kg	1	4/7/2019 12:25:11 AM	44112
Toluene	ND	0.046	mg/Kg	1	4/7/2019 12:25:11 AM	44112
Ethylbenzene	ND	0.046	mg/Kg	1	4/7/2019 12:25:11 AM	44112
Xylenes, Total	ND	0.093	mg/Kg	1	4/7/2019 12:25:11 AM	44112
Surr: 4-Bromofluorobenzene	90.5	80-120	%Rec	1	4/7/2019 12:25:11 AM	44112

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

Page 8 of 111

Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP173
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-009 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: CJS
Chloride	210	60		mg/Kg	20	4/6/2019 8:56:29 PM	44176
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/6/2019 2:32:54 AM	44128
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/6/2019 2:32:54 AM	44128
Surr: DNOP	69.2	70-130	S	%Rec	1	4/6/2019 2:32:54 AM	44128
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/7/2019 12:48:39 AM	44112
Surr: BFB	87.6	73.8-119		%Rec	1	4/7/2019 12:48:39 AM	44112
EPA METHOD 8021B: VOLATILES						Analyst	: RAA
Benzene	ND	0.024		mg/Kg	1	4/7/2019 12:48:39 AM	44112
Toluene	ND	0.047		mg/Kg	1	4/7/2019 12:48:39 AM	44112
Ethylbenzene	ND	0.047		mg/Kg	1	4/7/2019 12:48:39 AM	44112
Xylenes, Total	ND	0.095		mg/Kg	1	4/7/2019 12:48:39 AM	44112
Surr: 4-Bromofluorobenzene	88.8	80-120		%Rec	1	4/7/2019 12:48:39 AM	44112

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

Page 9 of 111

Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP174
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-010 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: CJS
Chloride	230	60		mg/Kg	20	4/6/2019 9:08:54 PM	44176
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	4/6/2019 2:54:43 AM	44128
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/6/2019 2:54:43 AM	44128
Surr: DNOP	36.6	70-130	S	%Rec	1	4/6/2019 2:54:43 AM	44128
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/7/2019 1:12:01 AM	44112
Surr: BFB	90.4	73.8-119		%Rec	1	4/7/2019 1:12:01 AM	44112
EPA METHOD 8021B: VOLATILES						Analyst	: RAA
Benzene	ND	0.024		mg/Kg	1	4/7/2019 1:12:01 AM	44112
Toluene	ND	0.048		mg/Kg	1	4/7/2019 1:12:01 AM	44112
Ethylbenzene	ND	0.048		mg/Kg	1	4/7/2019 1:12:01 AM	44112
Xylenes, Total	ND	0.096		mg/Kg	1	4/7/2019 1:12:01 AM	44112
Surr: 4-Bromofluorobenzene	91.8	80-120		%Rec	1	4/7/2019 1:12:01 AM	44112

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP175
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-011 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analys	t: CJS
Chloride	300	60		mg/Kg	20	4/6/2019 9:21:18 PM	44176
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analys	t: Irm
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/6/2019 3:16:40 AM	44128
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/6/2019 3:16:40 AM	44128
Surr: DNOP	42.2	70-130	S	%Rec	1	4/6/2019 3:16:40 AM	44128
EPA METHOD 8015D: GASOLINE RANGE						Analys	t: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/7/2019 1:35:23 AM	44112
Surr: BFB	90.4	73.8-119		%Rec	1	4/7/2019 1:35:23 AM	44112
EPA METHOD 8021B: VOLATILES						Analys	t: RAA
Benzene	ND	0.024		mg/Kg	1	4/7/2019 1:35:23 AM	44112
Toluene	ND	0.048		mg/Kg	1	4/7/2019 1:35:23 AM	44112
Ethylbenzene	ND	0.048		mg/Kg	1	4/7/2019 1:35:23 AM	44112
Xylenes, Total	ND	0.096		mg/Kg	1	4/7/2019 1:35:23 AM	44112
Surr: 4-Bromofluorobenzene	92.3	80-120		%Rec	1	4/7/2019 1:35:23 AM	44112

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP176
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-012 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: CJS
Chloride	240	60		mg/Kg	20	4/6/2019 9:33:43 PM	44176
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/6/2019 3:38:31 AM	44128
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/6/2019 3:38:31 AM	44128
Surr: DNOP	46.7	70-130	S	%Rec	1	4/6/2019 3:38:31 AM	44128
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/7/2019 1:58:54 AM	44112
Surr: BFB	89.8	73.8-119		%Rec	1	4/7/2019 1:58:54 AM	44112
EPA METHOD 8021B: VOLATILES						Analyst	: RAA
Benzene	ND	0.024		mg/Kg	1	4/7/2019 1:58:54 AM	44112
Toluene	ND	0.048		mg/Kg	1	4/7/2019 1:58:54 AM	44112
Ethylbenzene	ND	0.048		mg/Kg	1	4/7/2019 1:58:54 AM	44112
Xylenes, Total	ND	0.096		mg/Kg	1	4/7/2019 1:58:54 AM	44112
Surr: 4-Bromofluorobenzene	92.1	80-120		%Rec	1	4/7/2019 1:58:54 AM	44112

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP177
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-013 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	:: CJS
Chloride	230	60		mg/Kg	20	4/6/2019 9:46:07 PM	44176
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	:: Irm
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	4/6/2019 4:00:27 AM	44142
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/6/2019 4:00:27 AM	44142
Surr: DNOP	59.7	70-130	S	%Rec	1	4/6/2019 4:00:27 AM	44142
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/7/2019 2:22:17 AM	44112
Surr: BFB	88.4	73.8-119		%Rec	1	4/7/2019 2:22:17 AM	44112
EPA METHOD 8021B: VOLATILES						Analyst	: RAA
Benzene	ND	0.023		mg/Kg	1	4/7/2019 2:22:17 AM	44112
Toluene	ND	0.046		mg/Kg	1	4/7/2019 2:22:17 AM	44112
Ethylbenzene	ND	0.046		mg/Kg	1	4/7/2019 2:22:17 AM	44112
Xylenes, Total	ND	0.093		mg/Kg	1	4/7/2019 2:22:17 AM	44112
Surr: 4-Bromofluorobenzene	90.2	80-120		%Rec	1	4/7/2019 2:22:17 AM	44112

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP178
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-014 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: CJS
Chloride	260	60		mg/Kg	20	4/6/2019 9:58:31 PM	44176
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	4/6/2019 4:22:31 AM	44142
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/6/2019 4:22:31 AM	44142
Surr: DNOP	67.4	70-130	S	%Rec	1	4/6/2019 4:22:31 AM	44142
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/7/2019 2:45:50 AM	44112
Surr: BFB	90.2	73.8-119		%Rec	1	4/7/2019 2:45:50 AM	44112
EPA METHOD 8021B: VOLATILES						Analyst	: RAA
Benzene	ND	0.024		mg/Kg	1	4/7/2019 2:45:50 AM	44112
Toluene	ND	0.047		mg/Kg	1	4/7/2019 2:45:50 AM	44112
Ethylbenzene	ND	0.047		mg/Kg	1	4/7/2019 2:45:50 AM	44112
Xylenes, Total	ND	0.095		mg/Kg	1	4/7/2019 2:45:50 AM	44112
Surr: 4-Bromofluorobenzene	92.0	80-120		%Rec	1	4/7/2019 2:45:50 AM	44112

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP179

Collection Date: 4/3/2019

Lab ID: 1904256-015 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	: CJS
Chloride	270	60	mg/Kg	20	4/7/2019 1:08:27 PM	44176
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analys	: CLP
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	4/5/2019 6:18:31 PM	44133
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/5/2019 6:18:31 PM	44133
Surr: DNOP	115	70-130	%Rec	1	4/5/2019 6:18:31 PM	44133
EPA METHOD 8015D: GASOLINE RANGE					Analys	: RAA
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	4/7/2019 5:06:21 AM	44113
Surr: BFB	88.7	73.8-119	%Rec	1	4/7/2019 5:06:21 AM	44113
EPA METHOD 8021B: VOLATILES					Analys	: RAA
Benzene	ND	0.025	mg/Kg	1	4/7/2019 5:06:21 AM	44113
Toluene	ND	0.050	mg/Kg	1	4/7/2019 5:06:21 AM	44113
Ethylbenzene	ND	0.050	mg/Kg	1	4/7/2019 5:06:21 AM	44113
Xylenes, Total	ND	0.10	mg/Kg	1	4/7/2019 5:06:21 AM	44113
Surr: 4-Bromofluorobenzene	90.4	80-120	%Rec	1	4/7/2019 5:06:21 AM	44113

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP180
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-016 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: CJS
Chloride	150	60	mg/Kg	20	4/7/2019 1:20:51 PM	44176
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analys	t: CLP
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	4/5/2019 7:30:55 PM	44133
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/5/2019 7:30:55 PM	44133
Surr: DNOP	96.6	70-130	%Rec	1	4/5/2019 7:30:55 PM	44133
EPA METHOD 8015D: GASOLINE RANGE					Analys	t: RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/7/2019 6:16:44 AM	44113
Surr: BFB	91.4	73.8-119	%Rec	1	4/7/2019 6:16:44 AM	44113
EPA METHOD 8021B: VOLATILES					Analys	t: RAA
Benzene	ND	0.024	mg/Kg	1	4/7/2019 6:16:44 AM	44113
Toluene	ND	0.048	mg/Kg	1	4/7/2019 6:16:44 AM	44113
Ethylbenzene	ND	0.048	mg/Kg	1	4/7/2019 6:16:44 AM	44113
Xylenes, Total	ND	0.097	mg/Kg	1	4/7/2019 6:16:44 AM	44113
Surr: 4-Bromofluorobenzene	93.6	80-120	%Rec	1	4/7/2019 6:16:44 AM	44113

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

Qualifiers:

Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Н

Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP181
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-017 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	: CJS
Chloride	330	60	mg/Kg	20	4/7/2019 1:33:15 PM	44176
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analys	: CLP
Diesel Range Organics (DRO)	ND	9.2	mg/Kg	1	4/5/2019 7:55:07 PM	44133
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	4/5/2019 7:55:07 PM	44133
Surr: DNOP	88.3	70-130	%Rec	1	4/5/2019 7:55:07 PM	44133
EPA METHOD 8015D: GASOLINE RANGE					Analys	: RAA
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/7/2019 7:27:13 AM	44113
Surr: BFB	90.6	73.8-119	%Rec	1	4/7/2019 7:27:13 AM	44113
EPA METHOD 8021B: VOLATILES					Analys	: RAA
Benzene	ND	0.023	mg/Kg	1	4/7/2019 7:27:13 AM	44113
Toluene	ND	0.047	mg/Kg	1	4/7/2019 7:27:13 AM	44113
Ethylbenzene	ND	0.047	mg/Kg	1	4/7/2019 7:27:13 AM	44113
Xylenes, Total	ND	0.093	mg/Kg	1	4/7/2019 7:27:13 AM	44113
Surr: 4-Bromofluorobenzene	92.1	80-120	%Rec	1	4/7/2019 7:27:13 AM	44113

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP182
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-018 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: CJS
Chloride	240	60	mg/Kg	20	4/7/2019 1:45:40 PM	44176
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: CLP
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	4/5/2019 8:19:18 PM	44133
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/5/2019 8:19:18 PM	44133
Surr: DNOP	103	70-130	%Rec	1	4/5/2019 8:19:18 PM	44133
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/7/2019 7:50:36 AM	44113
Surr: BFB	91.9	73.8-119	%Rec	1	4/7/2019 7:50:36 AM	44113
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.024	mg/Kg	1	4/7/2019 7:50:36 AM	44113
Toluene	ND	0.049	mg/Kg	1	4/7/2019 7:50:36 AM	44113
Ethylbenzene	ND	0.049	mg/Kg	1	4/7/2019 7:50:36 AM	44113
Xylenes, Total	ND	0.097	mg/Kg	1	4/7/2019 7:50:36 AM	44113
Surr: 4-Bromofluorobenzene	95.0	80-120	%Rec	1	4/7/2019 7:50:36 AM	44113

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP183
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-019 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: CJS
Chloride	240	60	mg/Kg	20	4/7/2019 1:58:04 PM	44176
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	:: CLP
Diesel Range Organics (DRO)	ND	9.1	mg/Kg	1	4/5/2019 8:43:26 PM	44133
Motor Oil Range Organics (MRO)	ND	45	mg/Kg	1	4/5/2019 8:43:26 PM	44133
Surr: DNOP	96.6	70-130	%Rec	1	4/5/2019 8:43:26 PM	44133
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/7/2019 8:14:15 AM	44113
Surr: BFB	90.0	73.8-119	%Rec	1	4/7/2019 8:14:15 AM	44113
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.023	mg/Kg	1	4/7/2019 8:14:15 AM	44113
Toluene	ND	0.047	mg/Kg	1	4/7/2019 8:14:15 AM	44113
Ethylbenzene	ND	0.047	mg/Kg	1	4/7/2019 8:14:15 AM	44113
Xylenes, Total	ND	0.093	mg/Kg	1	4/7/2019 8:14:15 AM	44113
Surr: 4-Bromofluorobenzene	93.2	80-120	%Rec	1	4/7/2019 8:14:15 AM	44113

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP184
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-020 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: CJS
Chloride	170	60	mg/Kg	20	4/7/2019 2:10:29 PM	44176
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analys	t: CLP
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	4/5/2019 9:07:33 PM	44133
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	4/5/2019 9:07:33 PM	44133
Surr: DNOP	94.3	70-130	%Rec	1	4/5/2019 9:07:33 PM	44133
EPA METHOD 8015D: GASOLINE RANGE					Analys	t: RAA
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	4/7/2019 8:37:47 AM	44113
Surr: BFB	90.1	73.8-119	%Rec	1	4/7/2019 8:37:47 AM	44113
EPA METHOD 8021B: VOLATILES					Analys	t: RAA
Benzene	ND	0.023	mg/Kg	1	4/7/2019 8:37:47 AM	44113
Toluene	ND	0.046	mg/Kg	1	4/7/2019 8:37:47 AM	44113
Ethylbenzene	ND	0.046	mg/Kg	1	4/7/2019 8:37:47 AM	44113
Xylenes, Total	ND	0.093	mg/Kg	1	4/7/2019 8:37:47 AM	44113
Surr: 4-Bromofluorobenzene	92.8	80-120	%Rec	1	4/7/2019 8:37:47 AM	44113

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT:WPX EnergyClient Sample ID: SP185Project:LVP SWDCollection Date: 4/3/2019

Lab ID: 1904256-021 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: CJS
Chloride	220	60	mg/Kg	20	4/7/2019 2:22:53 PM	44176
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analys	t: CLP
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	4/5/2019 9:31:41 PM	44133
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/5/2019 9:31:41 PM	44133
Surr: DNOP	88.0	70-130	%Rec	1	4/5/2019 9:31:41 PM	44133
EPA METHOD 8015D: GASOLINE RANGE					Analys	t: RAA
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/7/2019 9:01:21 AM	44113
Surr: BFB	88.7	73.8-119	%Rec	1	4/7/2019 9:01:21 AM	44113
EPA METHOD 8021B: VOLATILES					Analys	t: RAA
Benzene	ND	0.023	mg/Kg	1	4/7/2019 9:01:21 AM	44113
Toluene	ND	0.047	mg/Kg	1	4/7/2019 9:01:21 AM	44113
Ethylbenzene	ND	0.047	mg/Kg	1	4/7/2019 9:01:21 AM	44113
Xylenes, Total	ND	0.093	mg/Kg	1	4/7/2019 9:01:21 AM	44113
Surr: 4-Bromofluorobenzene	90.0	80-120	%Rec	1	4/7/2019 9:01:21 AM	44113

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP186
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-022 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	: CJS
Chloride	170	60	mg/Kg	20	4/7/2019 2:35:18 PM	44176
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analys	: CLP
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	4/5/2019 9:55:46 PM	44133
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/5/2019 9:55:46 PM	44133
Surr: DNOP	87.5	70-130	%Rec	1	4/5/2019 9:55:46 PM	44133
EPA METHOD 8015D: GASOLINE RANGE					Analys	: RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/7/2019 9:24:50 AM	44113
Surr: BFB	87.9	73.8-119	%Rec	1	4/7/2019 9:24:50 AM	44113
EPA METHOD 8021B: VOLATILES					Analys	: RAA
Benzene	ND	0.024	mg/Kg	1	4/7/2019 9:24:50 AM	44113
Toluene	ND	0.048	mg/Kg	1	4/7/2019 9:24:50 AM	44113
Ethylbenzene	ND	0.048	mg/Kg	1	4/7/2019 9:24:50 AM	44113
Xylenes, Total	ND	0.095	mg/Kg	1	4/7/2019 9:24:50 AM	44113
Surr: 4-Bromofluorobenzene	90.5	80-120	%Rec	1	4/7/2019 9:24:50 AM	44113

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP187
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-023 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: CJS
Chloride	220	60	mg/Kg	20	4/7/2019 2:47:42 PM	44176
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: CLP
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	4/5/2019 10:19:48 PM	44133
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	4/5/2019 10:19:48 PM	44133
Surr: DNOP	85.3	70-130	%Rec	1	4/5/2019 10:19:48 PM	44133
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/7/2019 9:48:20 AM	44113
Surr: BFB	90.9	73.8-119	%Rec	1	4/7/2019 9:48:20 AM	44113
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.024	mg/Kg	1	4/7/2019 9:48:20 AM	44113
Toluene	ND	0.049	mg/Kg	1	4/7/2019 9:48:20 AM	44113
Ethylbenzene	ND	0.049	mg/Kg	1	4/7/2019 9:48:20 AM	44113
Xylenes, Total	ND	0.097	mg/Kg	1	4/7/2019 9:48:20 AM	44113
Surr: 4-Bromofluorobenzene	92.0	80-120	%Rec	1	4/7/2019 9:48:20 AM	44113

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP188
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-024 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: CJS
Chloride	180	60	mg/Kg	20	4/7/2019 3:00:07 PM	44176
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: CLP
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	4/5/2019 10:43:51 PM	44133
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	4/5/2019 10:43:51 PM	44133
Surr: DNOP	104	70-130	%Rec	1	4/5/2019 10:43:51 PM	44133
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/7/2019 10:11:41 AM	44113
Surr: BFB	91.7	73.8-119	%Rec	1	4/7/2019 10:11:41 AM	44113
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.024	mg/Kg	1	4/7/2019 10:11:41 AM	44113
Toluene	ND	0.047	mg/Kg	1	4/7/2019 10:11:41 AM	44113
Ethylbenzene	ND	0.047	mg/Kg	1	4/7/2019 10:11:41 AM	44113
Xylenes, Total	ND	0.095	mg/Kg	1	4/7/2019 10:11:41 AM	44113
Surr: 4-Bromofluorobenzene	93.4	80-120	%Rec	1	4/7/2019 10:11:41 AM	44113

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP189

Collection Date: 4/3/2019

Lab ID: 1904256-025 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: CJS
Chloride	150	60	mg/Kg	20	4/7/2019 3:37:21 PM	44176
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: CLP
Diesel Range Organics (DRO)	ND	9.0	mg/Kg	1	4/5/2019 11:07:50 PM	44133
Motor Oil Range Organics (MRO)	ND	45	mg/Kg	1	4/5/2019 11:07:50 PM	44133
Surr: DNOP	82.1	70-130	%Rec	1	4/5/2019 11:07:50 PM	44133
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/7/2019 11:22:20 AM	44113
Surr: BFB	88.4	73.8-119	%Rec	1	4/7/2019 11:22:20 AM	44113
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.024	mg/Kg	1	4/7/2019 11:22:20 AM	44113
Toluene	ND	0.049	mg/Kg	1	4/7/2019 11:22:20 AM	44113
Ethylbenzene	ND	0.049	mg/Kg	1	4/7/2019 11:22:20 AM	44113
Xylenes, Total	ND	0.098	mg/Kg	1	4/7/2019 11:22:20 AM	44113
Surr: 4-Bromofluorobenzene	90.1	80-120	%Rec	1	4/7/2019 11:22:20 AM	44113

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

Qualifiers:

Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Н

Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP190

Collection Date: 4/3/2019

Lab ID: 1904256-026 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: CJS
Chloride	120	60	mg/Kg	20	4/6/2019 10:33:17 PM	44177
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: CLP
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	4/5/2019 11:31:50 PM	44133
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	4/5/2019 11:31:50 PM	44133
Surr: DNOP	92.9	70-130	%Rec	1	4/5/2019 11:31:50 PM	44133
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/7/2019 11:45:59 AM	44113
Surr: BFB	89.2	73.8-119	%Rec	1	4/7/2019 11:45:59 AM	44113
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.023	mg/Kg	1	4/7/2019 11:45:59 AM	44113
Toluene	ND	0.047	mg/Kg	1	4/7/2019 11:45:59 AM	44113
Ethylbenzene	ND	0.047	mg/Kg	1	4/7/2019 11:45:59 AM	44113
Xylenes, Total	ND	0.093	mg/Kg	1	4/7/2019 11:45:59 AM	44113
Surr: 4-Bromofluorobenzene	91.2	80-120	%Rec	1	4/7/2019 11:45:59 AM	44113

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

Qualifiers:

Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Н

Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP191
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-027 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: CJS
Chloride	190	60	mg/Kg	20	4/6/2019 11:10:32 PM	44177
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: CLP
Diesel Range Organics (DRO)	ND	9.2	mg/Kg	1	4/5/2019 11:55:46 PM	44133
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	4/5/2019 11:55:46 PM	44133
Surr: DNOP	93.2	70-130	%Rec	1	4/5/2019 11:55:46 PM	44133
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/7/2019 12:09:38 PM	44113
Surr: BFB	87.7	73.8-119	%Rec	1	4/7/2019 12:09:38 PM	44113
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.023	mg/Kg	1	4/7/2019 12:09:38 PM	44113
Toluene	ND	0.047	mg/Kg	1	4/7/2019 12:09:38 PM	44113
Ethylbenzene	ND	0.047	mg/Kg	1	4/7/2019 12:09:38 PM	44113
Xylenes, Total	ND	0.093	mg/Kg	1	4/7/2019 12:09:38 PM	44113
Surr: 4-Bromofluorobenzene	89.0	80-120	%Rec	1	4/7/2019 12:09:38 PM	44113

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP192

Collection Date: 4/3/2019

Lab ID: 1904256-028 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	CJS
Chloride	120	60	mg/Kg	20	4/6/2019 11:22:56 PM	44177
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst:	CLP
Diesel Range Organics (DRO)	ND	9.0	mg/Kg	1	4/6/2019 12:19:41 AM	44133
Motor Oil Range Organics (MRO)	ND	45	mg/Kg	1	4/6/2019 12:19:41 AM	44133
Surr: DNOP	99.6	70-130	%Rec	1	4/6/2019 12:19:41 AM	44133
EPA METHOD 8015D: GASOLINE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/7/2019 12:33:19 PM	44113
Surr: BFB	89.6	73.8-119	%Rec	1	4/7/2019 12:33:19 PM	44113
EPA METHOD 8021B: VOLATILES					Analyst	RAA
Benzene	ND	0.024	mg/Kg	1	4/7/2019 12:33:19 PM	44113
Toluene	ND	0.048	mg/Kg	1	4/7/2019 12:33:19 PM	44113
Ethylbenzene	ND	0.048	mg/Kg	1	4/7/2019 12:33:19 PM	44113
Xylenes, Total	ND	0.095	mg/Kg	1	4/7/2019 12:33:19 PM	44113
Surr: 4-Bromofluorobenzene	91.1	80-120	%Rec	1	4/7/2019 12:33:19 PM	44113

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP193
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-029 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: CJS
Chloride	220	60	mg/Kg	20	4/6/2019 11:35:21 PM	44177
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	CLP
Diesel Range Organics (DRO)	ND	8.8	mg/Kg	1	4/6/2019 12:43:35 AM	44133
Motor Oil Range Organics (MRO)	ND	44	mg/Kg	1	4/6/2019 12:43:35 AM	44133
Surr: DNOP	115	70-130	%Rec	1	4/6/2019 12:43:35 AM	44133
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/7/2019 12:56:46 PM	44113
Surr: BFB	93.7	73.8-119	%Rec	1	4/7/2019 12:56:46 PM	44113
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.024	mg/Kg	1	4/7/2019 12:56:46 PM	44113
Toluene	ND	0.048	mg/Kg	1	4/7/2019 12:56:46 PM	44113
Ethylbenzene	ND	0.048	mg/Kg	1	4/7/2019 12:56:46 PM	44113
Xylenes, Total	ND	0.095	mg/Kg	1	4/7/2019 12:56:46 PM	44113
Surr: 4-Bromofluorobenzene	95.5	80-120	%Rec	1	4/7/2019 12:56:46 PM	44113

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP194

Project: LVP SWD

Collection Date: 4/3/2019

Lab ID: 1904256-030 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: CJS
Chloride	150	60	mg/Kg	20	4/6/2019 11:47:46 PM	44177
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: CLP
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	4/6/2019 1:07:26 AM	44133
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/6/2019 1:07:26 AM	44133
Surr: DNOP	76.9	70-130	%Rec	1	4/6/2019 1:07:26 AM	44133
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/7/2019 1:20:11 PM	44113
Surr: BFB	88.7	73.8-119	%Rec	1	4/7/2019 1:20:11 PM	44113
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.025	mg/Kg	1	4/7/2019 1:20:11 PM	44113
Toluene	ND	0.049	mg/Kg	1	4/7/2019 1:20:11 PM	44113
Ethylbenzene	ND	0.049	mg/Kg	1	4/7/2019 1:20:11 PM	44113
Xylenes, Total	ND	0.099	mg/Kg	1	4/7/2019 1:20:11 PM	44113
Surr: 4-Bromofluorobenzene	90.4	80-120	%Rec	1	4/7/2019 1:20:11 PM	44113

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP195
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-031 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analysi	:: CJS
Chloride	220	59	mg/Kg	20	4/7/2019 12:00:11 AM	44177
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	:: CLP
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	4/6/2019 1:31:15 AM	44133
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/6/2019 1:31:15 AM	44133
Surr: DNOP	96.6	70-130	%Rec	1	4/6/2019 1:31:15 AM	44133
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/7/2019 1:43:35 PM	44113
Surr: BFB	92.1	73.8-119	%Rec	1	4/7/2019 1:43:35 PM	44113
EPA METHOD 8021B: VOLATILES					Analyst	:: RAA
Benzene	ND	0.024	mg/Kg	1	4/7/2019 1:43:35 PM	44113
Toluene	ND	0.047	mg/Kg	1	4/7/2019 1:43:35 PM	44113
Ethylbenzene	ND	0.047	mg/Kg	1	4/7/2019 1:43:35 PM	44113
Xylenes, Total	ND	0.095	mg/Kg	1	4/7/2019 1:43:35 PM	44113
Surr: 4-Bromofluorobenzene	93.5	80-120	%Rec	1	4/7/2019 1:43:35 PM	44113

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP196
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-032 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: CJS
Chloride	110	60	mg/Kg	20	4/7/2019 12:12:36 AM	44177
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: CLP
Diesel Range Organics (DRO)	ND	8.9	mg/Kg	1	4/6/2019 1:55:05 AM	44133
Motor Oil Range Organics (MRO)	ND	44	mg/Kg	1	4/6/2019 1:55:05 AM	44133
Surr: DNOP	78.7	70-130	%Rec	1	4/6/2019 1:55:05 AM	44133
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	4/7/2019 2:06:55 PM	44113
Surr: BFB	90.3	73.8-119	%Rec	1	4/7/2019 2:06:55 PM	44113
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.025	mg/Kg	1	4/7/2019 2:06:55 PM	44113
Toluene	ND	0.050	mg/Kg	1	4/7/2019 2:06:55 PM	44113
Ethylbenzene	ND	0.050	mg/Kg	1	4/7/2019 2:06:55 PM	44113
Xylenes, Total	ND	0.10	mg/Kg	1	4/7/2019 2:06:55 PM	44113
Surr: 4-Bromofluorobenzene	91.6	80-120	%Rec	1	4/7/2019 2:06:55 PM	44113

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP197

Collection Date: 4/3/2019

Lab ID: 1904256-033 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: CJS
Chloride	150	60	mg/Kg	20	4/7/2019 12:25:01 AM	44177
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: CLP
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	4/6/2019 2:18:51 AM	44133
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/6/2019 2:18:51 AM	44133
Surr: DNOP	85.4	70-130	%Rec	1	4/6/2019 2:18:51 AM	44133
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/7/2019 2:30:16 PM	44113
Surr: BFB	88.1	73.8-119	%Rec	1	4/7/2019 2:30:16 PM	44113
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.024	mg/Kg	1	4/7/2019 2:30:16 PM	44113
Toluene	ND	0.047	mg/Kg	1	4/7/2019 2:30:16 PM	44113
Ethylbenzene	ND	0.047	mg/Kg	1	4/7/2019 2:30:16 PM	44113
Xylenes, Total	ND	0.095	mg/Kg	1	4/7/2019 2:30:16 PM	44113
Surr: 4-Bromofluorobenzene	89.3	80-120	%Rec	1	4/7/2019 2:30:16 PM	44113

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT:WPX EnergyClient Sample ID: SP198Project:LVP SWDCollection Date: 4/3/2019

Lab ID: 1904256-034 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analys	t: CJS
Chloride	160	60		mg/Kg	20	4/7/2019 1:02:16 AM	44177
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analys	t: CLP
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	4/6/2019 2:42:36 AM	44133
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/6/2019 2:42:36 AM	44133
Surr: DNOP	68.1	70-130	S	%Rec	1	4/6/2019 2:42:36 AM	44133
EPA METHOD 8015D: GASOLINE RANGE						Analys	t: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/7/2019 2:53:38 PM	44113
Surr: BFB	90.2	73.8-119		%Rec	1	4/7/2019 2:53:38 PM	44113
EPA METHOD 8021B: VOLATILES						Analys	t: RAA
Benzene	ND	0.024		mg/Kg	1	4/7/2019 2:53:38 PM	44113
Toluene	ND	0.048		mg/Kg	1	4/7/2019 2:53:38 PM	44113
Ethylbenzene	ND	0.048		mg/Kg	1	4/7/2019 2:53:38 PM	44113
Xylenes, Total	ND	0.097		mg/Kg	1	4/7/2019 2:53:38 PM	44113
Surr: 4-Bromofluorobenzene	91.6	80-120		%Rec	1	4/7/2019 2:53:38 PM	44113

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP199

Collection Date: 4/3/2019

Lab ID: 1904256-035 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	: CJS
Chloride	210	60	mg/Kg	20	4/7/2019 1:14:41 AM	44177
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analys	: JME
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	4/9/2019 8:52:03 AM	44134
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	4/9/2019 8:52:03 AM	44134
Surr: DNOP	109	70-130	%Rec	1	4/9/2019 8:52:03 AM	44134
EPA METHOD 8015D: GASOLINE RANGE					Analys	: RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/7/2019 5:14:06 PM	44114
Surr: BFB	87.5	73.8-119	%Rec	1	4/7/2019 5:14:06 PM	44114
EPA METHOD 8021B: VOLATILES					Analys	: RAA
Benzene	ND	0.024	mg/Kg	1	4/7/2019 5:14:06 PM	44114
Toluene	ND	0.049	mg/Kg	1	4/7/2019 5:14:06 PM	44114
Ethylbenzene	ND	0.049	mg/Kg	1	4/7/2019 5:14:06 PM	44114
Xylenes, Total	ND	0.097	mg/Kg	1	4/7/2019 5:14:06 PM	44114
Surr: 4-Bromofluorobenzene	89.1	80-120	%Rec	1	4/7/2019 5:14:06 PM	44114

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP200

Collection Date: 4/3/2019

Lab ID: 1904256-036 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analysi	: CJS
Chloride	150	60	mg/Kg	20	4/7/2019 1:27:05 AM	44177
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	4/9/2019 10:04:00 AM	44134
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	4/9/2019 10:04:00 AM	44134
Surr: DNOP	118	70-130	%Rec	1	4/9/2019 10:04:00 AM	44134
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/7/2019 6:23:49 PM	44114
Surr: BFB	88.0	73.8-119	%Rec	1	4/7/2019 6:23:49 PM	44114
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.024	mg/Kg	1	4/7/2019 6:23:49 PM	44114
Toluene	ND	0.048	mg/Kg	1	4/7/2019 6:23:49 PM	44114
Ethylbenzene	ND	0.048	mg/Kg	1	4/7/2019 6:23:49 PM	44114
Xylenes, Total	ND	0.097	mg/Kg	1	4/7/2019 6:23:49 PM	44114
Surr: 4-Bromofluorobenzene	90.1	80-120	%Rec	1	4/7/2019 6:23:49 PM	44114

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP201
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-037 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analysi	:: CJS
Chloride	160	60	mg/Kg	20	4/7/2019 1:39:29 AM	44177
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	:: ЈМЕ
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	4/9/2019 10:28:11 AM	44134
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	4/9/2019 10:28:11 AM	44134
Surr: DNOP	105	70-130	%Rec	1	4/9/2019 10:28:11 AM	44134
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	4/7/2019 7:33:32 PM	44114
Surr: BFB	87.9	73.8-119	%Rec	1	4/7/2019 7:33:32 PM	44114
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.025	mg/Kg	1	4/7/2019 7:33:32 PM	44114
Toluene	ND	0.050	mg/Kg	1	4/7/2019 7:33:32 PM	44114
Ethylbenzene	ND	0.050	mg/Kg	1	4/7/2019 7:33:32 PM	44114
Xylenes, Total	ND	0.099	mg/Kg	1	4/7/2019 7:33:32 PM	44114
Surr: 4-Bromofluorobenzene	90.2	80-120	%Rec	1	4/7/2019 7:33:32 PM	44114

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP202

Collection Date: 4/3/2019

Lab ID: 1904256-038 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: CJS
Chloride	140	59	mg/Kg	20	4/7/2019 1:51:54 AM	44177
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: ЈМЕ
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	4/9/2019 12:01:52 PM	44134
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/9/2019 12:01:52 PM	44134
Surr: DNOP	79.4	70-130	%Rec	1	4/9/2019 12:01:52 PM	44134
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/7/2019 7:56:58 PM	44114
Surr: BFB	88.5	73.8-119	%Rec	1	4/7/2019 7:56:58 PM	44114
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.023	mg/Kg	1	4/7/2019 7:56:58 PM	44114
Toluene	ND	0.047	mg/Kg	1	4/7/2019 7:56:58 PM	44114
Ethylbenzene	ND	0.047	mg/Kg	1	4/7/2019 7:56:58 PM	44114
Xylenes, Total	ND	0.093	mg/Kg	1	4/7/2019 7:56:58 PM	44114
Surr: 4-Bromofluorobenzene	90.2	80-120	%Rec	1	4/7/2019 7:56:58 PM	44114

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP203
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-039 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: CJS
Chloride	220	60	mg/Kg	20	4/7/2019 2:04:18 AM	44177
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	4/9/2019 12:25:57 PM	44134
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/9/2019 12:25:57 PM	44134
Surr: DNOP	115	70-130	%Rec	1	4/9/2019 12:25:57 PM	44134
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/7/2019 8:20:28 PM	44114
Surr: BFB	85.7	73.8-119	%Rec	1	4/7/2019 8:20:28 PM	44114
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.025	mg/Kg	1	4/7/2019 8:20:28 PM	44114
Toluene	ND	0.049	mg/Kg	1	4/7/2019 8:20:28 PM	44114
Ethylbenzene	ND	0.049	mg/Kg	1	4/7/2019 8:20:28 PM	44114
Xylenes, Total	ND	0.098	mg/Kg	1	4/7/2019 8:20:28 PM	44114
Surr: 4-Bromofluorobenzene	86.7	80-120	%Rec	1	4/7/2019 8:20:28 PM	44114

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP204

Project: LVP SWD

Collection Date: 4/3/2019

Lab ID: 1904256-040 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analysi	: CJS
Chloride	200	60	mg/Kg	20	4/7/2019 2:16:43 AM	44177
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	4/9/2019 12:50:15 PM	44134
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/9/2019 12:50:15 PM	44134
Surr: DNOP	95.3	70-130	%Rec	1	4/9/2019 12:50:15 PM	44134
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/7/2019 8:43:59 PM	44114
Surr: BFB	89.3	73.8-119	%Rec	1	4/7/2019 8:43:59 PM	44114
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.024	mg/Kg	1	4/7/2019 8:43:59 PM	44114
Toluene	ND	0.047	mg/Kg	1	4/7/2019 8:43:59 PM	44114
Ethylbenzene	ND	0.047	mg/Kg	1	4/7/2019 8:43:59 PM	44114
Xylenes, Total	ND	0.094	mg/Kg	1	4/7/2019 8:43:59 PM	44114
Surr: 4-Bromofluorobenzene	90.1	80-120	%Rec	1	4/7/2019 8:43:59 PM	44114

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP205
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-041 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	: CJS
Chloride	210	60	mg/Kg	20	4/7/2019 2:29:08 AM	44177
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analys	: JME
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	4/9/2019 1:14:31 PM	44134
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/9/2019 1:14:31 PM	44134
Surr: DNOP	92.0	70-130	%Rec	1	4/9/2019 1:14:31 PM	44134
EPA METHOD 8015D: GASOLINE RANGE					Analys	: RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/7/2019 9:07:29 PM	44114
Surr: BFB	84.8	73.8-119	%Rec	1	4/7/2019 9:07:29 PM	44114
EPA METHOD 8021B: VOLATILES					Analys	: RAA
Benzene	ND	0.024	mg/Kg	1	4/7/2019 9:07:29 PM	44114
Toluene	ND	0.048	mg/Kg	1	4/7/2019 9:07:29 PM	44114
Ethylbenzene	ND	0.048	mg/Kg	1	4/7/2019 9:07:29 PM	44114
Xylenes, Total	ND	0.095	mg/Kg	1	4/7/2019 9:07:29 PM	44114
Surr: 4-Bromofluorobenzene	86.5	80-120	%Rec	1	4/7/2019 9:07:29 PM	44114

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP206
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-042 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: CJS
Chloride	240	60	mg/Kg	20	4/7/2019 2:41:32 AM	44177
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	4/9/2019 1:38:41 PM	44134
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/9/2019 1:38:41 PM	44134
Surr: DNOP	101	70-130	%Rec	1	4/9/2019 1:38:41 PM	44134
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/7/2019 9:31:03 PM	44114
Surr: BFB	87.6	73.8-119	%Rec	1	4/7/2019 9:31:03 PM	44114
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.024	mg/Kg	1	4/7/2019 9:31:03 PM	44114
Toluene	ND	0.048	mg/Kg	1	4/7/2019 9:31:03 PM	44114
Ethylbenzene	ND	0.048	mg/Kg	1	4/7/2019 9:31:03 PM	44114
Xylenes, Total	ND	0.097	mg/Kg	1	4/7/2019 9:31:03 PM	44114
Surr: 4-Bromofluorobenzene	89.3	80-120	%Rec	1	4/7/2019 9:31:03 PM	44114

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP207

Collection Date: 4/3/2019

Lab ID: 1904256-043 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	: CJS
Chloride	180	60	mg/Kg	20	4/7/2019 2:53:56 AM	44177
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analys	: JME
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	4/9/2019 2:02:56 PM	44134
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	4/9/2019 2:02:56 PM	44134
Surr: DNOP	104	70-130	%Rec	1	4/9/2019 2:02:56 PM	44134
EPA METHOD 8015D: GASOLINE RANGE					Analys	: RAA
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/7/2019 9:54:35 PM	44114
Surr: BFB	89.0	73.8-119	%Rec	1	4/7/2019 9:54:35 PM	44114
EPA METHOD 8021B: VOLATILES					Analys	: RAA
Benzene	ND	0.023	mg/Kg	1	4/7/2019 9:54:35 PM	44114
Toluene	ND	0.047	mg/Kg	1	4/7/2019 9:54:35 PM	44114
Ethylbenzene	ND	0.047	mg/Kg	1	4/7/2019 9:54:35 PM	44114
Xylenes, Total	ND	0.093	mg/Kg	1	4/7/2019 9:54:35 PM	44114
Surr: 4-Bromofluorobenzene	90.2	80-120	%Rec	1	4/7/2019 9:54:35 PM	44114

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP208

Collection Date: 4/3/2019

Lab ID: 1904256-044 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: CJS
Chloride	200	60	mg/Kg	20	4/7/2019 11:29:11 AM	44177
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: ЈМЕ
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	4/9/2019 2:27:14 PM	44134
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/9/2019 2:27:14 PM	44134
Surr: DNOP	94.2	70-130	%Rec	1	4/9/2019 2:27:14 PM	44134
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	4/7/2019 10:18:07 PM	44114
Surr: BFB	86.1	73.8-119	%Rec	1	4/7/2019 10:18:07 PM	44114
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.023	mg/Kg	1	4/7/2019 10:18:07 PM	44114
Toluene	ND	0.046	mg/Kg	1	4/7/2019 10:18:07 PM	44114
Ethylbenzene	ND	0.046	mg/Kg	1	4/7/2019 10:18:07 PM	44114
Xylenes, Total	ND	0.092	mg/Kg	1	4/7/2019 10:18:07 PM	44114
Surr: 4-Bromofluorobenzene	88.0	80-120	%Rec	1	4/7/2019 10:18:07 PM	44114

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP209

Collection Date: 4/3/2019

Lab ID: 1904256-045 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: CJS
Chloride	210	60	mg/Kg	20	4/7/2019 11:41:36 AM	44177
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: ЈМЕ
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	4/9/2019 2:51:35 PM	44134
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/9/2019 2:51:35 PM	44134
Surr: DNOP	83.1	70-130	%Rec	1	4/9/2019 2:51:35 PM	44134
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	4/7/2019 11:28:38 PM	44114
Surr: BFB	87.5	73.8-119	%Rec	1	4/7/2019 11:28:38 PM	44114
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.023	mg/Kg	1	4/7/2019 11:28:38 PM	44114
Toluene	ND	0.046	mg/Kg	1	4/7/2019 11:28:38 PM	44114
Ethylbenzene	ND	0.046	mg/Kg	1	4/7/2019 11:28:38 PM	44114
Xylenes, Total	ND	0.093	mg/Kg	1	4/7/2019 11:28:38 PM	44114
Surr: 4-Bromofluorobenzene	88.7	80-120	%Rec	1	4/7/2019 11:28:38 PM	44114

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP210
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-046 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: smb
Chloride	270	60	mg/Kg	20	4/8/2019 12:49:20 PM	44191
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	4/9/2019 3:15:56 PM	44134
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/9/2019 3:15:56 PM	44134
Surr: DNOP	99.1	70-130	%Rec	1	4/9/2019 3:15:56 PM	44134
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/7/2019 11:52:05 PM	44114
Surr: BFB	86.4	73.8-119	%Rec	1	4/7/2019 11:52:05 PM	44114
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.024	mg/Kg	1	4/7/2019 11:52:05 PM	44114
Toluene	ND	0.047	mg/Kg	1	4/7/2019 11:52:05 PM	44114
Ethylbenzene	ND	0.047	mg/Kg	1	4/7/2019 11:52:05 PM	44114
Xylenes, Total	ND	0.095	mg/Kg	1	4/7/2019 11:52:05 PM	44114
Surr: 4-Bromofluorobenzene	88.1	80-120	%Rec	1	4/7/2019 11:52:05 PM	44114

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP211
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-047 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: smb
Chloride	180	60	mg/Kg	20	4/8/2019 1:26:33 PM	44191
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	4/9/2019 3:40:14 PM	44134
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	4/9/2019 3:40:14 PM	44134
Surr: DNOP	122	70-130	%Rec	1	4/9/2019 3:40:14 PM	44134
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/8/2019 12:15:26 AM	44114
Surr: BFB	89.0	73.8-119	%Rec	1	4/8/2019 12:15:26 AM	44114
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.025	mg/Kg	1	4/8/2019 12:15:26 AM	44114
Toluene	ND	0.049	mg/Kg	1	4/8/2019 12:15:26 AM	44114
Ethylbenzene	ND	0.049	mg/Kg	1	4/8/2019 12:15:26 AM	44114
Xylenes, Total	ND	0.099	mg/Kg	1	4/8/2019 12:15:26 AM	44114
Surr: 4-Bromofluorobenzene	91.0	80-120	%Rec	1	4/8/2019 12:15:26 AM	44114

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP212
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-048 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: smb
Chloride	190	60	mg/Kg	20	4/8/2019 1:38:57 PM	44191
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	4/9/2019 4:28:59 PM	44134
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	4/9/2019 4:28:59 PM	44134
Surr: DNOP	81.7	70-130	%Rec	1	4/9/2019 4:28:59 PM	44134
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/8/2019 12:38:52 AM	44114
Surr: BFB	88.6	73.8-119	%Rec	1	4/8/2019 12:38:52 AM	44114
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.023	mg/Kg	1	4/8/2019 12:38:52 AM	44114
Toluene	ND	0.047	mg/Kg	1	4/8/2019 12:38:52 AM	44114
Ethylbenzene	ND	0.047	mg/Kg	1	4/8/2019 12:38:52 AM	44114
Xylenes, Total	ND	0.093	mg/Kg	1	4/8/2019 12:38:52 AM	44114
Surr: 4-Bromofluorobenzene	89.9	80-120	%Rec	1	4/8/2019 12:38:52 AM	44114

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP213
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-049 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: smb
Chloride	130	60	mg/Kg	20	4/8/2019 1:51:22 PM	44191
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analys	t: JME
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	4/9/2019 4:53:28 PM	44134
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/9/2019 4:53:28 PM	44134
Surr: DNOP	93.9	70-130	%Rec	1	4/9/2019 4:53:28 PM	44134
EPA METHOD 8015D: GASOLINE RANGE					Analys	t: RAA
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	4/8/2019 1:02:22 AM	44114
Surr: BFB	84.7	73.8-119	%Rec	1	4/8/2019 1:02:22 AM	44114
EPA METHOD 8021B: VOLATILES					Analys	t: RAA
Benzene	ND	0.023	mg/Kg	1	4/8/2019 1:02:22 AM	44114
Toluene	ND	0.046	mg/Kg	1	4/8/2019 1:02:22 AM	44114
Ethylbenzene	ND	0.046	mg/Kg	1	4/8/2019 1:02:22 AM	44114
Xylenes, Total	ND	0.091	mg/Kg	1	4/8/2019 1:02:22 AM	44114
Surr: 4-Bromofluorobenzene	87.0	80-120	%Rec	1	4/8/2019 1:02:22 AM	44114

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP214
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-050 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	smb
Chloride	210	60	mg/Kg	20	4/8/2019 2:03:46 PM	44191
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst	JME
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	4/9/2019 5:18:01 PM	44134
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	4/9/2019 5:18:01 PM	44134
Surr: DNOP	102	70-130	%Rec	1	4/9/2019 5:18:01 PM	44134
EPA METHOD 8015D: GASOLINE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/8/2019 1:25:33 AM	44114
Surr: BFB	85.9	73.8-119	%Rec	1	4/8/2019 1:25:33 AM	44114
EPA METHOD 8021B: VOLATILES					Analyst	RAA
Benzene	ND	0.024	mg/Kg	1	4/8/2019 1:25:33 AM	44114
Toluene	ND	0.049	mg/Kg	1	4/8/2019 1:25:33 AM	44114
Ethylbenzene	ND	0.049	mg/Kg	1	4/8/2019 1:25:33 AM	44114
Xylenes, Total	ND	0.097	mg/Kg	1	4/8/2019 1:25:33 AM	44114
Surr: 4-Bromofluorobenzene	87.4	80-120	%Rec	1	4/8/2019 1:25:33 AM	44114

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

Qualifiers:

Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT:WPX EnergyClient Sample ID: SP215Project:LVP SWDCollection Date: 4/3/2019

Lab ID: 1904256-051 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	:: smb
Chloride	190	60	mg/Kg	20	4/8/2019 2:16:10 PM	44191
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	:: ЈМЕ
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	4/9/2019 5:42:34 PM	44134
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/9/2019 5:42:34 PM	44134
Surr: DNOP	103	70-130	%Rec	1	4/9/2019 5:42:34 PM	44134
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/8/2019 1:49:04 AM	44114
Surr: BFB	88.9	73.8-119	%Rec	1	4/8/2019 1:49:04 AM	44114
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.024	mg/Kg	1	4/8/2019 1:49:04 AM	44114
Toluene	ND	0.048	mg/Kg	1	4/8/2019 1:49:04 AM	44114
Ethylbenzene	ND	0.048	mg/Kg	1	4/8/2019 1:49:04 AM	44114
Xylenes, Total	ND	0.097	mg/Kg	1	4/8/2019 1:49:04 AM	44114
Surr: 4-Bromofluorobenzene	89.7	80-120	%Rec	1	4/8/2019 1:49:04 AM	44114

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP216
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-052 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: smb
Chloride	200	60	mg/Kg	20	4/8/2019 2:53:24 PM	44191
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analys	t: JME
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	4/9/2019 6:07:24 PM	44134
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/9/2019 6:07:24 PM	44134
Surr: DNOP	106	70-130	%Rec	1	4/9/2019 6:07:24 PM	44134
EPA METHOD 8015D: GASOLINE RANGE					Analys	t: RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/8/2019 2:12:32 AM	44114
Surr: BFB	85.7	73.8-119	%Rec	1	4/8/2019 2:12:32 AM	44114
EPA METHOD 8021B: VOLATILES					Analys	t: RAA
Benzene	ND	0.024	mg/Kg	1	4/8/2019 2:12:32 AM	44114
Toluene	ND	0.048	mg/Kg	1	4/8/2019 2:12:32 AM	44114
Ethylbenzene	ND	0.048	mg/Kg	1	4/8/2019 2:12:32 AM	44114
Xylenes, Total	ND	0.096	mg/Kg	1	4/8/2019 2:12:32 AM	44114
Surr: 4-Bromofluorobenzene	87.5	80-120	%Rec	1	4/8/2019 2:12:32 AM	44114

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP217
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-053 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analysi	: smb
Chloride	110	60	mg/Kg	20	4/8/2019 3:05:49 PM	44191
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	4/9/2019 6:32:16 PM	44134
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/9/2019 6:32:16 PM	44134
Surr: DNOP	79.6	70-130	%Rec	1	4/9/2019 6:32:16 PM	44134
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/8/2019 2:36:03 AM	44114
Surr: BFB	87.2	73.8-119	%Rec	1	4/8/2019 2:36:03 AM	44114
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.024	mg/Kg	1	4/8/2019 2:36:03 AM	44114
Toluene	ND	0.049	mg/Kg	1	4/8/2019 2:36:03 AM	44114
Ethylbenzene	ND	0.049	mg/Kg	1	4/8/2019 2:36:03 AM	44114
Xylenes, Total	ND	0.097	mg/Kg	1	4/8/2019 2:36:03 AM	44114
Surr: 4-Bromofluorobenzene	89.0	80-120	%Rec	1	4/8/2019 2:36:03 AM	44114

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP218
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-054 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	smb
Chloride	180	60	mg/Kg	20	4/8/2019 3:18:13 PM	44191
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	4/9/2019 6:57:12 PM	44134
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	4/9/2019 6:57:12 PM	44134
Surr: DNOP	86.3	70-130	%Rec	1	4/9/2019 6:57:12 PM	44134
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/8/2019 2:59:28 AM	44114
Surr: BFB	87.0	73.8-119	%Rec	1	4/8/2019 2:59:28 AM	44114
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.024	mg/Kg	1	4/8/2019 2:59:28 AM	44114
Toluene	ND	0.047	mg/Kg	1	4/8/2019 2:59:28 AM	44114
Ethylbenzene	ND	0.047	mg/Kg	1	4/8/2019 2:59:28 AM	44114
Xylenes, Total	ND	0.094	mg/Kg	1	4/8/2019 2:59:28 AM	44114
Surr: 4-Bromofluorobenzene	87.4	80-120	%Rec	1	4/8/2019 2:59:28 AM	44114

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

Qualifiers:

Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP219

Collection Date: 4/3/2019

Lab ID: 1904256-055 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: smb
Chloride	200	60	mg/Kg	20	4/8/2019 3:30:38 PM	44191
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	4/8/2019 3:07:05 PM	44143
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	4/8/2019 3:07:05 PM	44143
Surr: DNOP	99.3	70-130	%Rec	1	4/8/2019 3:07:05 PM	44143
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/8/2019 1:43:22 PM	44115
Surr: BFB	90.1	73.8-119	%Rec	1	4/8/2019 1:43:22 PM	44115
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	4/8/2019 1:43:22 PM	44115
Toluene	ND	0.048	mg/Kg	1	4/8/2019 1:43:22 PM	44115
Ethylbenzene	ND	0.048	mg/Kg	1	4/8/2019 1:43:22 PM	44115
Xylenes, Total	ND	0.095	mg/Kg	1	4/8/2019 1:43:22 PM	44115
Surr: 4-Bromofluorobenzene	90.4	80-120	%Rec	1	4/8/2019 1:43:22 PM	44115

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

Qualifiers:

Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP220

Collection Date: 4/3/2019

Lab ID: 1904256-056 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	:: smb
Chloride	210	60	mg/Kg	20	4/8/2019 3:43:02 PM	44191
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	:: ЈМЕ
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	4/8/2019 3:31:08 PM	44143
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	4/8/2019 3:31:08 PM	44143
Surr: DNOP	98.8	70-130	%Rec	1	4/8/2019 3:31:08 PM	44143
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/8/2019 2:53:36 PM	44115
Surr: BFB	86.0	73.8-119	%Rec	1	4/8/2019 2:53:36 PM	44115
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.023	mg/Kg	1	4/8/2019 2:53:36 PM	44115
Toluene	ND	0.047	mg/Kg	1	4/8/2019 2:53:36 PM	44115
Ethylbenzene	ND	0.047	mg/Kg	1	4/8/2019 2:53:36 PM	44115
Xylenes, Total	ND	0.093	mg/Kg	1	4/8/2019 2:53:36 PM	44115
Surr: 4-Bromofluorobenzene	87.6	80-120	%Rec	1	4/8/2019 2:53:36 PM	44115

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP221
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-057 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analysi	t: smb
Chloride	240	60	mg/Kg	20	4/8/2019 3:55:27 PM	44191
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	t: JME
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	4/8/2019 3:55:14 PM	44143
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	4/8/2019 3:55:14 PM	44143
Surr: DNOP	97.5	70-130	%Rec	1	4/8/2019 3:55:14 PM	44143
EPA METHOD 8015D: GASOLINE RANGE					Analyst	t: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	4/8/2019 4:03:52 PM	44115
Surr: BFB	87.2	73.8-119	%Rec	1	4/8/2019 4:03:52 PM	44115
EPA METHOD 8021B: VOLATILES					Analyst	t: NSB
Benzene	ND	0.023	mg/Kg	1	4/8/2019 4:03:52 PM	44115
Toluene	ND	0.046	mg/Kg	1	4/8/2019 4:03:52 PM	44115
Ethylbenzene	ND	0.046	mg/Kg	1	4/8/2019 4:03:52 PM	44115
Xylenes, Total	ND	0.092	mg/Kg	1	4/8/2019 4:03:52 PM	44115
Surr: 4-Bromofluorobenzene	89.6	80-120	%Rec	1	4/8/2019 4:03:52 PM	44115

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP222

Project: LVP SWD

Collection Date: 4/3/2019

Lab ID: 1904256-058 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: smb
Chloride	170	60	mg/Kg	20	4/8/2019 4:07:52 PM	44191
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analys	t: JME
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	4/8/2019 4:19:14 PM	44143
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	4/8/2019 4:19:14 PM	44143
Surr: DNOP	96.9	70-130	%Rec	1	4/8/2019 4:19:14 PM	44143
EPA METHOD 8015D: GASOLINE RANGE					Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/8/2019 5:37:20 PM	44115
Surr: BFB	87.8	73.8-119	%Rec	1	4/8/2019 5:37:20 PM	44115
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.024	mg/Kg	1	4/8/2019 5:37:20 PM	44115
Toluene	ND	0.047	mg/Kg	1	4/8/2019 5:37:20 PM	44115
Ethylbenzene	ND	0.047	mg/Kg	1	4/8/2019 5:37:20 PM	44115
Xylenes, Total	ND	0.094	mg/Kg	1	4/8/2019 5:37:20 PM	44115
Surr: 4-Bromofluorobenzene	88.8	80-120	%Rec	1	4/8/2019 5:37:20 PM	44115

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

Qualifiers:

Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Н

Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP223
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-059 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	: smb
Chloride	190	60	mg/Kg	20	4/8/2019 7:14:02 PM	44203
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analys	: JME
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	4/8/2019 4:43:15 PM	44143
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/8/2019 4:43:15 PM	44143
Surr: DNOP	98.7	70-130	%Rec	1	4/8/2019 4:43:15 PM	44143
EPA METHOD 8015D: GASOLINE RANGE					Analys	: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	4/8/2019 6:00:36 PM	44115
Surr: BFB	87.3	73.8-119	%Rec	1	4/8/2019 6:00:36 PM	44115
EPA METHOD 8021B: VOLATILES					Analys	: NSB
Benzene	ND	0.023	mg/Kg	1	4/8/2019 6:00:36 PM	44115
Toluene	ND	0.046	mg/Kg	1	4/8/2019 6:00:36 PM	44115
Ethylbenzene	ND	0.046	mg/Kg	1	4/8/2019 6:00:36 PM	44115
Xylenes, Total	ND	0.092	mg/Kg	1	4/8/2019 6:00:36 PM	44115
Surr: 4-Bromofluorobenzene	88.7	80-120	%Rec	1	4/8/2019 6:00:36 PM	44115

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP224

Project: LVP SWD

Collection Date: 4/3/2019

Lab ID: 1904256-060 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	:: smb
Chloride	160	60	mg/Kg	20	4/8/2019 7:51:15 PM	44203
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	:: ЈМЕ
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	4/8/2019 5:07:17 PM	44143
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/8/2019 5:07:17 PM	44143
Surr: DNOP	81.4	70-130	%Rec	1	4/8/2019 5:07:17 PM	44143
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/8/2019 6:24:17 PM	44115
Surr: BFB	84.9	73.8-119	%Rec	1	4/8/2019 6:24:17 PM	44115
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.023	mg/Kg	1	4/8/2019 6:24:17 PM	44115
Toluene	ND	0.047	mg/Kg	1	4/8/2019 6:24:17 PM	44115
Ethylbenzene	ND	0.047	mg/Kg	1	4/8/2019 6:24:17 PM	44115
Xylenes, Total	ND	0.094	mg/Kg	1	4/8/2019 6:24:17 PM	44115
Surr: 4-Bromofluorobenzene	86.3	80-120	%Rec	1	4/8/2019 6:24:17 PM	44115

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP225
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-061 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	:: smb
Chloride	220	60	mg/Kg	20	4/8/2019 8:28:30 PM	44203
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	4/8/2019 5:31:37 PM	44143
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	4/8/2019 5:31:37 PM	44143
Surr: DNOP	91.7	70-130	%Rec	1	4/8/2019 5:31:37 PM	44143
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/8/2019 6:47:37 PM	44115
Surr: BFB	87.7	73.8-119	%Rec	1	4/8/2019 6:47:37 PM	44115
EPA METHOD 8021B: VOLATILES					Analyst	:: NSB
Benzene	ND	0.025	mg/Kg	1	4/8/2019 6:47:37 PM	44115
Toluene	ND	0.049	mg/Kg	1	4/8/2019 6:47:37 PM	44115
Ethylbenzene	ND	0.049	mg/Kg	1	4/8/2019 6:47:37 PM	44115
Xylenes, Total	ND	0.098	mg/Kg	1	4/8/2019 6:47:37 PM	44115
Surr: 4-Bromofluorobenzene	88.8	80-120	%Rec	1	4/8/2019 6:47:37 PM	44115

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP226
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-062 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: smb
Chloride	180	59	mg/Kg	20	4/8/2019 8:40:54 PM	44203
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: ЈМЕ
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	4/8/2019 5:56:07 PM	44143
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	4/8/2019 5:56:07 PM	44143
Surr: DNOP	71.5	70-130	%Rec	1	4/8/2019 5:56:07 PM	44143
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/8/2019 7:10:56 PM	44115
Surr: BFB	85.6	73.8-119	%Rec	1	4/8/2019 7:10:56 PM	44115
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	4/8/2019 7:10:56 PM	44115
Toluene	ND	0.048	mg/Kg	1	4/8/2019 7:10:56 PM	44115
Ethylbenzene	ND	0.048	mg/Kg	1	4/8/2019 7:10:56 PM	44115
Xylenes, Total	ND	0.096	mg/Kg	1	4/8/2019 7:10:56 PM	44115
Surr: 4-Bromofluorobenzene	88.2	80-120	%Rec	1	4/8/2019 7:10:56 PM	44115

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP227

Collection Date: 4/3/2019

Lab ID: 1904256-063 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: smb
Chloride	180	60	mg/Kg	20	4/8/2019 8:53:19 PM	44203
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: ЈМЕ
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	4/8/2019 6:20:44 PM	44143
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/8/2019 6:20:44 PM	44143
Surr: DNOP	78.4	70-130	%Rec	1	4/8/2019 6:20:44 PM	44143
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/8/2019 7:34:14 PM	44115
Surr: BFB	86.5	73.8-119	%Rec	1	4/8/2019 7:34:14 PM	44115
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	4/8/2019 7:34:14 PM	44115
Toluene	ND	0.048	mg/Kg	1	4/8/2019 7:34:14 PM	44115
Ethylbenzene	ND	0.048	mg/Kg	1	4/8/2019 7:34:14 PM	44115
Xylenes, Total	ND	0.096	mg/Kg	1	4/8/2019 7:34:14 PM	44115
Surr: 4-Bromofluorobenzene	88.2	80-120	%Rec	1	4/8/2019 7:34:14 PM	44115

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP228
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-064 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	:: smb
Chloride	200	60	mg/Kg	20	4/8/2019 9:05:44 PM	44203
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	:: ЈМЕ
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	4/8/2019 6:45:25 PM	44143
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/8/2019 6:45:25 PM	44143
Surr: DNOP	91.2	70-130	%Rec	1	4/8/2019 6:45:25 PM	44143
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	4/8/2019 7:57:29 PM	44115
Surr: BFB	88.7	73.8-119	%Rec	1	4/8/2019 7:57:29 PM	44115
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.023	mg/Kg	1	4/8/2019 7:57:29 PM	44115
Toluene	ND	0.046	mg/Kg	1	4/8/2019 7:57:29 PM	44115
Ethylbenzene	ND	0.046	mg/Kg	1	4/8/2019 7:57:29 PM	44115
Xylenes, Total	ND	0.092	mg/Kg	1	4/8/2019 7:57:29 PM	44115
Surr: 4-Bromofluorobenzene	91.0	80-120	%Rec	1	4/8/2019 7:57:29 PM	44115

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

Qualifiers:

Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Н

Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP229

Collection Date: 4/3/2019

Lab ID: 1904256-065 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	:: smb
Chloride	230	60	mg/Kg	20	4/8/2019 9:18:09 PM	44203
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	:: ЈМЕ
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	4/8/2019 7:10:04 PM	44143
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	4/8/2019 7:10:04 PM	44143
Surr: DNOP	90.1	70-130	%Rec	1	4/8/2019 7:10:04 PM	44143
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/8/2019 8:20:43 PM	44115
Surr: BFB	89.3	73.8-119	%Rec	1	4/8/2019 8:20:43 PM	44115
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	4/8/2019 8:20:43 PM	44115
Toluene	ND	0.049	mg/Kg	1	4/8/2019 8:20:43 PM	44115
Ethylbenzene	ND	0.049	mg/Kg	1	4/8/2019 8:20:43 PM	44115
Xylenes, Total	ND	0.097	mg/Kg	1	4/8/2019 8:20:43 PM	44115
Surr: 4-Bromofluorobenzene	91.3	80-120	%Rec	1	4/8/2019 8:20:43 PM	44115

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP230

Collection Date: 4/3/2019

Lab ID: 1904256-066 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	:: smb
Chloride	260	60	mg/Kg	20	4/8/2019 9:30:33 PM	44203
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	4/8/2019 7:34:39 PM	44143
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/8/2019 7:34:39 PM	44143
Surr: DNOP	97.4	70-130	%Rec	1	4/8/2019 7:34:39 PM	44143
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/8/2019 8:44:03 PM	44115
Surr: BFB	88.9	73.8-119	%Rec	1	4/8/2019 8:44:03 PM	44115
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.023	mg/Kg	1	4/8/2019 8:44:03 PM	44115
Toluene	ND	0.047	mg/Kg	1	4/8/2019 8:44:03 PM	44115
Ethylbenzene	ND	0.047	mg/Kg	1	4/8/2019 8:44:03 PM	44115
Xylenes, Total	ND	0.093	mg/Kg	1	4/8/2019 8:44:03 PM	44115
Surr: 4-Bromofluorobenzene	90.3	80-120	%Rec	1	4/8/2019 8:44:03 PM	44115

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP231
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-067 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: smb
Chloride	210	60	mg/Kg	20	4/8/2019 9:42:58 PM	44203
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	4/8/2019 7:59:15 PM	44143
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	4/8/2019 7:59:15 PM	44143
Surr: DNOP	73.6	70-130	%Rec	1	4/8/2019 7:59:15 PM	44143
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/8/2019 9:07:20 PM	44115
Surr: BFB	88.3	73.8-119	%Rec	1	4/8/2019 9:07:20 PM	44115
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	4/8/2019 9:07:20 PM	44115
Toluene	ND	0.048	mg/Kg	1	4/8/2019 9:07:20 PM	44115
Ethylbenzene	ND	0.048	mg/Kg	1	4/8/2019 9:07:20 PM	44115
Xylenes, Total	ND	0.097	mg/Kg	1	4/8/2019 9:07:20 PM	44115
Surr: 4-Bromofluorobenzene	89.8	80-120	%Rec	1	4/8/2019 9:07:20 PM	44115

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP232

Project: LVP SWD

Collection Date: 4/3/2019

Lab ID: 1904256-068 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: smb
Chloride	91	59		mg/Kg	20	4/8/2019 10:20:12 PM	44203
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS					Analyst	: JME
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/8/2019 8:23:52 PM	44143
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/8/2019 8:23:52 PM	44143
Surr: DNOP	63.7	70-130	S	%Rec	1	4/8/2019 8:23:52 PM	44143
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/8/2019 10:17:12 PM	44115
Surr: BFB	87.4	73.8-119		%Rec	1	4/8/2019 10:17:12 PM	44115
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.024		mg/Kg	1	4/8/2019 10:17:12 PM	44115
Toluene	ND	0.047		mg/Kg	1	4/8/2019 10:17:12 PM	44115
Ethylbenzene	ND	0.047		mg/Kg	1	4/8/2019 10:17:12 PM	44115
Xylenes, Total	ND	0.095		mg/Kg	1	4/8/2019 10:17:12 PM	44115
Surr: 4-Bromofluorobenzene	88.1	80-120		%Rec	1	4/8/2019 10:17:12 PM	44115

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP233
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-069 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	smb
Chloride	410	60	mg/Kg	20	4/8/2019 10:32:36 PM	44203
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	JME
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	4/8/2019 8:48:27 PM	44143
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	4/8/2019 8:48:27 PM	44143
Surr: DNOP	72.3	70-130	%Rec	1	4/8/2019 8:48:27 PM	44143
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/8/2019 10:40:41 PM	44115
Surr: BFB	86.5	73.8-119	%Rec	1	4/8/2019 10:40:41 PM	44115
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.023	mg/Kg	1	4/8/2019 10:40:41 PM	44115
Toluene	ND	0.047	mg/Kg	1	4/8/2019 10:40:41 PM	44115
Ethylbenzene	ND	0.047	mg/Kg	1	4/8/2019 10:40:41 PM	44115
Xylenes, Total	ND	0.093	mg/Kg	1	4/8/2019 10:40:41 PM	44115
Surr: 4-Bromofluorobenzene	88.0	80-120	%Rec	1	4/8/2019 10:40:41 PM	44115

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP234
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-070 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: smb
Chloride	170	59		mg/Kg	20	4/8/2019 10:45:01 PM	44203
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst	: JME
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/8/2019 9:12:59 PM	44143
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/8/2019 9:12:59 PM	44143
Surr: DNOP	68.0	70-130	S	%Rec	1	4/8/2019 9:12:59 PM	44143
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/8/2019 11:04:14 PM	44115
Surr: BFB	87.3	73.8-119		%Rec	1	4/8/2019 11:04:14 PM	44115
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.024		mg/Kg	1	4/8/2019 11:04:14 PM	44115
Toluene	ND	0.049		mg/Kg	1	4/8/2019 11:04:14 PM	44115
Ethylbenzene	ND	0.049		mg/Kg	1	4/8/2019 11:04:14 PM	44115
Xylenes, Total	ND	0.097		mg/Kg	1	4/8/2019 11:04:14 PM	44115
Surr: 4-Bromofluorobenzene	88.8	80-120		%Rec	1	4/8/2019 11:04:14 PM	44115

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP235
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-071 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: smb
Chloride	130	60		mg/Kg	20	4/8/2019 11:22:14 PM	44203
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	: JME
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/8/2019 9:37:32 PM	44143
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/8/2019 9:37:32 PM	44143
Surr: DNOP	63.4	70-130	S	%Rec	1	4/8/2019 9:37:32 PM	44143
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/8/2019 11:27:50 PM	44115
Surr: BFB	87.0	73.8-119		%Rec	1	4/8/2019 11:27:50 PM	44115
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.023		mg/Kg	1	4/8/2019 11:27:50 PM	44115
Toluene	ND	0.046		mg/Kg	1	4/8/2019 11:27:50 PM	44115
Ethylbenzene	ND	0.046		mg/Kg	1	4/8/2019 11:27:50 PM	44115
Xylenes, Total	ND	0.092		mg/Kg	1	4/8/2019 11:27:50 PM	44115
Surr: 4-Bromofluorobenzene	89.2	80-120		%Rec	1	4/8/2019 11:27:50 PM	44115

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP236
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-072 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: smb
Chloride	110	59	mg/Kg	20	4/8/2019 11:34:38 PM	44203
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	4/8/2019 10:02:05 PM	44143
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/8/2019 10:02:05 PM	44143
Surr: DNOP	75.6	70-130	%Rec	1	4/8/2019 10:02:05 PM	44143
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	4/8/2019 11:51:25 PM	44115
Surr: BFB	85.5	73.8-119	%Rec	1	4/8/2019 11:51:25 PM	44115
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.023	mg/Kg	1	4/8/2019 11:51:25 PM	44115
Toluene	ND	0.046	mg/Kg	1	4/8/2019 11:51:25 PM	44115
Ethylbenzene	ND	0.046	mg/Kg	1	4/8/2019 11:51:25 PM	44115
Xylenes, Total	ND	0.092	mg/Kg	1	4/8/2019 11:51:25 PM	44115
Surr: 4-Bromofluorobenzene	87.1	80-120	%Rec	1	4/8/2019 11:51:25 PM	44115

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP237
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-073 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: smb
Chloride	260	60	mg/Kg	20	4/8/2019 11:47:03 PM	44203
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: ЈМЕ
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	4/8/2019 10:26:34 PM	44143
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	4/8/2019 10:26:34 PM	44143
Surr: DNOP	73.2	70-130	%Rec	1	4/8/2019 10:26:34 PM	44143
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/9/2019 12:14:55 AM	44115
Surr: BFB	86.0	73.8-119	%Rec	1	4/9/2019 12:14:55 AM	44115
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.025	mg/Kg	1	4/9/2019 12:14:55 AM	44115
Toluene	ND	0.049	mg/Kg	1	4/9/2019 12:14:55 AM	44115
Ethylbenzene	ND	0.049	mg/Kg	1	4/9/2019 12:14:55 AM	44115
Xylenes, Total	ND	0.098	mg/Kg	1	4/9/2019 12:14:55 AM	44115
Surr: 4-Bromofluorobenzene	87.1	80-120	%Rec	1	4/9/2019 12:14:55 AM	44115

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

Qualifiers:

Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP238
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-074 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	160	60		mg/Kg	20	4/8/2019 11:59:27 PM	44203
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS					Analyst	: JME
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	4/8/2019 10:50:57 PM	44143
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/8/2019 10:50:57 PM	44143
Surr: DNOP	66.7	70-130	S	%Rec	1	4/8/2019 10:50:57 PM	44143
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/9/2019 12:38:25 AM	44115
Surr: BFB	87.8	73.8-119		%Rec	1	4/9/2019 12:38:25 AM	44115
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.025		mg/Kg	1	4/9/2019 12:38:25 AM	44115
Toluene	ND	0.049		mg/Kg	1	4/9/2019 12:38:25 AM	44115
Ethylbenzene	ND	0.049		mg/Kg	1	4/9/2019 12:38:25 AM	44115
Xylenes, Total	ND	0.099		mg/Kg	1	4/9/2019 12:38:25 AM	44115
Surr: 4-Bromofluorobenzene	88.0	80-120		%Rec	1	4/9/2019 12:38:25 AM	44115

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

Qualifiers:

Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Н

Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP239

Collection Date: 4/3/2019

Lab ID: 1904256-075 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	smb
Chloride	210	59	mg/Kg	20	4/9/2019 12:11:52 AM	44203
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	4/6/2019 2:22:23 PM	44144
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	4/6/2019 2:22:23 PM	44144
Surr: DNOP	85.7	70-130	%Rec	1	4/6/2019 2:22:23 PM	44144
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/9/2019 10:13:48 PM	44121
Surr: BFB	89.3	73.8-119	%Rec	1	4/9/2019 10:13:48 PM	44121
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	4/9/2019 10:13:48 PM	44121
Toluene	ND	0.049	mg/Kg	1	4/9/2019 10:13:48 PM	44121
Ethylbenzene	ND	0.049	mg/Kg	1	4/9/2019 10:13:48 PM	44121
Xylenes, Total	ND	0.097	mg/Kg	1	4/9/2019 10:13:48 PM	44121
Surr: 4-Bromofluorobenzene	88.7	80-120	%Rec	1	4/9/2019 10:13:48 PM	44121

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP240

Collection Date: 4/3/2019

Lab ID: 1904256-076 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	230	60		mg/Kg	20	4/9/2019 12:49:06 AM	44203
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/6/2019 3:35:43 PM	44144
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/6/2019 3:35:43 PM	44144
Surr: DNOP	66.9	70-130	S	%Rec	1	4/6/2019 3:35:43 PM	44144
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/9/2019 11:24:09 PM	44121
Surr: BFB	90.1	73.8-119		%Rec	1	4/9/2019 11:24:09 PM	44121
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.024		mg/Kg	1	4/9/2019 11:24:09 PM	44121
Toluene	ND	0.048		mg/Kg	1	4/9/2019 11:24:09 PM	44121
Ethylbenzene	ND	0.048		mg/Kg	1	4/9/2019 11:24:09 PM	44121
Xylenes, Total	ND	0.097		mg/Kg	1	4/9/2019 11:24:09 PM	44121
Surr: 4-Bromofluorobenzene	89.4	80-120		%Rec	1	4/9/2019 11:24:09 PM	44121

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP241
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-077 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	260	60		mg/Kg	20	4/9/2019 1:01:31 AM	44203
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/6/2019 4:00:10 PM	44144
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/6/2019 4:00:10 PM	44144
Surr: DNOP	58.0	70-130	S	%Rec	1	4/6/2019 4:00:10 PM	44144
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/10/2019 12:34:00 AM	44121
Surr: BFB	86.5	73.8-119		%Rec	1	4/10/2019 12:34:00 AM	44121
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.024		mg/Kg	1	4/10/2019 12:34:00 AM	44121
Toluene	ND	0.047		mg/Kg	1	4/10/2019 12:34:00 AM	44121
Ethylbenzene	ND	0.047		mg/Kg	1	4/10/2019 12:34:00 AM	44121
Xylenes, Total	ND	0.095		mg/Kg	1	4/10/2019 12:34:00 AM	44121
Surr: 4-Bromofluorobenzene	86.5	80-120		%Rec	1	4/10/2019 12:34:00 AM	44121

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP242

Project: LVP SWD

Collection Date: 4/3/2019

Lab ID: 1904256-078 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	160	60		mg/Kg	20	4/9/2019 1:13:55 AM	44203
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/6/2019 4:24:44 PM	44144
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/6/2019 4:24:44 PM	44144
Surr: DNOP	59.6	70-130	S	%Rec	1	4/6/2019 4:24:44 PM	44144
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/10/2019 12:57:18 AM	44121
Surr: BFB	88.0	73.8-119		%Rec	1	4/10/2019 12:57:18 AM	44121
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.025		mg/Kg	1	4/10/2019 12:57:18 AM	44121
Toluene	ND	0.050		mg/Kg	1	4/10/2019 12:57:18 AM	44121
Ethylbenzene	ND	0.050		mg/Kg	1	4/10/2019 12:57:18 AM	44121
Xylenes, Total	ND	0.099		mg/Kg	1	4/10/2019 12:57:18 AM	44121
Surr: 4-Bromofluorobenzene	89.1	80-120		%Rec	1	4/10/2019 12:57:18 AM	44121

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT:WPX EnergyClient Sample ID: SP243Project:LVP SWDCollection Date: 4/3/2019

Lab ID: 1904256-079 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: CJS
Chloride	120	60		mg/Kg	20	4/8/2019 9:22:39 PM	44214
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/6/2019 4:49:14 PM	44144
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/6/2019 4:49:14 PM	44144
Surr: DNOP	56.6	70-130	S	%Rec	1	4/6/2019 4:49:14 PM	44144
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/10/2019 1:20:33 AM	44121
Surr: BFB	87.9	73.8-119		%Rec	1	4/10/2019 1:20:33 AM	44121
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.025		mg/Kg	1	4/10/2019 1:20:33 AM	44121
Toluene	ND	0.049		mg/Kg	1	4/10/2019 1:20:33 AM	44121
Ethylbenzene	ND	0.049		mg/Kg	1	4/10/2019 1:20:33 AM	44121
Xylenes, Total	ND	0.099		mg/Kg	1	4/10/2019 1:20:33 AM	44121
Surr: 4-Bromofluorobenzene	87.5	80-120		%Rec	1	4/10/2019 1:20:33 AM	44121

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP244
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-080 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	CJS
Chloride	120	60		mg/Kg	20	4/8/2019 9:35:03 PM	44214
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	Irm
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/6/2019 5:13:49 PM	44144
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/6/2019 5:13:49 PM	44144
Surr: DNOP	67.6	70-130	S	%Rec	1	4/6/2019 5:13:49 PM	44144
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/10/2019 1:43:51 AM	44121
Surr: BFB	88.3	73.8-119		%Rec	1	4/10/2019 1:43:51 AM	44121
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.023		mg/Kg	1	4/10/2019 1:43:51 AM	44121
Toluene	ND	0.047		mg/Kg	1	4/10/2019 1:43:51 AM	44121
Ethylbenzene	ND	0.047		mg/Kg	1	4/10/2019 1:43:51 AM	44121
Xylenes, Total	ND	0.093		mg/Kg	1	4/10/2019 1:43:51 AM	44121
Surr: 4-Bromofluorobenzene	88.2	80-120		%Rec	1	4/10/2019 1:43:51 AM	44121

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP245
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-081 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: CJS
Chloride	81	60	mg/Kg	20	4/8/2019 10:12:17 PM	44214
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	4/6/2019 5:38:16 PM	44144
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/6/2019 5:38:16 PM	44144
Surr: DNOP	77.9	70-130	%Rec	1	4/6/2019 5:38:16 PM	44144
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/10/2019 2:07:13 AM	44121
Surr: BFB	90.4	73.8-119	%Rec	1	4/10/2019 2:07:13 AM	44121
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.023	mg/Kg	1	4/10/2019 2:07:13 AM	44121
Toluene	ND	0.047	mg/Kg	1	4/10/2019 2:07:13 AM	44121
Ethylbenzene	ND	0.047	mg/Kg	1	4/10/2019 2:07:13 AM	44121
Xylenes, Total	ND	0.094	mg/Kg	1	4/10/2019 2:07:13 AM	44121
Surr: 4-Bromofluorobenzene	89.7	80-120	%Rec	1	4/10/2019 2:07:13 AM	44121

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP246
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-082 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: CJS
Chloride	190	60		mg/Kg	20	4/8/2019 10:24:42 PM	44214
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/6/2019 6:02:50 PM	44144
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	4/6/2019 6:02:50 PM	44144
Surr: DNOP	51.9	70-130	S	%Rec	1	4/6/2019 6:02:50 PM	44144
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/10/2019 2:30:41 AM	44121
Surr: BFB	86.6	73.8-119		%Rec	1	4/10/2019 2:30:41 AM	44121
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.024		mg/Kg	1	4/10/2019 2:30:41 AM	44121
Toluene	ND	0.047		mg/Kg	1	4/10/2019 2:30:41 AM	44121
Ethylbenzene	ND	0.047		mg/Kg	1	4/10/2019 2:30:41 AM	44121
Xylenes, Total	ND	0.094		mg/Kg	1	4/10/2019 2:30:41 AM	44121
Surr: 4-Bromofluorobenzene	85.8	80-120		%Rec	1	4/10/2019 2:30:41 AM	44121

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP247

Project: LVP SWD

Collection Date: 4/3/2019

Lab ID: 1904256-083 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: CJS
Chloride	120	60		mg/Kg	20	4/8/2019 11:01:55 PM	44214
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/6/2019 6:27:17 PM	44144
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/6/2019 6:27:17 PM	44144
Surr: DNOP	57.7	70-130	S	%Rec	1	4/6/2019 6:27:17 PM	44144
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/10/2019 2:54:10 AM	44121
Surr: BFB	86.4	73.8-119		%Rec	1	4/10/2019 2:54:10 AM	44121
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.023		mg/Kg	1	4/10/2019 2:54:10 AM	44121
Toluene	ND	0.047		mg/Kg	1	4/10/2019 2:54:10 AM	44121
Ethylbenzene	ND	0.047		mg/Kg	1	4/10/2019 2:54:10 AM	44121
Xylenes, Total	ND	0.093		mg/Kg	1	4/10/2019 2:54:10 AM	44121
Surr: 4-Bromofluorobenzene	85.1	80-120		%Rec	1	4/10/2019 2:54:10 AM	44121

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP248
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-084 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: CJS
Chloride	74	60		mg/Kg	20	4/8/2019 11:14:20 PM	44214
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/6/2019 6:51:48 PM	44144
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/6/2019 6:51:48 PM	44144
Surr: DNOP	68.1	70-130	S	%Rec	1	4/6/2019 6:51:48 PM	44144
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/10/2019 3:41:07 AM	44121
Surr: BFB	85.9	73.8-119		%Rec	1	4/10/2019 3:41:07 AM	44121
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.023		mg/Kg	1	4/10/2019 3:41:07 AM	44121
Toluene	ND	0.047		mg/Kg	1	4/10/2019 3:41:07 AM	44121
Ethylbenzene	ND	0.047		mg/Kg	1	4/10/2019 3:41:07 AM	44121
Xylenes, Total	ND	0.093		mg/Kg	1	4/10/2019 3:41:07 AM	44121
Surr: 4-Bromofluorobenzene	84.6	80-120		%Rec	1	4/10/2019 3:41:07 AM	44121

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP249

Collection Date: 4/3/2019

Lab ID: 1904256-085 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: CJS
Chloride	150	60		mg/Kg	20	4/8/2019 11:51:34 PM	44214
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/6/2019 7:16:09 PM	44144
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/6/2019 7:16:09 PM	44144
Surr: DNOP	50.3	70-130	S	%Rec	1	4/6/2019 7:16:09 PM	44144
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/10/2019 4:04:32 AM	44121
Surr: BFB	85.9	73.8-119		%Rec	1	4/10/2019 4:04:32 AM	44121
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.024		mg/Kg	1	4/10/2019 4:04:32 AM	44121
Toluene	ND	0.047		mg/Kg	1	4/10/2019 4:04:32 AM	44121
Ethylbenzene	ND	0.047		mg/Kg	1	4/10/2019 4:04:32 AM	44121
Xylenes, Total	ND	0.094		mg/Kg	1	4/10/2019 4:04:32 AM	44121
Surr: 4-Bromofluorobenzene	85.6	80-120		%Rec	1	4/10/2019 4:04:32 AM	44121

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP250

Project: LVP SWD

Collection Date: 4/3/2019

Lab ID: 1904256-086 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: CJS
Chloride	220	60		mg/Kg	20	4/9/2019 12:03:59 AM	44214
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	4/6/2019 7:40:37 PM	44144
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/6/2019 7:40:37 PM	44144
Surr: DNOP	49.3	70-130	S	%Rec	1	4/6/2019 7:40:37 PM	44144
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/10/2019 7:36:49 AM	44121
Surr: BFB	89.2	73.8-119		%Rec	1	4/10/2019 7:36:49 AM	44121
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.024		mg/Kg	1	4/10/2019 7:36:49 AM	44121
Toluene	ND	0.048		mg/Kg	1	4/10/2019 7:36:49 AM	44121
Ethylbenzene	ND	0.048		mg/Kg	1	4/10/2019 7:36:49 AM	44121
Xylenes, Total	ND	0.097		mg/Kg	1	4/10/2019 7:36:49 AM	44121
Surr: 4-Bromofluorobenzene	88.3	80-120		%Rec	1	4/10/2019 7:36:49 AM	44121

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP251
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-087 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: CJS
Chloride	180	59		mg/Kg	20	4/9/2019 12:16:23 AM	44214
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/6/2019 8:04:55 PM	44144
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	4/6/2019 8:04:55 PM	44144
Surr: DNOP	56.8	70-130	S	%Rec	1	4/6/2019 8:04:55 PM	44144
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/10/2019 8:00:26 AM	44121
Surr: BFB	86.5	73.8-119		%Rec	1	4/10/2019 8:00:26 AM	44121
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.023		mg/Kg	1	4/10/2019 8:00:26 AM	44121
Toluene	ND	0.046		mg/Kg	1	4/10/2019 8:00:26 AM	44121
Ethylbenzene	ND	0.046		mg/Kg	1	4/10/2019 8:00:26 AM	44121
Xylenes, Total	ND	0.092		mg/Kg	1	4/10/2019 8:00:26 AM	44121
Surr: 4-Bromofluorobenzene	85.6	80-120		%Rec	1	4/10/2019 8:00:26 AM	44121

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP252
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-088 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: CJS
Chloride	110	60		mg/Kg	20	4/9/2019 12:28:48 AM	44214
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/6/2019 8:29:22 PM	44144
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/6/2019 8:29:22 PM	44144
Surr: DNOP	43.2	70-130	S	%Rec	1	4/6/2019 8:29:22 PM	44144
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/10/2019 8:24:09 AM	44121
Surr: BFB	89.1	73.8-119		%Rec	1	4/10/2019 8:24:09 AM	44121
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.024		mg/Kg	1	4/10/2019 8:24:09 AM	44121
Toluene	ND	0.049		mg/Kg	1	4/10/2019 8:24:09 AM	44121
Ethylbenzene	ND	0.049		mg/Kg	1	4/10/2019 8:24:09 AM	44121
Xylenes, Total	ND	0.098		mg/Kg	1	4/10/2019 8:24:09 AM	44121
Surr: 4-Bromofluorobenzene	88.2	80-120		%Rec	1	4/10/2019 8:24:09 AM	44121

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP253
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-089 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: CJS
Chloride	190	60		mg/Kg	20	4/9/2019 12:41:13 AM	44214
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/6/2019 8:53:45 PM	44144
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/6/2019 8:53:45 PM	44144
Surr: DNOP	46.5	70-130	S	%Rec	1	4/6/2019 8:53:45 PM	44144
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/10/2019 8:47:49 AM	44121
Surr: BFB	89.9	73.8-119		%Rec	1	4/10/2019 8:47:49 AM	44121
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.025		mg/Kg	1	4/10/2019 8:47:49 AM	44121
Toluene	ND	0.049		mg/Kg	1	4/10/2019 8:47:49 AM	44121
Ethylbenzene	ND	0.049		mg/Kg	1	4/10/2019 8:47:49 AM	44121
Xylenes, Total	ND	0.098		mg/Kg	1	4/10/2019 8:47:49 AM	44121
Surr: 4-Bromofluorobenzene	88.7	80-120		%Rec	1	4/10/2019 8:47:49 AM	44121

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP254
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-090 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	CJS
Chloride	170	60		mg/Kg	20	4/9/2019 12:53:38 AM	44214
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	4/6/2019 9:18:10 PM	44144
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/6/2019 9:18:10 PM	44144
Surr: DNOP	51.5	70-130	S	%Rec	1	4/6/2019 9:18:10 PM	44144
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/10/2019 9:11:22 AM	44121
Surr: BFB	89.0	73.8-119		%Rec	1	4/10/2019 9:11:22 AM	44121
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.023		mg/Kg	1	4/10/2019 9:11:22 AM	44121
Toluene	ND	0.046		mg/Kg	1	4/10/2019 9:11:22 AM	44121
Ethylbenzene	ND	0.046		mg/Kg	1	4/10/2019 9:11:22 AM	44121
Xylenes, Total	ND	0.092		mg/Kg	1	4/10/2019 9:11:22 AM	44121
Surr: 4-Bromofluorobenzene	88.7	80-120		%Rec	1	4/10/2019 9:11:22 AM	44121

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP255
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-091 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: CJS
Chloride	120	60		mg/Kg	20	4/9/2019 1:06:03 AM	44214
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	4/6/2019 9:42:22 PM	44144
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/6/2019 9:42:22 PM	44144
Surr: DNOP	46.9	70-130	S	%Rec	1	4/6/2019 9:42:22 PM	44144
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/10/2019 9:35:07 AM	44121
Surr: BFB	89.9	73.8-119		%Rec	1	4/10/2019 9:35:07 AM	44121
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.024		mg/Kg	1	4/10/2019 9:35:07 AM	44121
Toluene	ND	0.048		mg/Kg	1	4/10/2019 9:35:07 AM	44121
Ethylbenzene	ND	0.048		mg/Kg	1	4/10/2019 9:35:07 AM	44121
Xylenes, Total	ND	0.096		mg/Kg	1	4/10/2019 9:35:07 AM	44121
Surr: 4-Bromofluorobenzene	88.6	80-120		%Rec	1	4/10/2019 9:35:07 AM	44121

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

Qualifiers:

Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Н

Date Reported: 4/12/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP256
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904256-092 **Matrix:** SOIL **Received Date:** 4/4/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	CJS
Chloride	130	60		mg/Kg	20	4/9/2019 1:18:27 AM	44214
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	4/6/2019 10:06:43 PM	44144
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/6/2019 10:06:43 PM	44144
Surr: DNOP	35.9	70-130	S	%Rec	1	4/6/2019 10:06:43 PM	44144
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/10/2019 9:58:36 AM	44121
Surr: BFB	88.8	73.8-119		%Rec	1	4/10/2019 9:58:36 AM	44121
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.025		mg/Kg	1	4/10/2019 9:58:36 AM	44121
Toluene	ND	0.050		mg/Kg	1	4/10/2019 9:58:36 AM	44121
Ethylbenzene	ND	0.050		mg/Kg	1	4/10/2019 9:58:36 AM	44121
Xylenes, Total	ND	0.10		mg/Kg	1	4/10/2019 9:58:36 AM	44121
Surr: 4-Bromofluorobenzene	88.3	80-120		%Rec	1	4/10/2019 9:58:36 AM	44121

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

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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WPX Energy

LVP SWD

Client:

Project:

Hall Environmental Analysis Laboratory, Inc.

Result

14

PQL

1.5

WO#: **1904256**

12-Apr-19

Sample ID: MB-44177	SampType: mblk	TestCode: EPA Method	300.0: Anions	
Client ID: PBS	Batch ID: 44177	RunNo: 58961		
Prep Date: 4/6/2019	Analysis Date: 4/6/2019	SeqNo: 1983426	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride	ND 1.5			
Sample ID: LCS-44177	SampType: Ics	TestCode: EPA Method	300.0: Anions	
Client ID: LCSS	Batch ID: 44177	RunNo: 58961		
Prep Date: 4/6/2019	Analysis Date: 4/6/2019	SeqNo: 1983428	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride	14 1.5 15.00	0 93.6 90	110	
Sample ID: MB-44174	SampType: mblk	TestCode: EPA Method	300.0: Anions	
Client ID: PBS	Batch ID: 44174	RunNo: 58963		
Prep Date: 4/6/2019	Analysis Date: 4/6/2019	SeqNo: 1983569	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride	ND 1.5			
Sample ID: LCS-44174	SampType: Ics	TestCode: EPA Method	300.0: Anions	
Client ID: LCSS	Batch ID: 44174	RunNo: 58963		
Prep Date: 4/6/2019	Analysis Date: 4/6/2019	SeqNo: 1983570	Units: mg/Kg	

Sample ID: MB-44176	SampType: mblk			TestCode: EPA Method 300.0: Anions						
Client ID: PBS	Batch ID: 44176			RunNo: 58963						
Prep Date: 4/6/2019	Analysis Dat	te: 4/6/ 2	2019	S	SeqNo: 1983599		Units: mg/Kg			
Analyte	Result	PQL S	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

0

%REC

95.5

LowLimit

90

HighLimit

110

%RPD

RPDLimit

Qual

SPK value SPK Ref Val

15.00

Sample ID: LCS-44176	SampType: Ics	TestCode: EPA Method	300.0: Anions				
Client ID: LCSS	Batch ID: 44176	RunNo: 58963					
Prep Date: 4/6/2019	Analysis Date: 4/6/2019	SeqNo: 1983600	Units: mg/Kg				
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual			
Chloride	14 1.5 15.00	0 95.4 90	110				

Qualifiers:

Analyte

Chloride

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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WPX Energy

LVP SWD

Client:

Project:

Hall Environmental Analysis Laboratory, Inc.

Result

14

PQL

1.5

WO#: **1904256**

12-Apr-19

Sample ID: MB-44176	SampType: mblk	TestCode: EPA Method	300.0: Anions				
Client ID: PBS	Batch ID: 44176	RunNo: 58965					
Prep Date: 4/6/2019	Analysis Date: 4/7/2019	SeqNo: 1983668	Units: mg/Kg				
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual				
Chloride	ND 1.5						
Sample ID: LCS-44176	SampType: Ics	TestCode: EPA Method	300.0: Anions				
Client ID: LCSS	Batch ID: 44176	RunNo: 58965					
Prep Date: 4/6/2019	Analysis Date: 4/7/2019	SeqNo: 1983669	Units: mg/Kg				
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual				
Chloride	14 1.5 15.00	0 93.1 90	110				
Sample ID: MB-44191	SampType: mblk	TestCode: EPA Method	300.0: Anions				
Client ID: PBS	Batch ID: 44191	RunNo: 58977					
Prep Date: 4/8/2019	Analysis Date: 4/8/2019	SeqNo: 1984926	Units: mg/Kg				
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual				
Chloride	ND 1.5						
Sample ID: LCS-44191	SampType: Ics	TestCode: EPA Method	300.0: Anions				
Client ID: LCSS	Batch ID: 44191	RunNo: 58977					
Prep Date: 4/8/2019	Analysis Date: 4/8/2019	SeqNo: 1984927	Units: mg/Kg				

Sample ID: MB-44203	SampT	ype: m b	olk	Tes	TestCode: EPA Method 300.0: Anions					
Client ID: PBS	Batch	ID: 44	203	RunNo: 58977						
Prep Date: 4/8/2019	Analysis Da	ate: 4/	8/2019	S	SeqNo: 1984968		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

0

%REC

93.7

LowLimit

90

HighLimit

110

%RPD

RPDLimit

Qual

SPK value SPK Ref Val

15.00

Sample ID: LCS-44203	SampType: Ics	TestCode: EPA Method	300.0: Anions	
Client ID: LCSS	Batch ID: 44203	RunNo: 58977		
Prep Date: 4/8/2019	Analysis Date: 4/8/2019	SeqNo: 1984969	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride	14 1.5 15.00	0 94.1 90	110	

Qualifiers:

Analyte

Chloride

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1904256**

12-Apr-19

Client: WPX Energy
Project: LVP SWD

Sample ID: MB-44214 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 44214 RunNo: 58997

Prep Date: 4/8/2019 Analysis Date: 4/8/2019 SeqNo: 1985167 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride ND 1.5

Sample ID: LCS-44214 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 44214 RunNo: 58997

Prep Date: 4/8/2019 Analysis Date: 4/8/2019 SeqNo: 1985168 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride 14 1.5 15.00 0 92.3 90 110

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Hall Environmental Analysis Laboratory, Inc.

SampType: MBLK

WO#: **1904256**

12-Apr-19

Client:	WPX Energy						
Project:	LVP SV	VD					
Sample ID: LCS	S-44142	SampTy					

Sample ID: MB-44142

Sample ID: LCS-44142	SampT	SampType: LCS TestCode: EPA Method 8						esel Range	e Organics	
Client ID: LCSS	Batch	ID: 44	142	F	RunNo: 5 8	8917				
Prep Date: 4/5/2019	Analysis D	ate: 4/	5/2019	S	SeqNo: 1	981087	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	97.4	63.9	124			
Surr: DNOP	4.4		5.000		87.5	70	130			

TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: PBS	Batch	1D: 44	142	R						
Prep Date: 4/5/2019	Analysis D	ate: 4/	5/2019	S	SeqNo: 1	981088	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	10		10.00		101	70	130			

Sample ID: LCS-44128	SampT	ype: LC	S	Tes	TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch	n ID: 44	128	F	RunNo: 5	8917						
Prep Date: 4/4/2019 Analysis Date: 4/5/2019					SeqNo: 1982023			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	95.0	63.9	124					
Surr: DNOP	4.3		5.000		86.1	70	130					

Sample ID: MB-44128	SampT	уре: МВ	LK	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: PBS	Batch	ID: 44 1	128	F	RunNo: 5	8917				
Prep Date: 4/4/2019	Analysis D	ate: 4/	5/2019	S	SeqNo: 19	982024	Units: mg/K	(g		
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	9.8		10.00		98.1	70	130			

Sample ID: LCS-44144	SampT	ype: LC	S	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: LCSS	Batch	ID: 44	144	F	RunNo: 5	8960				
Prep Date: 4/5/2019	Analysis D	ate: 4/	6/2019	S	SeqNo: 1	983490	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	10	50.00	0	85.7	63.9	124			
Surr: DNOP	4.7		5.000		94.5	70	130			

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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WPX Energy

Client:

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904256**

12-Apr-19

Project: LVP SW								
Sample ID: MB-44144	SampType: MI	BLK	Tes	tCode: EPA Method	8015M/D: Dies	el Range	e Organics	
Client ID: PBS	Batch ID: 44	144	F	RunNo: 58960				
Prep Date: 4/5/2019	Analysis Date: 4/	6/2019	5	SeqNo: 1983491	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	9.8	10.00		97.6 70	130			
Sample ID: 1904256-075AMS	SampType: MS	5	Tes	tCode: EPA Method	8015M/D: Dies	el Range	e Organics	
Client ID: SP239	Batch ID: 44	144	F	RunNo: 58960				
Prep Date: 4/5/2019	Analysis Date: 4/	6/2019	\$	SeqNo: 1983493	Units: mg/Kg			
Analyte	Result PQL	SPK value	SPK Ref Val	%REC LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	38 9.9	49.55	0	77.2 53.5	126			
Surr: DNOP	2.3	4.955		46.6 70	130			S
Sample ID: 1904256-075AMS	SampType: MS	SD	Tes	tCode: EPA Method	8015M/D: Dies	el Range	e Organics	
Client ID: SP239	Batch ID: 44	144	F	RunNo: 58960				
Prep Date: 4/5/2019	Analysis Date: 4/	6/2019	8	SeqNo: 1983494	Units: mg/Kg			
Analyte	Result PQL	SPK value	SPK Ref Val	%REC LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41 9.8	48.78	0	83.1 53.5	126	5.80	21.7	
Surr: DNOP	2.6	4.878		52.7 70	130	0	0	S
Sample ID: MB-44152	SampType: MI	BLK	Tes	tCode: EPA Method	8015M/D: Dies	el Range	e Organics	
Client ID: PBS	Batch ID: 44	152	F	RunNo: 58967				
Prep Date: 4/5/2019	Analysis Date: 4/	8/2019	\$	SeqNo: 1983700	Units: %Rec			
Analyte	Result PQL	SPK value	SPK Ref Val	%REC LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10	10.00		101 70	130			
Sample ID: MB-44133	SampType: MI	BLK	Tes	tCode: EPA Method	8015M/D: Dies	el Range	e Organics	
Client ID: PBS	Batch ID: 44	133	F	RunNo: 58929				
Prep Date: 4/4/2019	Analysis Date: 4/	5/2019	S	SeqNo: 1983932	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							

Qualifiers:

Surr: DNOP

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

13

10.00

ND Not Detected at the Reporting Limit

130

70

130

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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S

Hall Environmental Analysis Laboratory, Inc.

WO#: 1904256

12-Apr-19

Client:	WPX Energy
Project:	LVP SWD

Sample ID: LCS-44133	SampTy	pe: LC	s	Tes	tCode: El	PA Method	8015M/D: Di	esel Range	e Organics	
Client ID: LCSS	Batch	ID: 44	133	F	RunNo: 5 8	8929				
Prep Date: 4/4/2019	Analysis Da	ate: 4/	5/2019	S	SeqNo: 19	983933	Units: mg/k	(g		
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	63.9	124			
Surr: DNOP	4.7		5.000		94.6	70	130			
Sample ID: 1904256-015AMS	SampTy	pe: M \$	5	Tes	tCode: El	PA Method	8015M/D: Di	esel Range	e Organics	
Client ID: SP179	Batch	ID: 44	133	F	RunNo: 5	8929				
Prep Date: 4/4/2019	Analysis Da	ate: 4/	/5/2019	S	SeqNo: 19	983935	Units: mg/h	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	9.4	47.08	0	106	53.5	126			
Surr: DNOP	4.8		4.708		103	70	130			
Sample ID: 1904256-015AMSI	D SampTy	ре: М \$	SD	Tes	tCode: El	PA Method	8015M/D: Di	esel Range	e Organics	
Client ID: SP179	Batch	ID: 44	133	F	RunNo: 5	8929				
Prep Date: 4/4/2019	Analysis Da	ate: 4/	5/2019	S	SeqNo: 19	983936	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	10	49.90	0	87.7	53.5	126	12.7	21.7	
Surr: DNOP	4.1		4.990		82.5	70	130	0	0	
Sample ID: LCS-44143	O T	"no: 1.0	.e	Tes	tCodo: EI	PA Mothod	8015M/D: Di	ocal Dange	Ormaniaa	
1	SampTy	pe. LC	,3	103	icoue. Er	A Method	00 13W/D. DI	esei Kaliyi	e Organics	
Client ID: LCSS		ID: 44			RunNo: 5		0013W/D. DI	esei Kaligi	e Organics	
· ·		ID: 44	143	F		8967	Units: mg/k		e Organics	
Client ID: LCSS	Batch	ID: 44	143 /8/2019	F	RunNo: 5	8967			RPDLimit	Qual
Client ID: LCSS Prep Date: 4/5/2019	Batch Analysis Da	ID: 44 ate: 4/	143 /8/2019	F	RunNo: 58 SeqNo: 19	8967 984045	Units: mg/h	(g	·	Qual
Client ID: LCSS Prep Date: 4/5/2019 Analyte	Batch Analysis Da Result	ID: 44 ate: 4/ PQL	143 / 8/2019 SPK value	F S SPK Ref Val	RunNo: 5 8 SeqNo: 1 9 %REC	8967 984045 LowLimit	Units: mg/k	(g	·	Qual
Client ID: LCSS Prep Date: 4/5/2019 Analyte Diesel Range Organics (DRO)	Batch Analysis Da Result 41	PQL 10: 44	143 /8/2019 SPK value 50.00 5.000	SPK Ref Val	RunNo: 5 8 SeqNo: 1 9 %REC 81.7 82.3	8967 984045 LowLimit 63.9 70	Units: mg/k HighLimit 124	Kg %RPD	RPDLimit	Qual
Client ID: LCSS Prep Date: 4/5/2019 Analyte Diesel Range Organics (DRO) Surr: DNOP	Batch Analysis Da Result 41 4.1 SampTy	PQL 10: 44	143 /8/2019 SPK value 50.00 5.000	SPK Ref Val 0	RunNo: 5 8 SeqNo: 1 9 %REC 81.7 82.3	8967 984045 LowLimit 63.9 70 PA Method	Units: mg/F HighLimit 124 130	Kg %RPD	RPDLimit	Qual
Client ID: LCSS Prep Date: 4/5/2019 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID: LCS-44152	Batch Analysis Da Result 41 4.1 SampTy	PQL 10: 44	143 8/2019 SPK value 50.00 5.000	SPK Ref Val 0 Tes	RunNo: 5 8 SeqNo: 1 9 %REC 81.7 82.3 tCode: E	8967 984045 LowLimit 63.9 70 PA Method 8967	Units: mg/F HighLimit 124 130	Kg %RPD esel Rango	RPDLimit	Qual
Client ID: LCSS Prep Date: 4/5/2019 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID: LCS-44152 Client ID: LCSS	Batch Analysis Da Result 41 4.1 SampTy Batch	PQL 10: 44	143 /8/2019 SPK value 50.00 5.000	SPK Ref Val 0 Tes	RunNo: 56 RunNo: 56 ReqNo: 19 REC 81.7 82.3 RunNo: 56 RunNo: 56 ReqNo: 19	8967 984045 LowLimit 63.9 70 PA Method 8967 984046	Units: mg/F HighLimit 124 130 8015M/D: Di	Kg %RPD esel Rango	RPDLimit	Qual
Client ID: LCSS Prep Date: 4/5/2019 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID: LCS-44152 Client ID: LCSS Prep Date: 4/5/2019	Batch Analysis Da Result 41 4.1 SampTy Batch Analysis Da	PQL 10 //Pe: LC	143 /8/2019 SPK value 50.00 5.000	SPK Ref Val 0 Tes	RunNo: 56 RunNo: 56 ReqNo: 19 REC 81.7 82.3 RunNo: 56 RunNo: 56 ReqNo: 19	8967 984045 LowLimit 63.9 70 PA Method 8967 984046	Units: mg/k HighLimit 124 130 8015M/D: Did Units: %Re	(g %RPD esel Rango	RPDLimit Property of the control of	
Client ID: LCSS Prep Date: 4/5/2019 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID: LCS-44152 Client ID: LCSS Prep Date: 4/5/2019 Analyte	Batch Analysis Da Result 41 4.1 SampTy Batch Analysis Da Result	PQL 10: 44 10: 44 10: 44 10: 44 10: 44 10: 44	143 /8/2019 SPK value 50.00 5.000 SS 152 /8/2019 SPK value 5.000	SPK Ref Val 0 Tes F S SPK Ref Val	RunNo: 56 ReqNo: 19 %REC 81.7 82.3 tCode: El RunNo: 56 ReqNo: 19 %REC 94.2	8967 984045 LowLimit 63.9 70 PA Method 8967 984046 LowLimit 70	Units: mg/k HighLimit 124 130 8015M/D: Did Units: %Re	Kg %RPD esel Rango c %RPD	RPDLimit e Organics RPDLimit	
Client ID: LCSS Prep Date: 4/5/2019 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID: LCS-44152 Client ID: LCSS Prep Date: 4/5/2019 Analyte Surr: DNOP	Batch Analysis Da Result 41 4.1 SampTy Batch Analysis Da Result 4.7 SampTy	PQL 10: 44 10: 44 10: 44 10: 44 10: 44 10: 44	143 /8/2019 SPK value 50.00 5.000 SS 152 /8/2019 SPK value 5.000	SPK Ref Val 0 Tes SPK Ref Val Tes	RunNo: 56 ReqNo: 19 %REC 81.7 82.3 tCode: El RunNo: 56 ReqNo: 19 %REC 94.2	8967 984045 LowLimit 63.9 70 PA Method 8967 984046 LowLimit 70	Units: mg/k HighLimit 124 130 8015M/D: Did Units: %Re HighLimit 130	Kg %RPD esel Rango c %RPD	RPDLimit e Organics RPDLimit	
Client ID: LCSS Prep Date: 4/5/2019 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID: LCS-44152 Client ID: LCSS Prep Date: 4/5/2019 Analyte Surr: DNOP Sample ID: MB-44143	Batch Analysis Da Result 41 4.1 SampTy Batch Analysis Da Result 4.7 SampTy	PQL 10: 44 ate: 4/ PQL 10 ID: 44 ate: 4/ PQL ID: 44 ID: 44	143 /8/2019 SPK value 50.00 5.000 SS 152 /8/2019 SPK value 5.000	SPK Ref Val 0 Tes SPK Ref Val Tes F	RunNo: 56 ReqNo: 19 %REC 81.7 82.3 tCode: Elf RunNo: 56 ReqNo: 19 %REC 94.2	8967 984045 LowLimit 63.9 70 PA Method 8967 984046 LowLimit 70 PA Method 8967	Units: mg/k HighLimit 124 130 8015M/D: Did Units: %Re HighLimit 130	%RPD esel Range c %RPD esel Range	RPDLimit e Organics RPDLimit	

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

Diesel Range Organics (DRO)

% Recovery outside of range due to dilution or matrix

ND

ND Not Detected at the Reporting Limit

Reporting Detection Limit

Sample container temperature is out of limit as specified at testcode

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Hall Environmental Analysis Laboratory, Inc.

WO#: 1904256

12-Apr-19

Client: WPX Energy **Project:** LVP SWD

Sample ID: MB-44143 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: PBS Batch ID: 44143 RunNo: 58967 Prep Date: 4/5/2019 Analysis Date: 4/8/2019 SeqNo: 1984047 Units: mg/Kg SPK value SPK Ref Val %REC %RPD **RPDLimit** Analyte Result PQL LowLimit HighLimit Qual Motor Oil Range Organics (MRO) NΩ 50 Surr: DNOP 11 10.00 109 70 130

Sample ID: 1904256-055AMS SampType: MS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: SP219 Batch ID: 44143 RunNo: 58979

Prep Date: 4/5/2019 Analysis Date: 4/8/2019 SeqNo: 1984234 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Diesel Range Organics (DRO) 45 10 49.80 O 90.5 53.5 126 Surr: DNOP 3.8 4 980 76.5 70 130

Sample ID: 1904256-055AMSD SampType: MSD TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: SP219 Batch ID: 44143 RunNo: 58979 Prep Date: 4/5/2019 Analysis Date: 4/8/2019 SeqNo: 1984236 Units: mg/Kg %RPD SPK value SPK Ref Val %REC HighLimit **RPDLimit** Analyte Result PQL LowLimit Qual Diesel Range Organics (DRO) 50 10 50.30 0 99.0 53.5 126 10.0 21.7 Surr: DNOP 5.030 87.4 70 130 4.4 0 0

TestCode: EPA Method 8015M/D: Diesel Range Organics Sample ID: MB-44134 SampType: MBLK Client ID: PBS Batch ID: 44134 RunNo: 59025 Prep Date: 4/4/2019 Analysis Date: 4/9/2019 SeqNo: 1986100 Units: mg/Kg SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Result PQL LowLimit Qual Diesel Range Organics (DRO) ND 10 Motor Oil Range Organics (MRO) ND 50 Surr: DNOP 10 10.00 104 70 130

Sample ID: LCS-44134 TestCode: EPA Method 8015M/D: Diesel Range Organics SampType: LCS Client ID: LCSS Batch ID: 44134 RunNo: 59025 Prep Date: 4/4/2019 Analysis Date: 4/9/2019 SeqNo: 1986101 Units: mg/Kg %REC LowLimit %RPD Analyte Result **PQL** SPK value SPK Ref Val HighLimit **RPDLimit** Qual Diesel Range Organics (DRO) 51 124 10 50.00 101 63.9 Surr: DNOP 4.5 5.000 90.7 70 130

Qualifiers:

Holding times for preparation or analysis exceeded

Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix

Not Detected at the Reporting Limit ND

Reporting Detection Limit RL

Sample container temperature is out of limit as specified at testcode

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1904256** *12-Apr-19*

Client: WPX Energy
Project: LVP SWD

Sample ID: 1904256-035AMS SampType: MS TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: SP199 Batch ID: 44134 RunNo: 59025

Prep Date: 4/4/2019 Analysis Date: 4/9/2019 SeqNo: 1986169 Units: mg/Kg

PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Analyte Result Diesel Range Organics (DRO) 0 60 9.5 47.53 125 53.5 126 Surr: DNOP 5.3 4.753 111 130

Sample ID: 1904256-035AMSD SampType: MSD TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: **SP199** Batch ID: **44134** RunNo: **59025**

Prep Date: 4/4/2019 Analysis Date: 4/9/2019 SeqNo: 1986172 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Diesel Range Organics (DRO) 40 9.3 46.51 0 87.0 53.5 126 38.3 21.7 R Surr: DNOP 3.5 4.651 75.2 70 130 0 0

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1904256**

12-Apr-19

Client: WPX Energy Project: LVP SWD

Sample ID: 1904256-016AMS	SampT	ype: MS	}	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	е	
Client ID: SP180	Batch	1D: 44 1	113	F	RunNo: 5 8	8955				
Prep Date: 4/4/2019	Analysis D	ate: 4/	7/2019	8	SeqNo: 19	982823	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.9	24.58	0	84.9	69.1	142			
Surr: BFB	1000		983.3		102	73.8	119			
Sample ID: 1904256-016AMSI) SampT	уре: М S	SD.	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	

Sample ID: 1904256-016AMS	D Sampi	ype: MS	SD	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	е	
Client ID: SP180	Batch	1D: 44	113	F	RunNo: 5	8955				
Prep Date: 4/4/2019	Analysis D	ate: 4/	7/2019	S	SeqNo: 1	982824	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.7	23.74	0	90.4	69.1	142	2.73	20	
Surr: BFB	940		949.7		99.4	73.8	119	0	0	

Sample ID: 1904256-036AMS	SampT	уре: М	5	Test	tCode: El	PA Method	8015D: Gaso	line Rang	е	
Client ID: SP200	Batch	1D: 44	114	R	RunNo: 5	8955				
Prep Date: 4/4/2019	Analysis D	ate: 4/	7/2019	S	SeqNo: 19	982847	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	19	4.8	23.99	0	79.3	69.1	142			
Surr: BFB	970		959.7		101	73.8	119			

Sample ID: 1904256-036AMSE	S ampT	уре: М S	SD	Test	tCode: EI	PA Method	8015D: Gaso	line Rang	е	
Client ID: SP200	Batch	ID: 44	114	R	RunNo: 5	8955				
Prep Date: 4/4/2019	Analysis D	ate: 4/	7/2019	S	SeqNo: 1	982848	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	4.8	23.95	0	84.0	69.1	142	5.54	20	
Surr: BFB	970		957.9		101	73.8	119	0	0	

Sample ID: LCS-44112	SampT	ype: LC	S	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	е	
Client ID: LCSS	Batch	ID: 44	112	F	RunNo: 5	8955				
Prep Date: 4/4/2019	Analysis D	ate: 4/	6/2019	S	SeqNo: 1	982861	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	90.1	80.1	123			
Surr: BFB	1000		1000		104	73.8	119			

Sample ID: LCS-44113	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range
Client ID: LCSS	Batch ID: 44113	RunNo: 58955
Prep Date: 4/4/2019	Analysis Date: 4/7/2019	SeqNo: 1982863 Units: mg/Kg
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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WPX Energy

Client:

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904256**

12-Apr-19

Project: LVP SW	VD.								
Sample ID: LCS-44113	SampType:	LCS	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	е	
Client ID: LCSS	Batch ID:		F	RunNo: 5	8955		_		
Prep Date: 4/4/2019	Analysis Date:	4/7/2019	5	SeqNo: 1	982863	Units: mg/k	(g		
Analyte	Result PQ	L SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO) Surr: BFB	22 5 1000	5.0 25.00 1000	0	89.0 101	80.1 73.8	123 119			
Sample ID: LCS-44114	SampType:	LCS	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	е	
Client ID: LCSS	Batch ID:	44114	F	RunNo: 5	8955				
Prep Date: 4/4/2019	Analysis Date:	4/7/2019	5	SeqNo: 1	982864	Units: mg/k	(g		
Analyte	Result PQ	L SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		5.0 25.00	0	83.8	80.1	123			
Surr: BFB	990	1000		98.9	73.8	119			
Sample ID: MB-44112	SampType:	MBLK	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	е	
Client ID: PBS	Batch ID:	44112	F	RunNo: 5	8955				
Prep Date: 4/4/2019	Analysis Date:	4/6/2019	5	SeqNo: 1	982865	Units: mg/h	〈 g		
Analyte	Result PQ	L SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND 5	5.0							
Surr: BFB	940	1000		94.0	73.8	119			
Surr: BFB Sample ID: MB-44113	940 SampType:		Tes			119 8015D: Gas o	oline Rang	e	
		MBLK			PA Method		oline Rang	e	
Sample ID: MB-44113	SampType:	MBLK 44113	F	tCode: El	PA Method 8955		-	e	
Sample ID: MB-44113 Client ID: PBS	SampType: Batch ID:	MBLK 44113 4/7/2019	F	tCode: El RunNo: 5 SeqNo: 1	PA Method 8955 982866	8015D: Gaso	-	e RPDLimit	Qual
Sample ID: MB-44113 Client ID: PBS Prep Date: 4/4/2019	SampType: Batch ID: Analysis Date: Result PQ	MBLK 44113 4/7/2019	F	tCode: El RunNo: 5 SeqNo: 1	PA Method 8955 982866	8015D: Gaso	√g		Qual
Sample ID: MB-44113 Client ID: PBS Prep Date: 4/4/2019 Analyte Gasoline Range Organics (GRO) Surr: BFB	SampType: Batch ID: Analysis Date: Result PQ ND 5 910	MBLK 44113 4/7/2019 L SPK value 5.0 1000	F SPK Ref Val	tCode: El RunNo: 5 SeqNo: 1 %REC 90.8	PA Method 8955 982866 LowLimit 73.8	8015D: Gaso Units: mg/k	(g %RPD	RPDLimit	Qual
Sample ID: MB-44113 Client ID: PBS Prep Date: 4/4/2019 Analyte Gasoline Range Organics (GRO)	SampType: Batch ID: Analysis Date: Result PQ ND 5	MBLK 44113 4/7/2019 L SPK value 5.0 1000 MBLK	SPK Ref Val	tCode: El RunNo: 5 SeqNo: 1 %REC 90.8	PA Method 8955 982866 LowLimit 73.8	8015D: Gaso Units: mg/k HighLimit	(g %RPD	RPDLimit	Qual
Sample ID: MB-44113 Client ID: PBS Prep Date: 4/4/2019 Analyte Gasoline Range Organics (GRO) Surr: BFB Sample ID: MB-44114	SampType: Batch ID: Analysis Date: Result PQ ND 5 910 SampType:	MBLK 44113 4/7/2019 L SPK value 5.0 1000 MBLK 44114	SPK Ref Val Tes	tCode: El RunNo: 5 SeqNo: 1 %REC 90.8 tCode: El	PA Method 8955 982866 LowLimit 73.8 PA Method 8955	8015D: Gaso Units: mg/k HighLimit	Kg %RPD Dline Rang	RPDLimit	Qual
Sample ID: MB-44113 Client ID: PBS Prep Date: 4/4/2019 Analyte Gasoline Range Organics (GRO) Surr: BFB Sample ID: MB-44114 Client ID: PBS	SampType: Batch ID: Analysis Date: Result PQ ND 5 910 SampType: Batch ID:	MBLK 44113 4/7/2019 L SPK value 5.0 1000 MBLK 44114 4/7/2019	SPK Ref Val Tes	tCode: El RunNo: 5 SeqNo: 1 %REC 90.8 tCode: El	PA Method 8955 982866 LowLimit 73.8 PA Method 8955	8015D: Gaso Units: mg/k HighLimit 119 8015D: Gaso	Kg %RPD Dline Rang	RPDLimit	Qual
Sample ID: MB-44113 Client ID: PBS Prep Date: 4/4/2019 Analyte Gasoline Range Organics (GRO) Surr: BFB Sample ID: MB-44114 Client ID: PBS Prep Date: 4/4/2019	SampType: Batch ID: Analysis Date: Result PQ ND 5 910 SampType: Batch ID: Analysis Date: Result PQ	MBLK 44113 4/7/2019 L SPK value 5.0 1000 MBLK 44114 4/7/2019	SPK Ref Val Tes	tCode: El RunNo: 5 SeqNo: 1 %REC 90.8 tCode: El RunNo: 5 SeqNo: 1	PA Method 8955 982866 LowLimit 73.8 PA Method 8955 982867	8015D: Gaso Units: mg/k HighLimit 119 8015D: Gaso Units: mg/k	%RPD bline Rang	RPDLimit e	
Sample ID: MB-44113 Client ID: PBS Prep Date: 4/4/2019 Analyte Gasoline Range Organics (GRO) Surr: BFB Sample ID: MB-44114 Client ID: PBS Prep Date: 4/4/2019 Analyte Gasoline Range Organics (GRO)	SampType: Batch ID: Analysis Date: Result PQ ND 5 910 SampType: Batch ID: Analysis Date: Result PQ ND 55	MBLK 44113 4/7/2019 L SPK value 5.0 1000 MBLK 44114 4/7/2019 L SPK value 5.0 1000	SPK Ref Val Tes F SPK Ref Val	tCode: El RunNo: 5 SeqNo: 1 %REC 90.8 tCode: El RunNo: 5 SeqNo: 1 %REC 89.0	PA Method 8955 982866 LowLimit 73.8 PA Method 8955 982867 LowLimit	8015D: Gaso Units: mg/k HighLimit 119 8015D: Gaso Units: mg/k HighLimit	(g %RPD pline Rang (g %RPD	RPDLimit e RPDLimit	
Sample ID: MB-44113 Client ID: PBS Prep Date: 4/4/2019 Analyte Gasoline Range Organics (GRO) Surr: BFB Sample ID: MB-44114 Client ID: PBS Prep Date: 4/4/2019 Analyte Gasoline Range Organics (GRO) Surr: BFB	SampType: Batch ID: Analysis Date: Result PQ ND 5 910 SampType: Batch ID: Analysis Date: Result PQ ND 5 890	MBLK 44113 4/7/2019 L SPK value 5.0 1000 MBLK 44114 4/7/2019 L SPK value 5.0 1000 MBLK	SPK Ref Val Tes SPK Ref Val	tCode: El RunNo: 5 SeqNo: 1 %REC 90.8 tCode: El RunNo: 5 SeqNo: 1 %REC 89.0	PA Method 8955 982866 LowLimit 73.8 PA Method 8955 982867 LowLimit 73.8	8015D: Gaso Units: mg/k HighLimit 119 8015D: Gaso Units: mg/k HighLimit	(g %RPD pline Rang (g %RPD	RPDLimit e RPDLimit	
Sample ID: MB-44113 Client ID: PBS Prep Date: 4/4/2019 Analyte Gasoline Range Organics (GRO) Surr: BFB Sample ID: MB-44114 Client ID: PBS Prep Date: 4/4/2019 Analyte Gasoline Range Organics (GRO) Surr: BFB Sample ID: MB-44115	SampType: Batch ID: Analysis Date: Result PQ ND 5 910 SampType: Batch ID: Analysis Date: Result PQ ND 5 890 SampType:	MBLK 44113 4/7/2019 L SPK value 5.0 1000 MBLK 44114 4/7/2019 L SPK value 5.0 1000 MBLK 44115	SPK Ref Val Tes SPK Ref Val Tes F	tCode: El RunNo: 5 SeqNo: 1 %REC 90.8 tCode: El RunNo: 5 SeqNo: 1 %REC 89.0	PA Method 8955 982866 LowLimit 73.8 PA Method 8955 982867 LowLimit 73.8 PA Method 8972	8015D: Gaso Units: mg/k HighLimit 119 8015D: Gaso Units: mg/k HighLimit	%RPD bline Rang %RPD bline Rang	RPDLimit e RPDLimit	

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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WPX Energy

Client:

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904256**

12-Apr-19

Project: LVP SW	D									
Sample ID: MB-44115	SampType: M	BLK	Tes	tCode: EP	PA Method	8015D: Gaso	line Rang	е		
Client ID: PBS	Batch ID: 44	1115	F	RunNo: 58	3972					
Prep Date: 4/4/2019	Analysis Date: 4	/8/2019	S	SeqNo: 19	984136	Units: mg/k	(g			
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO) Surr: BFB	ND 5.0 890	1000		89.4	73.8	119				
Sample ID: LCS-44115	SampType: Lo	cs	Tes	tCode: EP	PA Method	8015D: Gaso	oline Rang	e		
Client ID: LCSS	Batch ID: 44	1115	F	RunNo: 58	3972					
Prep Date: 4/4/2019	Analysis Date: 4	/8/2019	SeqNo: 1984137			Units: mg/Kg				
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	22 5.0	25.00	0	89.8	80.1	123				
Surr: BFB	1000	1000		101	73.8	119				
Sample ID: 1904256-056AMS	SampType: M	S	Tes	TestCode: EPA Method 8015D: Gasoline Range						
Client ID: SP220	Batch ID: 44	1115	F	RunNo: 58	3972					
Prep Date: 4/4/2019	Analysis Date: 4	Analysis Date: 4/8/2019			SeqNo: 1984140					
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	21 4.7		0	87.3	69.1	142				
Surr: BFB	960	947.0		101	73.8	119				
Sample ID: 1904256-056AMS	D SampType: M	SD	Tes	tCode: EP	PA Method	8015D: Gaso	oline Rang	е		
Client ID: SP220	Batch ID: 44	1115	F	RunNo: 58	3972					
Prep Date: 4/4/2019	Analysis Date: 4	/8/2019	8	SeqNo: 19	984141	Units: mg/k	(g			
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	22 5.0	24.85	0	89.4	69.1	142	7.20	20		
Surr: BFB	1000	994.0		100	73.8	119	0	0		
Sample ID: MB-44121	SampType: M	BLK	Tes	tCode: EP	PA Method	8015D: Gaso	oline Rang	e		
Client ID: PBS	Batch ID: 44	1121	F	RunNo: 59	9017					
Prep Date: 4/4/2019	Analysis Date: 4	/9/2019	S	SeqNo: 19	85591	Units: mg/k	(g			
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	ND 5.0									
Surr: BFB	900	1000		89.6	73.8	119				
Sample ID: LCS-44121	SampType: Lo	cs	TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCCC	Datab ID: 4	1404	-		.047					

Qualifiers:

Analyte

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

Client ID: LCSS

Prep Date: 4/4/2019

S % Recovery outside of range due to dilution or matrix

Batch ID: 44121

Analysis Date: 4/9/2019

Result

ND Not Detected at the Reporting Limit

RunNo: 59017

SeqNo: 1985592

%REC LowLimit

RL Reporting Detection Limit

SPK value SPK Ref Val

W Sample container temperature is out of limit as specified at testcode

Units: mg/Kg

%RPD

HighLimit

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RPDLimit

Qual

WPX Energy

LVP SWD

Client:

Project:

Hall Environmental Analysis Laboratory, Inc.

Result

880

WO#: **1904256**

12-Apr-19

Sample ID: LCS-44121	SampT	ype: LC	s	Tes	Code: El	PA Method	8015D: Gaso	line Rang	е	
Client ID: LCSS	Batch	ID: 44	121	F	tunNo: 5 9	9017				
Prep Date: 4/4/2019	Analysis Da	ate: 4/	9/2019	S	eqNo: 1	985592	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	89.4	80.1	123			
Surr: BFB	1000		1000		104	73.8	119			
Sample ID: 1904256-076AMS	SampT	уре: М\$	6	Tes	Code: El	PA Method	8015D: Gaso	line Rang	e	
Client ID: SP240	Batch	ID: 44	121	F	tunNo: 5	9017				
Prep Date: 4/4/2019	Analysis Da	alysis Date: 4/9/2019 SeqNo: 1985595 Units: I						(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	19	4.7	23.72	0	80.3	69.1	142			
Surr: BFB	950		948.8		100	73.8	119			
Sample ID: 1904256-076AMSI	SampT	ype: M \$	SD	Tes	Code: El	PA Method	8015D: Gaso	line Rang	е	
Client ID: SP240	Batch	ID: 44	121	F	tunNo: 5	9017				
Prep Date: 4/4/2019	Analysis Da	ate: 4/	10/2019	S	eqNo: 19	985596	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	19	4.9	24.49	0	78.6	69.1	142	1.12	20	
Surr: BFB	980		979.4		99.8	73.8	119	0	0	
Sample ID: MB-44149	SampT	уре: МЕ	BLK	Tes	Code: El	PA Method	8015D: Gaso	line Rang	е	
Client ID: PBS	Batch	ID: 44	149	F	tunNo: 5	9056				
Prep Date: 4/5/2019	Analysis Da	ate: 4/	10/2019	S	eqNo: 1	987604	Units: %Re	С		

Sample ID: LCS-44149	SampType: LC	S	TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSS	Batch ID: 44	Batch ID: 44149			9056				
Prep Date: 4/5/2019	Analysis Date: 4/	S	SeqNo: 1987605			;			
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000	1000	•	99.6	73.8	119	•	•	

SPK value SPK Ref Val %REC LowLimit

88.2

1000

Sample ID: MB-44150	SampType: MBLK	TestCode: EPA Method	8015D: Gasoline Range
Client ID: PBS	Batch ID: 44150	RunNo: 59056	
Prep Date: 4/5/2019	Analysis Date: 4/10/2019	SeqNo: 1987630	Units: %Rec
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual
Surr: BFB	900 1000	89.8 73.8	119

Qualifiers:

Analyte

Surr: BFB

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

HighLimit

73.8

119

%RPD

RPDLimit

Qual

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Hall Environmental Analysis Laboratory, Inc.

1000

WO#: **1904256**

12-Apr-19

Client: WPX Energy
Project: LVP SWD

Surr: BFB

Sample ID: LCS-44150 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

1000

Client ID: LCSS Batch ID: 44150 RunNo: 59056

Prep Date: 4/5/2019 Analysis Date: 4/10/2019 SeqNo: 1987631 Units: %Rec

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

102

73.8

119

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1904256**

12-Apr-19

Client: WPX Energy Project: LVP SWD

Sample ID: 1904256-015AMS	SampT	Гуре: М	3	TestCode: EPA Method 8021B: Volatiles						
Client ID: SP179	Batcl	h ID: 44	113	F	RunNo: 5	8955				
Prep Date: 4/4/2019	Analysis D	Date: 4/	7/2019	8	SeqNo: 1	982887	Units: mg/K			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.023	0.9337	0	93.4	63.9	127			
Toluene	0.92	0.047	0.9337	0.01584	96.8	69.9	131			
Ethylbenzene	0.92	0.047	0.9337	0	98.5	71	132			
Xylenes, Total	2.8	0.093	2.801	0.01464	99.7	71.8	131			
Surr: 4-Bromofluorobenzene	0.85	0.85 0.9337			91.1	80	120			

Sample ID: 1904256-015AMS	D SampT	ype: MS	SD.	TestCode: EPA Method 8021B: Volatiles						
Client ID: SP179	Batch	1D: 44 1	113	F	RunNo: 5	8955				
Prep Date: 4/4/2019	Analysis D	ate: 4/	7/2019	5	SeqNo: 1982888 Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.024	0.9681	0	93.0	63.9	127	3.16	20	
Toluene	0.94	0.048	0.9681	0.01584	95.1	69.9	131	1.79	20	
Ethylbenzene	0.94	0.048	0.9681	0	96.6	71	132	1.71	20	
Xylenes, Total	2.8	0.097	2.904	0.01464	97.5	71.8	131	1.37	20	
Surr: 4-Bromofluorobenzene	0.91	0.91 0.9681			93.6	80	120	0	0	

Sample ID: 1904256-035AMS	Samp1	SampType: MS TestCode: EPA Method 8021B: Volatiles								
Client ID: SP199	Batcl	h ID: 44	114	F						
Prep Date: 4/4/2019	Analysis [Date: 4/	7/2019	9	SeqNo: 1982909 Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.023	0.9302	0	94.9	63.9	127			
Toluene	0.93	0.047	0.9302	0.01856	98.1	69.9	131			
Ethylbenzene	0.92	0.047	0.9302	0	99.0	71	132			
Xylenes, Total	2.8	0.093	2.791	0.01487	99.5	71.8	131			
Surr: 4-Bromofluorobenzene	0.87	0.87 0.9302			93.1	80	120			

Sample ID: 1904256-035AM	SD SampT	уре: М S	SD.	TestCode: EPA Method 8021B: Volatiles						
Client ID: SP199	Batch	n ID: 44 ′	114	F	RunNo: 5	8955				
Prep Date: 4/4/2019	Analysis D	ate: 4/	7/2019	S	SeqNo: 1982910 Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.024	0.9569	0	95.6	63.9	127	3.56	20	
Toluene	0.97	0.048	0.9569	0.01856	99.7	69.9	131	4.44	20	
Ethylbenzene	0.96	0.048	0.9569	0	99.8	71	132	3.67	20	
Xylenes, Total	2.9	0.096	2.871	0.01487	101	71.8	131	4.12	20	
Surr: 4-Bromofluorobenzene	0.89		0.9569		93.3	80	120	0	0	

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1904256**

12-Apr-19

Client: WPX Energy Project: LVP SWD

Sample ID: LCS-44112	SampT	ype: LC	S	Tes	tCode: El	tiles				
Client ID: LCSS	Batch	n ID: 441	112	F	RunNo: 58	8955				
Prep Date: 4/4/2019	Analysis D	ate: 4/ 0	6/2019	9	SeqNo: 1982924 Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.025	1.000	0	83.7	80	120			
Toluene	0.90	0.050	1.000	0	90.1	80	120			
Ethylbenzene	0.89	0.050	1.000	0	89.3	80	120			
Xylenes, Total	2.7	0.10	3.000	0	90.5	80	120			
Surr: 4-Bromofluorobenzene	0.94	0.94 1.000			93.9	80	120			

Sample ID: LCS-44113	SampT	SampType: LCS TestCode: EPA Method 8021B: Volatiles									
Client ID: LCSS	Batch	n ID: 44 ′	113	F	RunNo: 5						
Prep Date: 4/4/2019	Analysis D	oate: 4/	7/2019	8	SeqNo: 1	982925	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	91.2	80	120				
Toluene	0.95	0.050	1.000	0	95.2	80	120				
Ethylbenzene	0.94	0.050	1.000	0	93.6	80	120				
Xylenes, Total	2.9	0.10	3.000	0	95.0	80	120				
Surr: 4-Bromofluorobenzene	0.92		1.000	92.1 80			120				

Sample ID: LCS-44114	SampT	ype: LC	S	TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSS	Batch	n ID: 441	114	F	RunNo: 5	3955				
Prep Date: 4/4/2019	Analysis D	ate: 4/	7/2019	S	SeqNo: 1982926 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	94.4	80	120			
Toluene	0.98	0.050	1.000	0	97.9	80	120			
Ethylbenzene	0.96	0.050	1.000	0	96.3	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.4	80	120			
Surr: 4-Bromofluorobenzene	0.89		1.000		89.3	80	120			

Sample ID: MB-44112	SampT	ype: ME	BLK	TestCode: EPA Method 8021B: Volatiles						
Client ID: PBS	Batch	n ID: 44	112	F	RunNo: 5	8955				
Prep Date: 4/4/2019	Analysis D	ate: 4/	6/2019	S	SeqNo: 1982927 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	0.95		1.000		95.0	80	120			

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1904256**

12-Apr-19

Client:	WPX Energy
Project:	LVP SWD

Sample ID: MB-44113	SampType:	MBLK	Test	Code: EF	PA Method	8021B: Volat	iles		
Client ID: PBS	Batch ID:	44113	R	unNo: 58	3955				
Prep Date: 4/4/2019	Analysis Date:	4/7/2019	S	eqNo: 1 9	982928	Units: mg/K	g		
Analyte	Result PC	L SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND 0.0	25							
Toluene	ND 0.0	50							
Ethylbenzene	ND 0.0	50							
Xylenes, Total	ND 0.	10							
Surr: 4-Bromofluorobenzene	0.93	1.000		93.0	80	120			
Sample ID: MB-44114	SampType:	MBLK	Test	Code: EF	PA Method	8021B: Volat	iles		
Client ID: PBS	Batch ID:	44114	R	unNo: 58	3955				
Prep Date: 4/4/2019	Analysis Date:	4/7/2019	S	eqNo: 19	982929	Units: mg/K	g		
Analyte	Result PC	L SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND 0.0	25							
Toluene	ND 0.0	50							
Ethylbenzene	ND 0.0	50							
Xylenes, Total	ND 0.	10							
Surr: 4-Bromofluorobenzene	0.90	1.000		89.9	80	120			
Sample ID: MB-44115	SampType:	MBLK	Test	Code: EF	PA Method	8021B: Volat	iles		
Client ID: PBS	Batch ID:	44115	R	unNo: 58	3972				
Prep Date: 4/4/2019	Analysis Date:	4/8/2019	S	eqNo: 19	984175	Units: mg/K	g		
Analyte	Result PC	L SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND 0.0	25							
Toluene	ND 0.0	50							
Ethylbenzene	ND 0.0	50							
Xylenes, Total	ND 0.	10							
Surr: 4-Bromofluorobenzene	0.91	1.000		90.6	80	120			
Sample ID: LCS-44115	SampType:	LCS	Test	Code: EF	PA Method	8021B: Volat	iles		
Client ID: LCSS	Batch ID:	44115	R	3972					
Prep Date: 4/4/2019	Analysis Date:	4/8/2019	S	SeqNo: 1984176			g		
Analyte	Result PC	L SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

Benzene Toluene

Ethylbenzene

Xylenes, Total

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

Surr: 4-Bromofluorobenzene

S % Recovery outside of range due to dilution or matrix

0.91

0.95

0.93

2.9

0.91

0.025

0.050

0.050

0.10

1.000

1.000

1.000

3.000

1.000

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

0

0

0

0

90.9

94.6

93.1

95.0

91.0

80

80

80

80

80

120

120

120

120

120

W Sample container temperature is out of limit as specified at testcode

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1904256**

12-Apr-19

Client: WPX Energy Project: LVP SWD

Sample ID: 1904256-055AMS	SampT	ype: MS	3	Tes						
Client ID: SP219	Batch	ID: 44 1	115	F	RunNo: 5	8972				
Prep Date: 4/4/2019	Analysis D	ate: 4/8	8/2019	8	SeqNo: 19	984178	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.024	0.9479	0.009610	89.2	63.9	127			
Toluene	0.91	0.047	0.9479	0.01475	95.0	69.9	131			
Ethylbenzene	0.92	0.047	0.9479	0	97.1	71	132			
Xylenes, Total	2.8	0.095	2.844	0.01456	97.6	71.8	131			
Surr: 4-Bromofluorobenzene	0.87		0.9479		91.4	80	120			

Sample ID: 1904256-055AMSD	SampT	ype: MS	D	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: SP219	Batch	ID: 44 1	115	F	RunNo: 58	8972				
Prep Date: 4/4/2019	,				SeqNo: 1	984182	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	%RPD	RPDLimit	Qual	
Benzene	0.91	0.025	0.9930	0.009610	90.7	63.9	127	6.23	20	
Toluene	0.95	0.050	0.9930	0.01475	94.6	69.9	131	4.26	20	
Ethylbenzene	0.95	0.050	0.9930	0	96.1	71	1 132 3.66		20	
Xylenes, Total	2.9	0.099	2.979	0.01456	96.8	71.8	131	3.85	20	
Surr: 4-Bromofluorobenzene	0.90		0.9930		90.4	80	120	0	0	

Sample ID: MB-44121	SampT	ype: ME	BLK	Tes	tCode: El	iles				
Client ID: PBS	Batch	n ID: 44	121	F	RunNo: 5	9017				
Prep Date: 4/4/2019	Analysis D	Analysis Date: 4/9/2019 Result PQL SPK value S			SeqNo: 1	985640	Units: mg/k	(g		
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	0.90				90.1 80					

Sample ID: LCS-44121	SampT	Гуре: LC	s	Tes	tCode: El	iles				
Client ID: LCSS	Batcl	h ID: 44 1	121	F	RunNo: 5	9017				
Prep Date: 4/4/2019	Analysis D	Date: 4/	9/2019	8	SeqNo: 1	985641	Units: mg/k	ζg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	93.1	80	120			
Toluene	0.96	0.050	1.000	0	96.0	80	120			
Ethylbenzene	0.95	0.050	1.000	0	94.8	80	120			
Xylenes, Total	2.9	0.10	3.000	0	96.0	80	120			
Surr: 4-Bromofluorobenzene 0.91			1.000	90.9		80	120			

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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Hall Environmental Analysis Laboratory, Inc.

WO#: 1904256

12-Apr-19

Client: WPX Energy **Project:** LVP SWD

Sample ID: 1904256-075AMS	SampT	ype: MS	;	TestCode: EPA Method 8021B: Volatiles							
Client ID: SP239	Batch	n ID: 44 ′	121	F	RunNo: 5 9	9017					
Prep Date: 4/4/2019	Analysis D	oate: 4/	9/2019	S	SeqNo: 19	985643	Units: mg/k	(g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.88	0.024	0.9470	0.009709	91.8	63.9	127				
Toluene	0.93	0.047	0.9470	0.01456	96.4	69.9	131				
Ethylbenzene	0.92	0.047	0.9470	0	97.3	71	132				
Xylenes, Total	2.8	0.095	2.841	0.01447	96.9	71.8	131				
Surr: 4-Bromofluorobenzene	0.86		0.9470		90.5	80	120				
Sample ID: 1904256-075AMSI Client ID: SP239		ype: MS n ID: 44			tCode: El RunNo: 5 !		8021B: Vola	tiles			
		n ID: 44	121	F		9017	8021B: Volati Units: mg/k				
Client ID: SP239	Batch	n ID: 44	121 9/2019	F	RunNo: 5 9	9017			RPDLimit	Qual	
Client ID: SP239 Prep Date: 4/4/2019	Batch Analysis D	n ID: 44 Date: 4/	121 9/2019	F	RunNo: 59	9017 985644	Units: mg/k	(g	RPDLimit 20	Qual	
Client ID: SP239 Prep Date: 4/4/2019 Analyte	Batch Analysis D Result	n ID: 44 / Date: 4/ 9	121 9/2019 SPK value	F S SPK Ref Val	RunNo: 5 9 SeqNo: 1 9 %REC	9017 985644 LowLimit	Units: mg/k	(g %RPD		Qual	
Client ID: SP239 Prep Date: 4/4/2019 Analyte Benzene	Batch Analysis D Result 0.91	PQL 0.025	9/2019 SPK value 0.9891	SPK Ref Val 0.009709	RunNo: 5 9 SeqNo: 1 9 %REC 90.6	9017 985644 LowLimit 63.9	Units: mg/k HighLimit	%RPD 3.09	20	Qual	
Client ID: SP239 Prep Date: 4/4/2019 Analyte Benzene Toluene	Batch Analysis D Result 0.91 0.97	PQL 0.049	9/2019 SPK value 0.9891 0.9891	SPK Ref Val 0.009709 0.01456	RunNo: 59 ReqNo: 19 REC 90.6 96.2	9017 985644 LowLimit 63.9 69.9	Units: mg/K HighLimit 127 131	%RPD 3.09 4.11	20 20	Qual	
Client ID: SP239 Prep Date: 4/4/2019 Analyte Benzene Toluene Ethylbenzene	Analysis D Result 0.91 0.97 0.96	PQL 0.025 0.049	9/2019 SPK value 0.9891 0.9891 0.9891	SPK Ref Val 0.009709 0.01456 0	RunNo: 5 9 ReqNo: 1 9 REC 90.6 96.2 96.9	9017 985644 LowLimit 63.9 69.9 71	Units: mg/K HighLimit 127 131 132	%RPD 3.09 4.11 3.94	20 20 20	Qual	

Sample ID: MB-44149	SampTy	pe: ME	BLK	Test	tCode: El	PA Method	8021B: Volati	iles			
Client ID: PBS	Batch	ID: 44	149	R	RunNo: 5	9056					
Prep Date: 4/5/2019	Analysis Da	ate: 4/	10/2019	S	SeqNo: 1	987683	Units: %Rec	:			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: 4-Bromofluorobenzene	0.88		1.000		87.7	80	120				

Sample ID: LCS-44149	SampTyp	e: LCS	Test	tCode: EI	PA Method	8021B: Volat	iles		
Client ID: LCSS	Batch II	D: 44149	R	RunNo: 5	9056				
Prep Date: 4/5/2019	Analysis Date	e: 4/10/2019	S	SeqNo: 1	987684	Units: %Rec	;		
Analyte	Result F	PQL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.87	1 000		86.9	80	120			

Sample ID: MB-44150	SampT	ype: Mi	BLK	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: PBS	Batch	n ID: 44	150	F	RunNo: 5	9056				
Prep Date: 4/5/2019	Analysis D	ate: 4/	/10/2019	S	SeqNo: 1	987707	Units: %Red	;		
Analyte	Result PQL SPK value			SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Curry 1 Dramafluarahanzana	0.00		1 000		0 n o	90	120			

Surr: 4-Bromofluorobenzene 1.000 0.90 89.8 120

Qualifiers:

Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

Reporting Detection Limit

Sample container temperature is out of limit as specified at testcode

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1904256** *12-Apr-19*

Client: WPX Energy
Project: LVP SWD

Sample ID: LCS-44150 SampType: LCS TestCode: EPA Method 8021B: Volatiles

Client ID: LCSS Batch ID: 44150 RunNo: 59056

Prep Date: 4/5/2019 Analysis Date: 4/11/2019 SeqNo: 1987708 Units: %Rec

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

92.3

80

120

Surr: 4-Bromofluorobenzene 0.92 1.000

Qualifiers:

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

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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

CI	ient Name:	WPX ENE	RGY CARLS	B Work	Order Num	ber: 190	4256			RcptNo	: 1
Re	ceived By:	Yazmine	Garduno	4/4/201	9 8:55:00 A	M		nfamin li U U	Graduite		
Co	mpleted By:	Erin Mele	ndrez	4/4/201	9 9:44:37 A	M		un	1	-	
Re	viewed By:	M	5	4/11	19						
1	B. YI	G ul	4116	' /							
Ch	ain of Cus	tody	-11-1								
1.	Is Chain of C	ustody comp	lete?			Yes	V	No [Not Present	
2.	How was the	sample deliv	ered?			Cou	ırier				
Lo	og In										
	Was an attem	npt made to	cool the samp	les?		Yes	V	No [NA 🗌	
4. \	Nere all samp	oles received	l at a tempera	ture of >0° C	to 6.0°C	Yes	V	No [NA □	
5. :	Sample(s) in p	proper conta	iner(s)?			Yes	v	No [
6. 5	Sufficient sam	ple volume f	or indicated to	est(s)?		Yes	V	No [
7. <i>F</i>	Are samples (except VOA	and ONG) pr	operly preserve	ed?	Yes	✓	No [
8. v	Vas preserva	tive added to	bottles?			Yes		No 🔽		NA 🗆	٨
_								_	_	_	/
	OA vials hav		v • ***********************************			Yes		No L		No VOA Vials 🗹	/
10.\	Nere any san	nple containe	ers received b	roken?		Yes		No N		# of preserved	
11 г	Does paperwo	ark match ha	Hla labala?			Yes		Na F	_	bottles checked for pH:	
	Note discrepa			·)		Yes	•	No L	_		>12 unless noted)
				n of Custody?		Yes	V	No 🗆		Adjusted?	
13. l	s it clear what	analyses we	ere requested	?		Yes	V	No [/	a .1 .1.
	Vere all holdir					Yes	V	No [Checked by:	6 41414
(If no, notify cu	istomer for a	iuthorization.)						-		
Spe	<u>cial Handlı</u>	ing (if app	olicable)							/	
15.\	Was client no	tified of all di	iscrepancies	with this order?		Yes		No [/ _{NA} ✓	7
	Person	Notified:			Date						
	By Who				Via:	☐ eM	ail [Phone F	ax [In Person	
	Regardi										
		structions:									
16.	Additional rer	marks:									
17.	Cooler Infor										
	Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal D	ate	Signed By	<i>!</i>		
	1	1.6	Good	Yes							

	1	ANALYSTS LABORATORY	antal com	37109	Eax 505-345-4107	Analysis Request	(O)	(SMI	(1.8 (1.4) (1.4) (1.5) (1.5) (1.5) (1.5) (1.5) (1.5) (1.5) (1.5)	06 Pd 06 bd 07 00 Bd 18 18 18 18 18 18 18 18 18 18 18 18 18 1	TPH 8015B TPH (Metho EDB (Metho PAH's (8310 RCRA 8 Me 8260B (VOA 8250B (VOA 8270 (Semi-	×.											→ 	Report to: Oab bie watson	They have	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	Tum-Around Time: 5 Lay tvr	X Standard Rush	Project Name:	LVP SWN					₹ 8'8MT	+ + + + + + + + + + + + + + + + + + +	Container Preservative HEAL No Type and # Type	402,(1) see -001 X	1 200- 1	-003	<u> 100-</u>	-0.05	200-		-00%	500-	010-	110-1	V -012	Received by: Dafe Time Remarks: $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$	Date T	170 A ST
R	Chain-of-Custody Record	of Distance WPX Carlsbad		Mailing Address: 0 F; [e		Phone #:	mail or Fax#:	Standard 🗆 Level 4 (Full Validation)		(ed/	Date Time Matrix Sample Request ID	1/3/201 SP165	-	57167	S P168	SPI69	SPITO	17195	S7172	8 7773	7177	SP 175	\$ 80176	Data: Time: Relinquished by: 1/2014/600 Melinquished by:	Relinquished by:	If necessary, samples submitted to Hall Environmental may be subco

Chain Chain	n-of-Cl	Chain-of-Custody Record	Turn-Around Time	шe	5 day turn			上	HAL	Pase		KONM	4 N		¥.	Received b
o Ima	4	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	Project Name:	L Kusu				₹ ′	Z	ANALYSIS	S	LABORA		RA	6 8	>
Surveying Address:	Š.	on file	•				4901 Hawkins NE	- - - - - - - - -	IS NE	www.nairenvinorimental.com ns NE - Albuquerque, NM (allino	Albuquerque, NM 87109	оп. М 87.	109		
3/2			Project #:				<u>a</u>	05-34	Tel 505-345-3975		Fax 50	505-345-4107	4107			
9/20 9/20			7	-UP SV	SWD					√nal		Request				
mail or Fax#:		->	Project Manager:	ger:					_			_		-		
ZA/QC Package:	2.5)	15,5	ix Range	Q				(5)			8.00				
Ser Standard		- Level 4 (Full Validation)		2) (1.70				
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Chain-of-Custody Record			\ddre			Fax#	ackag	tion	_	Туре	Time													Time:		Time: / 9/	If necessary, samples submitted to Hall Environmental may be subconfracted to other accredited laboratories.
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Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

April 16, 2019

Kris Rowe WPX Energy 5315 Buena Vista Drive Carlsbad, NM 88220 TEL: (505) 386-9693

FAX

RE: LVP SWD OrderNo.: 1904351

Dear Kris Rowe:

Hall Environmental Analysis Laboratory received 107 sample(s) on 4/5/2019 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 #NM0901

Sincerely,

Andy Freeman

Laboratory Manager

Indes

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP258
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-001 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	170	60	mg/Kg	20	4/9/2019 2:45:15 PM	44223
EPA METHOD 8015D MOD: GASOLINE RANGE	.				Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/8/2019 4:18:03 PM	44148
Surr: BFB	103	70-130	%Rec	1	4/8/2019 4:18:03 PM	44148
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS				Analyst	: Irm
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	4/8/2019 4:53:57 PM	44152
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	4/8/2019 4:53:57 PM	44152
Surr: DNOP	72.2	70-130	%Rec	1	4/8/2019 4:53:57 PM	44152
EPA METHOD 8260B: VOLATILES SHORT LIST	Γ				Analyst	: RAA
Benzene	ND	0.024	mg/Kg	1	4/8/2019 4:18:03 PM	44148
Toluene	ND	0.048	mg/Kg	1	4/8/2019 4:18:03 PM	44148
Ethylbenzene	ND	0.048	mg/Kg	1	4/8/2019 4:18:03 PM	44148
Xylenes, Total	ND	0.095	mg/Kg	1	4/8/2019 4:18:03 PM	44148
Surr: 1,2-Dichloroethane-d4	85.5	70-130	%Rec	1	4/8/2019 4:18:03 PM	44148
Surr: 4-Bromofluorobenzene	100	70-130	%Rec	1	4/8/2019 4:18:03 PM	44148
Surr: Dibromofluoromethane	89.7	70-130	%Rec	1	4/8/2019 4:18:03 PM	44148
Surr: Toluene-d8	93.3	70-130	%Rec	1	4/8/2019 4:18:03 PM	44148

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP259

Project: LVP SWD

Collection Date: 4/3/2019

Lab ID: 1904351-002 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: MRA
Chloride	250	60	mg/Kg	20	4/9/2019 2:57:40 PM	44223
EPA METHOD 8015D MOD: GASOLINE RANG	E				Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/8/2019 4:46:41 PM	44148
Surr: BFB	98.9	70-130	%Rec	1	4/8/2019 4:46:41 PM	44148
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	4/8/2019 5:18:30 PM	44152
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	4/8/2019 5:18:30 PM	44152
Surr: DNOP	91.0	70-130	%Rec	1	4/8/2019 5:18:30 PM	44152
EPA METHOD 8260B: VOLATILES SHORT LIS	ST .				Analyst	: RAA
Benzene	ND	0.025	mg/Kg	1	4/8/2019 4:46:41 PM	44148
Toluene	ND	0.049	mg/Kg	1	4/8/2019 4:46:41 PM	44148
Ethylbenzene	ND	0.049	mg/Kg	1	4/8/2019 4:46:41 PM	44148
Xylenes, Total	ND	0.098	mg/Kg	1	4/8/2019 4:46:41 PM	44148
Surr: 1,2-Dichloroethane-d4	85.4	70-130	%Rec	1	4/8/2019 4:46:41 PM	44148
Surr: 4-Bromofluorobenzene	101	70-130	%Rec	1	4/8/2019 4:46:41 PM	44148
Surr: Dibromofluoromethane	89.9	70-130	%Rec	1	4/8/2019 4:46:41 PM	44148
Surr: Toluene-d8	92.0	70-130	%Rec	1	4/8/2019 4:46:41 PM	44148

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP260

Project: LVP SWD

Collection Date: 4/3/2019

Lab ID: 1904351-003 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: MRA
Chloride	310	60	mg/Kg	20	4/9/2019 3:10:05 PM	44223
EPA METHOD 8015D MOD: GASOLINE RANG	E				Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/8/2019 5:15:13 PM	44148
Surr: BFB	102	70-130	%Rec	1	4/8/2019 5:15:13 PM	44148
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.2	mg/Kg	1	4/8/2019 5:43:00 PM	44152
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	4/8/2019 5:43:00 PM	44152
Surr: DNOP	89.3	70-130	%Rec	1	4/8/2019 5:43:00 PM	44152
EPA METHOD 8260B: VOLATILES SHORT LIS	ST .				Analyst	: RAA
Benzene	ND	0.024	mg/Kg	1	4/8/2019 5:15:13 PM	44148
Toluene	ND	0.048	mg/Kg	1	4/8/2019 5:15:13 PM	44148
Ethylbenzene	ND	0.048	mg/Kg	1	4/8/2019 5:15:13 PM	44148
Xylenes, Total	ND	0.096	mg/Kg	1	4/8/2019 5:15:13 PM	44148
Surr: 1,2-Dichloroethane-d4	86.7	70-130	%Rec	1	4/8/2019 5:15:13 PM	44148
Surr: 4-Bromofluorobenzene	102	70-130	%Rec	1	4/8/2019 5:15:13 PM	44148
Surr: Dibromofluoromethane	91.5	70-130	%Rec	1	4/8/2019 5:15:13 PM	44148
Surr: Toluene-d8	93.7	70-130	%Rec	1	4/8/2019 5:15:13 PM	44148

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP261
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-004 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: MRA
Chloride	200	60		mg/Kg	20	4/9/2019 3:22:30 PM	44223
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/8/2019 5:43:43 PM	44148
Surr: BFB	104	70-130		%Rec	1	4/8/2019 5:43:43 PM	44148
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	4/8/2019 6:07:44 PM	44152
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/8/2019 6:07:44 PM	44152
Surr: DNOP	67.9	70-130	S	%Rec	1	4/8/2019 6:07:44 PM	44152
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst	: RAA
Benzene	ND	0.024		mg/Kg	1	4/8/2019 5:43:43 PM	44148
Toluene	ND	0.049		mg/Kg	1	4/8/2019 5:43:43 PM	44148
Ethylbenzene	ND	0.049		mg/Kg	1	4/8/2019 5:43:43 PM	44148
Xylenes, Total	ND	0.098		mg/Kg	1	4/8/2019 5:43:43 PM	44148
Surr: 1,2-Dichloroethane-d4	88.3	70-130		%Rec	1	4/8/2019 5:43:43 PM	44148
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	4/8/2019 5:43:43 PM	44148
Surr: Dibromofluoromethane	90.4	70-130		%Rec	1	4/8/2019 5:43:43 PM	44148
Surr: Toluene-d8	93.6	70-130		%Rec	1	4/8/2019 5:43:43 PM	44148

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

Qualifiers:

- Value above quantitation range
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode
- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP262
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-005 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	200	60	mg/Kg	20	4/9/2019 3:59:43 PM	44223
EPA METHOD 8015D MOD: GASOLINE RANGE	Ξ				Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/8/2019 6:12:13 PM	44148
Surr: BFB	106	70-130	%Rec	1	4/8/2019 6:12:13 PM	44148
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS				Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	4/9/2019 2:06:46 PM	44152
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/9/2019 2:06:46 PM	44152
Surr: DNOP	71.5	70-130	%Rec	1	4/9/2019 2:06:46 PM	44152
EPA METHOD 8260B: VOLATILES SHORT LIS	Т				Analyst	: RAA
Benzene	ND	0.024	mg/Kg	1	4/8/2019 6:12:13 PM	44148
Toluene	ND	0.049	mg/Kg	1	4/8/2019 6:12:13 PM	44148
Ethylbenzene	ND	0.049	mg/Kg	1	4/8/2019 6:12:13 PM	44148
Xylenes, Total	ND	0.097	mg/Kg	1	4/8/2019 6:12:13 PM	44148
Surr: 1,2-Dichloroethane-d4	86.8	70-130	%Rec	1	4/8/2019 6:12:13 PM	44148
Surr: 4-Bromofluorobenzene	104	70-130	%Rec	1	4/8/2019 6:12:13 PM	44148
Surr: Dibromofluoromethane	89.1	70-130	%Rec	1	4/8/2019 6:12:13 PM	44148
Surr: Toluene-d8	96.0	70-130	%Rec	1	4/8/2019 6:12:13 PM	44148

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP263
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-006 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	180	60		mg/Kg	20	4/9/2019 4:12:07 PM	44223
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/8/2019 6:40:50 PM	44148
Surr: BFB	104	70-130		%Rec	1	4/8/2019 6:40:50 PM	44148
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/9/2019 2:31:22 PM	44152
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/9/2019 2:31:22 PM	44152
Surr: DNOP	65.1	70-130	S	%Rec	1	4/9/2019 2:31:22 PM	44152
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst	RAA
Benzene	ND	0.024		mg/Kg	1	4/8/2019 6:40:50 PM	44148
Toluene	ND	0.049		mg/Kg	1	4/8/2019 6:40:50 PM	44148
Ethylbenzene	ND	0.049		mg/Kg	1	4/8/2019 6:40:50 PM	44148
Xylenes, Total	ND	0.098		mg/Kg	1	4/8/2019 6:40:50 PM	44148
Surr: 1,2-Dichloroethane-d4	85.8	70-130		%Rec	1	4/8/2019 6:40:50 PM	44148
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	4/8/2019 6:40:50 PM	44148
Surr: Dibromofluoromethane	90.0	70-130		%Rec	1	4/8/2019 6:40:50 PM	44148
Surr: Toluene-d8	95.1	70-130		%Rec	1	4/8/2019 6:40:50 PM	44148

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

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP264
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-007 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	280	60	mg/Kg	20	4/9/2019 4:24:31 PM	44223
EPA METHOD 8015D MOD: GASOLINE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/8/2019 7:09:16 PM	44148
Surr: BFB	102	70-130	%Rec	1	4/8/2019 7:09:16 PM	44148
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS				Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	4/9/2019 2:55:57 PM	44152
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/9/2019 2:55:57 PM	44152
Surr: DNOP	72.2	70-130	%Rec	1	4/9/2019 2:55:57 PM	44152
EPA METHOD 8260B: VOLATILES SHORT LIST					Analyst	: RAA
Benzene	ND	0.025	mg/Kg	1	4/8/2019 7:09:16 PM	44148
Toluene	ND	0.049	mg/Kg	1	4/8/2019 7:09:16 PM	44148
Ethylbenzene	ND	0.049	mg/Kg	1	4/8/2019 7:09:16 PM	44148
Xylenes, Total	ND	0.098	mg/Kg	1	4/8/2019 7:09:16 PM	44148
Surr: 1,2-Dichloroethane-d4	87.6	70-130	%Rec	1	4/8/2019 7:09:16 PM	44148
Surr: 4-Bromofluorobenzene	105	70-130	%Rec	1	4/8/2019 7:09:16 PM	44148
Surr: Dibromofluoromethane	90.0	70-130	%Rec	1	4/8/2019 7:09:16 PM	44148
Surr: Toluene-d8	92.6	70-130	%Rec	1	4/8/2019 7:09:16 PM	44148

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

Page 7 of 131

Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP265
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-008 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	150	60	mg/Kg	20	4/9/2019 4:36:56 PM	44223
EPA METHOD 8015D MOD: GASOLINE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/8/2019 7:37:43 PM	44148
Surr: BFB	103	70-130	%Rec	1	4/8/2019 7:37:43 PM	44148
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS				Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	4/9/2019 3:20:28 PM	44152
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	4/9/2019 3:20:28 PM	44152
Surr: DNOP	75.7	70-130	%Rec	1	4/9/2019 3:20:28 PM	44152
EPA METHOD 8260B: VOLATILES SHORT LIST	-				Analyst	RAA
Benzene	ND	0.024	mg/Kg	1	4/8/2019 7:37:43 PM	44148
Toluene	ND	0.048	mg/Kg	1	4/8/2019 7:37:43 PM	44148
Ethylbenzene	ND	0.048	mg/Kg	1	4/8/2019 7:37:43 PM	44148
Xylenes, Total	ND	0.095	mg/Kg	1	4/8/2019 7:37:43 PM	44148
Surr: 1,2-Dichloroethane-d4	88.4	70-130	%Rec	1	4/8/2019 7:37:43 PM	44148
Surr: 4-Bromofluorobenzene	103	70-130	%Rec	1	4/8/2019 7:37:43 PM	44148
Surr: Dibromofluoromethane	89.2	70-130	%Rec	1	4/8/2019 7:37:43 PM	44148
Surr: Toluene-d8	94.5	70-130	%Rec	1	4/8/2019 7:37:43 PM	44148

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

Qualifiers:

- Value above quantitation range
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode
- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP266
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-009 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: MRA
Chloride	280	60	mg/Kg	20	4/9/2019 4:49:20 PM	44223
EPA METHOD 8015D MOD: GASOLINE RANGE	.				Analyst	: RAA
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	4/8/2019 8:06:09 PM	44148
Surr: BFB	101	70-130	%Rec	1	4/8/2019 8:06:09 PM	44148
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS				Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	4/9/2019 3:45:04 PM	44152
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/9/2019 3:45:04 PM	44152
Surr: DNOP	79.9	70-130	%Rec	1	4/9/2019 3:45:04 PM	44152
EPA METHOD 8260B: VOLATILES SHORT LIST	Т				Analyst	: RAA
Benzene	ND	0.025	mg/Kg	1	4/8/2019 8:06:09 PM	44148
Toluene	ND	0.050	mg/Kg	1	4/8/2019 8:06:09 PM	44148
Ethylbenzene	ND	0.050	mg/Kg	1	4/8/2019 8:06:09 PM	44148
Xylenes, Total	ND	0.099	mg/Kg	1	4/8/2019 8:06:09 PM	44148
Surr: 1,2-Dichloroethane-d4	85.9	70-130	%Rec	1	4/8/2019 8:06:09 PM	44148
Surr: 4-Bromofluorobenzene	103	70-130	%Rec	1	4/8/2019 8:06:09 PM	44148
Surr: Dibromofluoromethane	90.7	70-130	%Rec	1	4/8/2019 8:06:09 PM	44148
Surr: Toluene-d8	90.9	70-130	%Rec	1	4/8/2019 8:06:09 PM	44148

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP267
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-010 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	94	60	mg/Kg	20	4/9/2019 5:01:45 PM	44223
EPA METHOD 8015D MOD: GASOLINE RANGE	į				Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	4/8/2019 8:34:39 PM	44148
Surr: BFB	100	70-130	%Rec	1	4/8/2019 8:34:39 PM	44148
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS				Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	4/9/2019 4:09:30 PM	44152
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/9/2019 4:09:30 PM	44152
Surr: DNOP	88.6	70-130	%Rec	1	4/9/2019 4:09:30 PM	44152
EPA METHOD 8260B: VOLATILES SHORT LIST	Г				Analyst	: RAA
Benzene	ND	0.023	mg/Kg	1	4/8/2019 8:34:39 PM	44148
Toluene	ND	0.046	mg/Kg	1	4/8/2019 8:34:39 PM	44148
Ethylbenzene	ND	0.046	mg/Kg	1	4/8/2019 8:34:39 PM	44148
Xylenes, Total	ND	0.092	mg/Kg	1	4/8/2019 8:34:39 PM	44148
Surr: 1,2-Dichloroethane-d4	85.8	70-130	%Rec	1	4/8/2019 8:34:39 PM	44148
Surr: 4-Bromofluorobenzene	101	70-130	%Rec	1	4/8/2019 8:34:39 PM	44148
Surr: Dibromofluoromethane	90.7	70-130	%Rec	1	4/8/2019 8:34:39 PM	44148
Surr: Toluene-d8	92.4	70-130	%Rec	1	4/8/2019 8:34:39 PM	44148

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP268
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-011 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	200	60	mg/Kg	20	4/9/2019 5:14:09 PM	44223
EPA METHOD 8015D MOD: GASOLINE RANGE	.				Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/8/2019 9:03:04 PM	44148
Surr: BFB	104	70-130	%Rec	1	4/8/2019 9:03:04 PM	44148
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS				Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	4/9/2019 4:34:19 PM	44152
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	4/9/2019 4:34:19 PM	44152
Surr: DNOP	89.4	70-130	%Rec	1	4/9/2019 4:34:19 PM	44152
EPA METHOD 8260B: VOLATILES SHORT LIST	Т				Analyst	: RAA
Benzene	ND	0.024	mg/Kg	1	4/8/2019 9:03:04 PM	44148
Toluene	ND	0.048	mg/Kg	1	4/8/2019 9:03:04 PM	44148
Ethylbenzene	ND	0.048	mg/Kg	1	4/8/2019 9:03:04 PM	44148
Xylenes, Total	ND	0.096	mg/Kg	1	4/8/2019 9:03:04 PM	44148
Surr: 1,2-Dichloroethane-d4	89.2	70-130	%Rec	1	4/8/2019 9:03:04 PM	44148
Surr: 4-Bromofluorobenzene	102	70-130	%Rec	1	4/8/2019 9:03:04 PM	44148
Surr: Dibromofluoromethane	89.4	70-130	%Rec	1	4/8/2019 9:03:04 PM	44148
Surr: Toluene-d8	94.3	70-130	%Rec	1	4/8/2019 9:03:04 PM	44148

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP269

Project: LVP SWD

Collection Date: 4/3/2019

Lab ID: 1904351-012 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	smb
Chloride	230	60	mg/Kg	20	4/9/2019 1:12:15 PM	44224
EPA METHOD 8015D MOD: GASOLINE RANG	E				Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/9/2019 12:22:33 AM	44148
Surr: BFB	102	70-130	%Rec	1	4/9/2019 12:22:33 AM	44148
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	JME
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	4/9/2019 7:22:03 PM	44182
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/9/2019 7:22:03 PM	44182
Surr: DNOP	96.7	70-130	%Rec	1	4/9/2019 7:22:03 PM	44182
EPA METHOD 8260B: VOLATILES SHORT LIS	T				Analyst	RAA
Benzene	ND	0.025	mg/Kg	1	4/9/2019 12:22:33 AM	44148
Toluene	ND	0.049	mg/Kg	1	4/9/2019 12:22:33 AM	44148
Ethylbenzene	ND	0.049	mg/Kg	1	4/9/2019 12:22:33 AM	44148
Xylenes, Total	ND	0.099	mg/Kg	1	4/9/2019 12:22:33 AM	44148
Surr: 1,2-Dichloroethane-d4	90.2	70-130	%Rec	1	4/9/2019 12:22:33 AM	44148
Surr: 4-Bromofluorobenzene	102	70-130	%Rec	1	4/9/2019 12:22:33 AM	44148
Surr: Dibromofluoromethane	90.8	70-130	%Rec	1	4/9/2019 12:22:33 AM	44148
Surr: Toluene-d8	95.0	70-130	%Rec	1	4/9/2019 12:22:33 AM	44148

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP270

Collection Date: 4/3/2019

Lab ID: 1904351-013 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	smb
Chloride	220	60	mg/Kg	20	4/9/2019 1:24:39 PM	44224
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	4/9/2019 8:36:29 PM	44182
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/9/2019 8:36:29 PM	44182
Surr: DNOP	91.0	70-130	%Rec	1	4/9/2019 8:36:29 PM	44182
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/10/2019 12:19:12 PM	44149
Surr: BFB	85.1	73.8-119	%Rec	1	4/10/2019 12:19:12 PM	44149
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.025	mg/Kg	1	4/10/2019 12:19:12 PM	44149
Toluene	ND	0.049	mg/Kg	1	4/10/2019 12:19:12 PM	44149
Ethylbenzene	ND	0.049	mg/Kg	1	4/10/2019 12:19:12 PM	44149
Xylenes, Total	ND	0.099	mg/Kg	1	4/10/2019 12:19:12 PM	44149
Surr: 4-Bromofluorobenzene	84.6	80-120	%Rec	1	4/10/2019 12:19:12 PM	44149

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP271
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-014 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	smb
Chloride	260	60	mg/Kg	20	4/9/2019 2:01:53 PM	44224
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: ЈМЕ
Diesel Range Organics (DRO)	ND	9.2	mg/Kg	1	4/9/2019 9:01:14 PM	44182
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	4/9/2019 9:01:14 PM	44182
Surr: DNOP	98.9	70-130	%Rec	1	4/9/2019 9:01:14 PM	44182
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/10/2019 1:30:05 PM	44149
Surr: BFB	88.4	73.8-119	%Rec	1	4/10/2019 1:30:05 PM	44149
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	4/10/2019 1:30:05 PM	44149
Toluene	ND	0.048	mg/Kg	1	4/10/2019 1:30:05 PM	44149
Ethylbenzene	ND	0.048	mg/Kg	1	4/10/2019 1:30:05 PM	44149
Xylenes, Total	ND	0.097	mg/Kg	1	4/10/2019 1:30:05 PM	44149
Surr: 4-Bromofluorobenzene	89.2	80-120	%Rec	1	4/10/2019 1:30:05 PM	44149

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP272

Collection Date: 4/3/2019

Lab ID: 1904351-015 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	smb
Chloride	160	60	mg/Kg	20	4/9/2019 2:14:18 PM	44224
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	4/9/2019 9:25:53 PM	44182
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	4/9/2019 9:25:53 PM	44182
Surr: DNOP	95.5	70-130	%Rec	1	4/9/2019 9:25:53 PM	44182
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	4/10/2019 2:40:54 PM	44149
Surr: BFB	87.8	73.8-119	%Rec	1	4/10/2019 2:40:54 PM	44149
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.023	mg/Kg	1	4/10/2019 2:40:54 PM	44149
Toluene	ND	0.046	mg/Kg	1	4/10/2019 2:40:54 PM	44149
Ethylbenzene	ND	0.046	mg/Kg	1	4/10/2019 2:40:54 PM	44149
Xylenes, Total	ND	0.093	mg/Kg	1	4/10/2019 2:40:54 PM	44149
Surr: 4-Bromofluorobenzene	87.8	80-120	%Rec	1	4/10/2019 2:40:54 PM	44149

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

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP273
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-016 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: smb
Chloride	200	60	mg/Kg	20	4/9/2019 2:26:43 PM	44224
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	4/9/2019 9:50:39 PM	44182
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/9/2019 9:50:39 PM	44182
Surr: DNOP	103	70-130	%Rec	1	4/9/2019 9:50:39 PM	44182
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	4/10/2019 3:04:32 PM	44149
Surr: BFB	86.7	73.8-119	%Rec	1	4/10/2019 3:04:32 PM	44149
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.023	mg/Kg	1	4/12/2019 1:39:25 PM	44149
Toluene	ND	0.046	mg/Kg	1	4/12/2019 1:39:25 PM	44149
Ethylbenzene	ND	0.046	mg/Kg	1	4/12/2019 1:39:25 PM	44149
Xylenes, Total	ND	0.092	mg/Kg	1	4/12/2019 1:39:25 PM	44149
Surr: 4-Bromofluorobenzene	92.5	80-120	%Rec	1	4/12/2019 1:39:25 PM	44149

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP274

Project: LVP SWD

Collection Date: 4/3/2019

Lab ID: 1904351-017 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analysi	:: smb
Chloride	120	60	mg/Kg	20	4/9/2019 2:39:07 PM	44224
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS				Analyst	:: JME
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	4/9/2019 10:15:29 PM	44182
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/9/2019 10:15:29 PM	44182
Surr: DNOP	94.5	70-130	%Rec	1	4/9/2019 10:15:29 PM	44182
EPA METHOD 8015D: GASOLINE RANGE					Analyst	:: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/10/2019 3:28:05 PM	44149
Surr: BFB	86.8	73.8-119	%Rec	1	4/10/2019 3:28:05 PM	44149
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	4/12/2019 2:50:12 PM	44149
Toluene	ND	0.047	mg/Kg	1	4/12/2019 2:50:12 PM	44149
Ethylbenzene	ND	0.047	mg/Kg	1	4/12/2019 2:50:12 PM	44149
Xylenes, Total	ND	0.094	mg/Kg	1	4/12/2019 2:50:12 PM	44149
Surr: 4-Bromofluorobenzene	88.0	80-120	%Rec	1	4/12/2019 2:50:12 PM	44149

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

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP275
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-018 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: smb
Chloride	ND	59	mg/Kg	20	4/9/2019 2:51:32 PM	44224
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	4/9/2019 10:40:22 PM	44182
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	4/9/2019 10:40:22 PM	44182
Surr: DNOP	95.5	70-130	%Rec	1	4/9/2019 10:40:22 PM	44182
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/10/2019 4:38:30 PM	44149
Surr: BFB	86.4	73.8-119	%Rec	1	4/10/2019 4:38:30 PM	44149
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	4/10/2019 4:38:30 PM	44149
Toluene	ND	0.049	mg/Kg	1	4/10/2019 4:38:30 PM	44149
Ethylbenzene	ND	0.049	mg/Kg	1	4/10/2019 4:38:30 PM	44149
Xylenes, Total	ND	0.098	mg/Kg	1	4/10/2019 4:38:30 PM	44149
Surr: 4-Bromofluorobenzene	85.0	80-120	%Rec	1	4/10/2019 4:38:30 PM	44149

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP276
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-019 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: smb
Chloride	260	60	mg/Kg	20	4/9/2019 3:03:57 PM	44224
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analyst	: JME
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	4/9/2019 11:05:05 PM	44182
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/9/2019 11:05:05 PM	44182
Surr: DNOP	99.0	70-130	%Rec	1	4/9/2019 11:05:05 PM	44182
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/10/2019 5:01:51 PM	44149
Surr: BFB	87.7	73.8-119	%Rec	1	4/10/2019 5:01:51 PM	44149
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	4/10/2019 5:01:51 PM	44149
Toluene	ND	0.049	mg/Kg	1	4/10/2019 5:01:51 PM	44149
Ethylbenzene	ND	0.049	mg/Kg	1	4/10/2019 5:01:51 PM	44149
Xylenes, Total	ND	0.097	mg/Kg	1	4/10/2019 5:01:51 PM	44149
Surr: 4-Bromofluorobenzene	88.8	80-120	%Rec	1	4/10/2019 5:01:51 PM	44149

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

Qualifiers:

- Value above quantitation range
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode
- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP277

Project: LVP SWD

Collection Date: 4/3/2019

Lab ID: 1904351-020 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: smb
Chloride	210	60	mg/Kg	20	4/9/2019 3:16:21 PM	44224
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	4/9/2019 11:29:50 PM	44182
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/9/2019 11:29:50 PM	44182
Surr: DNOP	101	70-130	%Rec	1	4/9/2019 11:29:50 PM	44182
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/10/2019 5:25:15 PM	44149
Surr: BFB	87.2	73.8-119	%Rec	1	4/10/2019 5:25:15 PM	44149
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	4/10/2019 5:25:15 PM	44149
Toluene	ND	0.048	mg/Kg	1	4/10/2019 5:25:15 PM	44149
Ethylbenzene	ND	0.048	mg/Kg	1	4/10/2019 5:25:15 PM	44149
Xylenes, Total	ND	0.096	mg/Kg	1	4/10/2019 5:25:15 PM	44149
Surr: 4-Bromofluorobenzene	86.5	80-120	%Rec	1	4/10/2019 5:25:15 PM	44149

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP278

Project: LVP SWD

Collection Date: 4/3/2019

Lab ID: 1904351-021 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: smb
Chloride	170	60	mg/Kg	20	4/9/2019 3:28:46 PM	44224
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	4/10/2019 12:19:13 AM	44182
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/10/2019 12:19:13 AM	44182
Surr: DNOP	91.5	70-130	%Rec	1	4/10/2019 12:19:13 AM	44182
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	4/10/2019 5:48:33 PM	44149
Surr: BFB	87.4	73.8-119	%Rec	1	4/10/2019 5:48:33 PM	44149
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.025	mg/Kg	1	4/10/2019 5:48:33 PM	44149
Toluene	ND	0.050	mg/Kg	1	4/10/2019 5:48:33 PM	44149
Ethylbenzene	ND	0.050	mg/Kg	1	4/10/2019 5:48:33 PM	44149
Xylenes, Total	ND	0.099	mg/Kg	1	4/10/2019 5:48:33 PM	44149
Surr: 4-Bromofluorobenzene	86.8	80-120	%Rec	1	4/10/2019 5:48:33 PM	44149

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP279

Collection Date: 4/3/2019

Lab ID: 1904351-022 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	:: smb
Chloride	86	60	mg/Kg	20	4/9/2019 3:41:10 PM	44224
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	:: ЈМЕ
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	4/10/2019 12:43:52 AM	44182
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	4/10/2019 12:43:52 AM	l 44182
Surr: DNOP	100	70-130	%Rec	1	4/10/2019 12:43:52 AM	44182
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	4/10/2019 6:11:56 PM	44149
Surr: BFB	87.6	73.8-119	%Rec	1	4/10/2019 6:11:56 PM	44149
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.023	mg/Kg	1	4/10/2019 6:11:56 PM	44149
Toluene	ND	0.046	mg/Kg	1	4/10/2019 6:11:56 PM	44149
Ethylbenzene	ND	0.046	mg/Kg	1	4/10/2019 6:11:56 PM	44149
Xylenes, Total	ND	0.093	mg/Kg	1	4/10/2019 6:11:56 PM	44149
Surr: 4-Bromofluorobenzene	87.1	80-120	%Rec	1	4/10/2019 6:11:56 PM	44149

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

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP280

Collection Date: 4/3/2019

Lab ID: 1904351-023 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: smb
Chloride	120	60	mg/Kg	20	4/9/2019 3:53:35 PM	44224
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	4/10/2019 1:08:28 AM	44182
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	4/10/2019 1:08:28 AM	44182
Surr: DNOP	89.4	70-130	%Rec	1	4/10/2019 1:08:28 AM	44182
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/10/2019 6:35:21 PM	44149
Surr: BFB	88.3	73.8-119	%Rec	1	4/10/2019 6:35:21 PM	44149
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.023	mg/Kg	1	4/10/2019 6:35:21 PM	44149
Toluene	ND	0.047	mg/Kg	1	4/10/2019 6:35:21 PM	44149
Ethylbenzene	ND	0.047	mg/Kg	1	4/10/2019 6:35:21 PM	44149
Xylenes, Total	ND	0.093	mg/Kg	1	4/10/2019 6:35:21 PM	44149
Surr: 4-Bromofluorobenzene	88.2	80-120	%Rec	1	4/10/2019 6:35:21 PM	44149

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP281
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-024 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analysi	:: smb
Chloride	140	60	mg/Kg	20	4/9/2019 4:30:49 PM	44224
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	4/10/2019 1:33:10 AM	44182
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/10/2019 1:33:10 AM	44182
Surr: DNOP	96.8	70-130	%Rec	1	4/10/2019 1:33:10 AM	44182
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/10/2019 6:58:50 PM	44149
Surr: BFB	86.6	73.8-119	%Rec	1	4/10/2019 6:58:50 PM	44149
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.025	mg/Kg	1	4/10/2019 6:58:50 PM	44149
Toluene	ND	0.049	mg/Kg	1	4/10/2019 6:58:50 PM	44149
Ethylbenzene	ND	0.049	mg/Kg	1	4/10/2019 6:58:50 PM	44149
Xylenes, Total	ND	0.099	mg/Kg	1	4/10/2019 6:58:50 PM	44149
Surr: 4-Bromofluorobenzene	85.7	80-120	%Rec	1	4/10/2019 6:58:50 PM	44149

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

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP282
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-025 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: smb
Chloride	210	60	mg/Kg	20	4/9/2019 4:43:14 PM	44224
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	4/10/2019 1:57:45 AM	44182
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	4/10/2019 1:57:45 AM	44182
Surr: DNOP	101	70-130	%Rec	1	4/10/2019 1:57:45 AM	44182
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/10/2019 7:22:28 PM	44149
Surr: BFB	88.9	73.8-119	%Rec	1	4/10/2019 7:22:28 PM	44149
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	4/10/2019 7:22:28 PM	44149
Toluene	ND	0.047	mg/Kg	1	4/10/2019 7:22:28 PM	44149
Ethylbenzene	ND	0.047	mg/Kg	1	4/10/2019 7:22:28 PM	44149
Xylenes, Total	ND	0.095	mg/Kg	1	4/10/2019 7:22:28 PM	44149
Surr: 4-Bromofluorobenzene	89.0	80-120	%Rec	1	4/10/2019 7:22:28 PM	44149

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

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP283
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-026 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analysi	:: smb
Chloride	220	59	mg/Kg	20	4/9/2019 4:55:38 PM	44224
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	4/10/2019 2:22:18 AM	44182
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/10/2019 2:22:18 AM	44182
Surr: DNOP	99.9	70-130	%Rec	1	4/10/2019 2:22:18 AM	44182
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/10/2019 7:45:59 PM	44149
Surr: BFB	87.4	73.8-119	%Rec	1	4/10/2019 7:45:59 PM	44149
EPA METHOD 8021B: VOLATILES					Analyst	:: NSB
Benzene	ND	0.024	mg/Kg	1	4/10/2019 7:45:59 PM	44149
Toluene	ND	0.047	mg/Kg	1	4/10/2019 7:45:59 PM	44149
Ethylbenzene	ND	0.047	mg/Kg	1	4/10/2019 7:45:59 PM	44149
Xylenes, Total	ND	0.095	mg/Kg	1	4/10/2019 7:45:59 PM	44149
Surr: 4-Bromofluorobenzene	87.6	80-120	%Rec	1	4/10/2019 7:45:59 PM	44149

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

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP284
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-027 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	:: smb
Chloride	150	60	mg/Kg	20	4/9/2019 5:08:02 PM	44224
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analyst	: JME
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	4/10/2019 2:46:50 AM	44182
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	4/10/2019 2:46:50 AM	44182
Surr: DNOP	99.9	70-130	%Rec	1	4/10/2019 2:46:50 AM	44182
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	4/10/2019 8:09:26 PM	44149
Surr: BFB	86.3	73.8-119	%Rec	1	4/10/2019 8:09:26 PM	44149
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.023	mg/Kg	1	4/10/2019 8:09:26 PM	44149
Toluene	ND	0.046	mg/Kg	1	4/10/2019 8:09:26 PM	44149
Ethylbenzene	ND	0.046	mg/Kg	1	4/10/2019 8:09:26 PM	44149
Xylenes, Total	ND	0.092	mg/Kg	1	4/10/2019 8:09:26 PM	44149
Surr: 4-Bromofluorobenzene	86.2	80-120	%Rec	1	4/10/2019 8:09:26 PM	44149

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP285
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-028 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	:: smb
Chloride	170	60	mg/Kg	20	4/9/2019 6:10:05 PM	44240
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	4/10/2019 3:11:25 AM	44182
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/10/2019 3:11:25 AM	44182
Surr: DNOP	101	70-130	%Rec	1	4/10/2019 3:11:25 AM	44182
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/10/2019 9:19:49 PM	44149
Surr: BFB	86.9	73.8-119	%Rec	1	4/10/2019 9:19:49 PM	44149
EPA METHOD 8021B: VOLATILES					Analyst	:: NSB
Benzene	ND	0.024	mg/Kg	1	4/10/2019 9:19:49 PM	44149
Toluene	ND	0.049	mg/Kg	1	4/10/2019 9:19:49 PM	44149
Ethylbenzene	ND	0.049	mg/Kg	1	4/10/2019 9:19:49 PM	44149
Xylenes, Total	ND	0.098	mg/Kg	1	4/10/2019 9:19:49 PM	44149
Surr: 4-Bromofluorobenzene	86.5	80-120	%Rec	1	4/10/2019 9:19:49 PM	44149

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP286
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-029 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: smb
Chloride	140	60	mg/Kg	20	4/9/2019 6:22:29 PM	44240
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	4/10/2019 3:35:58 AM	44182
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/10/2019 3:35:58 AM	44182
Surr: DNOP	100	70-130	%Rec	1	4/10/2019 3:35:58 AM	44182
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/10/2019 9:43:20 PM	44149
Surr: BFB	89.2	73.8-119	%Rec	1	4/10/2019 9:43:20 PM	44149
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	4/10/2019 9:43:20 PM	44149
Toluene	ND	0.048	mg/Kg	1	4/10/2019 9:43:20 PM	44149
Ethylbenzene	ND	0.048	mg/Kg	1	4/10/2019 9:43:20 PM	44149
Xylenes, Total	ND	0.097	mg/Kg	1	4/10/2019 9:43:20 PM	44149
Surr: 4-Bromofluorobenzene	89.0	80-120	%Rec	1	4/10/2019 9:43:20 PM	44149

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

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP287

Project: LVP SWD

Collection Date: 4/3/2019

Lab ID: 1904351-030 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: smb
Chloride	ND	60	mg/Kg	20	4/9/2019 7:24:33 PM	44240
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	9.1	mg/Kg	1	4/10/2019 4:00:28 AM	44182
Motor Oil Range Organics (MRO)	ND	45	mg/Kg	1	4/10/2019 4:00:28 AM	44182
Surr: DNOP	106	70-130	%Rec	1	4/10/2019 4:00:28 AM	44182
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	4/10/2019 10:06:34 PM	44149
Surr: BFB	89.5	73.8-119	%Rec	1	4/10/2019 10:06:34 PM	44149
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.025	mg/Kg	1	4/10/2019 10:06:34 PM	44149
Toluene	ND	0.050	mg/Kg	1	4/10/2019 10:06:34 PM	44149
Ethylbenzene	ND	0.050	mg/Kg	1	4/10/2019 10:06:34 PM	44149
Xylenes, Total	ND	0.10	mg/Kg	1	4/10/2019 10:06:34 PM	44149
Surr: 4-Bromofluorobenzene	89.8	80-120	%Rec	1	4/10/2019 10:06:34 PM	44149

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP288
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-031 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: smb
Chloride	180	60	mg/Kg	20	4/9/2019 7:36:58 PM	44240
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	4/10/2019 4:24:57 AM	44182
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/10/2019 4:24:57 AM	44182
Surr: DNOP	97.8	70-130	%Rec	1	4/10/2019 4:24:57 AM	44182
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/10/2019 10:30:07 PM	44149
Surr: BFB	86.8	73.8-119	%Rec	1	4/10/2019 10:30:07 PM	44149
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.023	mg/Kg	1	4/10/2019 10:30:07 PM	44149
Toluene	ND	0.047	mg/Kg	1	4/10/2019 10:30:07 PM	44149
Ethylbenzene	ND	0.047	mg/Kg	1	4/10/2019 10:30:07 PM	44149
Xylenes, Total	ND	0.094	mg/Kg	1	4/10/2019 10:30:07 PM	44149
Surr: 4-Bromofluorobenzene	86.8	80-120	%Rec	1	4/10/2019 10:30:07 PM	44149

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP289

Collection Date: 4/3/2019

Lab ID: 1904351-032 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	smb
Chloride	ND	60	mg/Kg	20	4/9/2019 7:49:23 PM	44240
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: Irm
Diesel Range Organics (DRO)	ND	8.9	mg/Kg	1	4/9/2019 1:45:42 PM	44183
Motor Oil Range Organics (MRO)	ND	44	mg/Kg	1	4/9/2019 1:45:42 PM	44183
Surr: DNOP	94.3	70-130	%Rec	1	4/9/2019 1:45:42 PM	44183
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/10/2019 10:53:33 PM	44149
Surr: BFB	91.2	73.8-119	%Rec	1	4/10/2019 10:53:33 PM	44149
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.024	mg/Kg	1	4/10/2019 10:53:33 PM	44149
Toluene	ND	0.047	mg/Kg	1	4/10/2019 10:53:33 PM	44149
Ethylbenzene	ND	0.047	mg/Kg	1	4/10/2019 10:53:33 PM	44149
Xylenes, Total	ND	0.095	mg/Kg	1	4/10/2019 10:53:33 PM	44149
Surr: 4-Bromofluorobenzene	91.9	80-120	%Rec	1	4/10/2019 10:53:33 PM	44149

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP290

Collection Date: 4/3/2019

Lab ID: 1904351-033 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	smb
Chloride	130	60	mg/Kg	20	4/9/2019 8:01:48 PM	44240
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: Irm
Diesel Range Organics (DRO)	ND	8.1	mg/Kg	1	4/9/2019 2:52:25 PM	44183
Motor Oil Range Organics (MRO)	ND	40	mg/Kg	1	4/9/2019 2:52:25 PM	44183
Surr: DNOP	95.9	70-130	%Rec	1	4/9/2019 2:52:25 PM	44183
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/11/2019 12:27:41 AM	44150
Surr: BFB	93.9	73.8-119	%Rec	1	4/11/2019 12:27:41 AM	44150
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.025	mg/Kg	1	4/11/2019 12:27:41 AM	44150
Toluene	ND	0.049	mg/Kg	1	4/11/2019 12:27:41 AM	44150
Ethylbenzene	ND	0.049	mg/Kg	1	4/11/2019 12:27:41 AM	44150
Xylenes, Total	ND	0.099	mg/Kg	1	4/11/2019 12:27:41 AM	44150
Surr: 4-Bromofluorobenzene	94.2	80-120	%Rec	1	4/11/2019 12:27:41 AM	44150

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP291
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-034 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: smb
Chloride	280	60		mg/Kg	20	4/9/2019 8:14:12 PM	44240
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/9/2019 3:14:37 PM	44183
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/9/2019 3:14:37 PM	44183
Surr: DNOP	56.4	70-130	S	%Rec	1	4/9/2019 3:14:37 PM	44183
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/11/2019 1:38:09 AM	44150
Surr: BFB	88.9	73.8-119		%Rec	1	4/11/2019 1:38:09 AM	44150
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.024		mg/Kg	1	4/11/2019 1:38:09 AM	44150
Toluene	ND	0.048		mg/Kg	1	4/11/2019 1:38:09 AM	44150
Ethylbenzene	ND	0.048		mg/Kg	1	4/11/2019 1:38:09 AM	44150
Xylenes, Total	ND	0.097		mg/Kg	1	4/11/2019 1:38:09 AM	44150
Surr: 4-Bromofluorobenzene	88.4	80-120		%Rec	1	4/11/2019 1:38:09 AM	44150

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP292

Collection Date: 4/3/2019

Lab ID: 1904351-035 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	230	61		mg/Kg	20	4/9/2019 8:26:37 PM	44240
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	Irm
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/9/2019 3:36:50 PM	44183
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/9/2019 3:36:50 PM	44183
Surr: DNOP	59.1	70-130	S	%Rec	1	4/9/2019 3:36:50 PM	44183
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/11/2019 2:48:35 AM	44150
Surr: BFB	90.6	73.8-119		%Rec	1	4/11/2019 2:48:35 AM	44150
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.023		mg/Kg	1	4/11/2019 2:48:35 AM	44150
Toluene	ND	0.046		mg/Kg	1	4/11/2019 2:48:35 AM	44150
Ethylbenzene	ND	0.046		mg/Kg	1	4/11/2019 2:48:35 AM	44150
Xylenes, Total	ND	0.093		mg/Kg	1	4/11/2019 2:48:35 AM	44150
Surr: 4-Bromofluorobenzene	91.3	80-120		%Rec	1	4/11/2019 2:48:35 AM	44150

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

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP293
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-036 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: smb
Chloride	290	60		mg/Kg	20	4/9/2019 8:39:01 PM	44240
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	4/9/2019 3:58:59 PM	44183
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/9/2019 3:58:59 PM	44183
Surr: DNOP	63.5	70-130	S	%Rec	1	4/9/2019 3:58:59 PM	44183
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/11/2019 3:12:10 AM	44150
Surr: BFB	90.8	73.8-119		%Rec	1	4/11/2019 3:12:10 AM	44150
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.024		mg/Kg	1	4/11/2019 3:12:10 AM	44150
Toluene	ND	0.047		mg/Kg	1	4/11/2019 3:12:10 AM	44150
Ethylbenzene	ND	0.047		mg/Kg	1	4/11/2019 3:12:10 AM	44150
Xylenes, Total	ND	0.095		mg/Kg	1	4/11/2019 3:12:10 AM	44150
Surr: 4-Bromofluorobenzene	91.4	80-120		%Rec	1	4/11/2019 3:12:10 AM	44150

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

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP294

Collection Date: 4/3/2019

Lab ID: 1904351-037 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: smb
Chloride	ND	60	mg/Kg	20	4/9/2019 8:51:26 PM	44240
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	4/9/2019 4:21:26 PM	44183
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	4/9/2019 4:21:26 PM	44183
Surr: DNOP	82.4	70-130	%Rec	1	4/9/2019 4:21:26 PM	44183
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/11/2019 3:35:27 AM	44150
Surr: BFB	89.7	73.8-119	%Rec	1	4/11/2019 3:35:27 AM	44150
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	4/11/2019 3:35:27 AM	44150
Toluene	ND	0.048	mg/Kg	1	4/11/2019 3:35:27 AM	44150
Ethylbenzene	ND	0.048	mg/Kg	1	4/11/2019 3:35:27 AM	44150
Xylenes, Total	ND	0.096	mg/Kg	1	4/11/2019 3:35:27 AM	44150
Surr: 4-Bromofluorobenzene	89.8	80-120	%Rec	1	4/11/2019 3:35:27 AM	44150

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP295
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-038 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	180	60		mg/Kg	20	4/9/2019 9:28:39 PM	44240
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/9/2019 4:43:49 PM	44183
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/9/2019 4:43:49 PM	44183
Surr: DNOP	50.4	70-130	S	%Rec	1	4/9/2019 4:43:49 PM	44183
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/11/2019 7:33:11 AM	44150
Surr: BFB	93.5	73.8-119		%Rec	1	4/11/2019 7:33:11 AM	44150
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.025		mg/Kg	1	4/11/2019 7:33:11 AM	44150
Toluene	ND	0.049		mg/Kg	1	4/11/2019 7:33:11 AM	44150
Ethylbenzene	ND	0.049		mg/Kg	1	4/11/2019 7:33:11 AM	44150
Xylenes, Total	ND	0.098		mg/Kg	1	4/11/2019 7:33:11 AM	44150
Surr: 4-Bromofluorobenzene	92.5	80-120		%Rec	1	4/11/2019 7:33:11 AM	44150

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP296
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-039 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	smb
Chloride	ND	60	mg/Kg	20	4/9/2019 9:41:04 PM	44240
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: Irm
Diesel Range Organics (DRO)	ND	8.1	mg/Kg	1	4/9/2019 5:06:03 PM	44183
Motor Oil Range Organics (MRO)	ND	41	mg/Kg	1	4/9/2019 5:06:03 PM	44183
Surr: DNOP	71.7	70-130	%Rec	1	4/9/2019 5:06:03 PM	44183
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/11/2019 7:56:41 AM	44150
Surr: BFB	90.0	73.8-119	%Rec	1	4/11/2019 7:56:41 AM	44150
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	4/11/2019 7:56:41 AM	44150
Toluene	ND	0.048	mg/Kg	1	4/11/2019 7:56:41 AM	44150
Ethylbenzene	ND	0.048	mg/Kg	1	4/11/2019 7:56:41 AM	44150
Xylenes, Total	ND	0.096	mg/Kg	1	4/11/2019 7:56:41 AM	44150
Surr: 4-Bromofluorobenzene	89.7	80-120	%Rec	1	4/11/2019 7:56:41 AM	44150

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP297

Collection Date: 4/3/2019

Lab ID: 1904351-040 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	ND	60		mg/Kg	20	4/9/2019 9:53:28 PM	44240
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/9/2019 5:28:23 PM	44183
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/9/2019 5:28:23 PM	44183
Surr: DNOP	54.4	70-130	S	%Rec	1	4/9/2019 5:28:23 PM	44183
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/11/2019 8:20:15 AM	44150
Surr: BFB	93.9	73.8-119		%Rec	1	4/11/2019 8:20:15 AM	44150
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.025		mg/Kg	1	4/11/2019 8:20:15 AM	44150
Toluene	ND	0.049		mg/Kg	1	4/11/2019 8:20:15 AM	44150
Ethylbenzene	ND	0.049		mg/Kg	1	4/11/2019 8:20:15 AM	44150
Xylenes, Total	ND	0.099		mg/Kg	1	4/11/2019 8:20:15 AM	44150
Surr: 4-Bromofluorobenzene	93.6	80-120		%Rec	1	4/11/2019 8:20:15 AM	44150

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP298

Collection Date: 4/3/2019

Lab ID: 1904351-041 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: smb
Chloride	230	60		mg/Kg	20	4/9/2019 10:05:53 PM	44240
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	4/9/2019 5:50:43 PM	44183
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/9/2019 5:50:43 PM	44183
Surr: DNOP	45.2	70-130	S	%Rec	1	4/9/2019 5:50:43 PM	44183
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/12/2019 3:13:50 PM	44150
Surr: BFB	92.1	73.8-119		%Rec	1	4/12/2019 3:13:50 PM	44150
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.023		mg/Kg	1	4/12/2019 3:13:50 PM	44150
Toluene	ND	0.047		mg/Kg	1	4/12/2019 3:13:50 PM	44150
Ethylbenzene	ND	0.047		mg/Kg	1	4/12/2019 3:13:50 PM	44150
Xylenes, Total	ND	0.093		mg/Kg	1	4/12/2019 3:13:50 PM	44150
Surr: 4-Bromofluorobenzene	91.8	80-120		%Rec	1	4/12/2019 3:13:50 PM	44150

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP299

Collection Date: 4/3/2019

Lab ID: 1904351-042 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: smb
Chloride	ND	60		mg/Kg	20	4/9/2019 10:18:17 PM	44240
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	4/9/2019 6:12:56 PM	44183
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	4/9/2019 6:12:56 PM	44183
Surr: DNOP	55.9	70-130	S	%Rec	1	4/9/2019 6:12:56 PM	44183
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/12/2019 3:37:26 PM	44150
Surr: BFB	91.3	73.8-119		%Rec	1	4/12/2019 3:37:26 PM	44150
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.025		mg/Kg	1	4/12/2019 3:37:26 PM	44150
Toluene	ND	0.049		mg/Kg	1	4/12/2019 3:37:26 PM	44150
Ethylbenzene	ND	0.049		mg/Kg	1	4/12/2019 3:37:26 PM	44150
Xylenes, Total	ND	0.099		mg/Kg	1	4/12/2019 3:37:26 PM	44150
Surr: 4-Bromofluorobenzene	90.5	80-120		%Rec	1	4/12/2019 3:37:26 PM	44150

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP300

Collection Date: 4/3/2019

Lab ID: 1904351-043 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: smb
Chloride	150	60		mg/Kg	20	4/9/2019 10:30:42 PM	44240
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/9/2019 6:35:20 PM	44183
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/9/2019 6:35:20 PM	44183
Surr: DNOP	53.9	70-130	S	%Rec	1	4/9/2019 6:35:20 PM	44183
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/12/2019 4:01:02 PM	44150
Surr: BFB	91.9	73.8-119		%Rec	1	4/12/2019 4:01:02 PM	44150
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.025		mg/Kg	1	4/12/2019 4:01:02 PM	44150
Toluene	ND	0.049		mg/Kg	1	4/12/2019 4:01:02 PM	44150
Ethylbenzene	ND	0.049		mg/Kg	1	4/12/2019 4:01:02 PM	44150
Xylenes, Total	ND	0.099		mg/Kg	1	4/12/2019 4:01:02 PM	44150
Surr: 4-Bromofluorobenzene	92.5	80-120		%Rec	1	4/12/2019 4:01:02 PM	44150

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP301
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-044 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	130	60		mg/Kg	20	4/9/2019 10:43:06 PM	44240
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	4/9/2019 6:57:39 PM	44183
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/9/2019 6:57:39 PM	44183
Surr: DNOP	62.2	70-130	S	%Rec	1	4/9/2019 6:57:39 PM	44183
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/12/2019 4:24:37 PM	44150
Surr: BFB	90.5	73.8-119		%Rec	1	4/12/2019 4:24:37 PM	44150
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.024		mg/Kg	1	4/12/2019 4:24:37 PM	44150
Toluene	ND	0.048		mg/Kg	1	4/12/2019 4:24:37 PM	44150
Ethylbenzene	ND	0.048		mg/Kg	1	4/12/2019 4:24:37 PM	44150
Xylenes, Total	ND	0.096		mg/Kg	1	4/12/2019 4:24:37 PM	44150
Surr: 4-Bromofluorobenzene	90.5	80-120		%Rec	1	4/12/2019 4:24:37 PM	44150

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

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP302
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-045 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: smb
Chloride	240	60		mg/Kg	20	4/9/2019 10:55:30 PM	44240
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	4/9/2019 7:19:58 PM	44183
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/9/2019 7:19:58 PM	44183
Surr: DNOP	68.2	70-130	S	%Rec	1	4/9/2019 7:19:58 PM	44183
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/12/2019 4:48:10 PM	44150
Surr: BFB	91.4	73.8-119		%Rec	1	4/12/2019 4:48:10 PM	44150
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.024		mg/Kg	1	4/12/2019 4:48:10 PM	44150
Toluene	ND	0.048		mg/Kg	1	4/12/2019 4:48:10 PM	44150
Ethylbenzene	ND	0.048		mg/Kg	1	4/12/2019 4:48:10 PM	44150
Xylenes, Total	ND	0.096		mg/Kg	1	4/12/2019 4:48:10 PM	44150
Surr: 4-Bromofluorobenzene	91.0	80-120		%Rec	1	4/12/2019 4:48:10 PM	44150

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

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP303
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-046 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	85	60		mg/Kg	20	4/9/2019 11:07:55 PM	44240
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	4/9/2019 7:42:16 PM	44183
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/9/2019 7:42:16 PM	44183
Surr: DNOP	51.6	70-130	S	%Rec	1	4/9/2019 7:42:16 PM	44183
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/12/2019 5:11:39 PM	44150
Surr: BFB	93.5	73.8-119		%Rec	1	4/12/2019 5:11:39 PM	44150
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.024		mg/Kg	1	4/12/2019 5:11:39 PM	44150
Toluene	ND	0.048		mg/Kg	1	4/12/2019 5:11:39 PM	44150
Ethylbenzene	ND	0.048		mg/Kg	1	4/12/2019 5:11:39 PM	44150
Xylenes, Total	ND	0.097		mg/Kg	1	4/12/2019 5:11:39 PM	44150
Surr: 4-Bromofluorobenzene	93.1	80-120		%Rec	1	4/12/2019 5:11:39 PM	44150

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

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP304
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-047 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: smb
Chloride	170	60		mg/Kg	20	4/9/2019 11:20:20 PM	44240
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	4/9/2019 8:04:39 PM	44183
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	4/9/2019 8:04:39 PM	44183
Surr: DNOP	51.1	70-130	S	%Rec	1	4/9/2019 8:04:39 PM	44183
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/12/2019 5:35:04 PM	44150
Surr: BFB	91.2	73.8-119		%Rec	1	4/12/2019 5:35:04 PM	44150
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.024		mg/Kg	1	4/12/2019 5:35:04 PM	44150
Toluene	ND	0.049		mg/Kg	1	4/12/2019 5:35:04 PM	44150
Ethylbenzene	ND	0.049		mg/Kg	1	4/12/2019 5:35:04 PM	44150
Xylenes, Total	ND	0.098		mg/Kg	1	4/12/2019 5:35:04 PM	44150
Surr: 4-Bromofluorobenzene	90.2	80-120		%Rec	1	4/12/2019 5:35:04 PM	44150

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP305
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-048 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: MRA
Chloride	ND	60	mg/Kg	20	4/9/2019 5:51:23 PM	44242
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.2	mg/Kg	1	4/9/2019 8:26:52 PM	44183
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	4/9/2019 8:26:52 PM	44183
Surr: DNOP	73.6	70-130	%Rec	1	4/9/2019 8:26:52 PM	44183
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/12/2019 5:58:25 PM	44150
Surr: BFB	93.7	73.8-119	%Rec	1	4/12/2019 5:58:25 PM	44150
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	4/12/2019 5:58:25 PM	44150
Toluene	ND	0.049	mg/Kg	1	4/12/2019 5:58:25 PM	44150
Ethylbenzene	ND	0.049	mg/Kg	1	4/12/2019 5:58:25 PM	44150
Xylenes, Total	ND	0.097	mg/Kg	1	4/12/2019 5:58:25 PM	44150
Surr: 4-Bromofluorobenzene	93.0	80-120	%Rec	1	4/12/2019 5:58:25 PM	44150

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP306
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-049 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	110	60		mg/Kg	20	4/9/2019 6:53:26 PM	44242
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS					Analyst	: Irm
Diesel Range Organics (DRO)	19	9.7		mg/Kg	1	4/9/2019 8:49:09 PM	44183
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/9/2019 8:49:09 PM	44183
Surr: DNOP	65.9	70-130	S	%Rec	1	4/9/2019 8:49:09 PM	44183
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/12/2019 6:21:42 PM	44150
Surr: BFB	92.5	73.8-119		%Rec	1	4/12/2019 6:21:42 PM	44150
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.025		mg/Kg	1	4/12/2019 6:21:42 PM	44150
Toluene	ND	0.050		mg/Kg	1	4/12/2019 6:21:42 PM	44150
Ethylbenzene	ND	0.050		mg/Kg	1	4/12/2019 6:21:42 PM	44150
Xylenes, Total	ND	0.099		mg/Kg	1	4/12/2019 6:21:42 PM	44150
Surr: 4-Bromofluorobenzene	91.5	80-120		%Rec	1	4/12/2019 6:21:42 PM	44150

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

Qualifiers:

- Value above quantitation range
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode
- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP307

Collection Date: 4/3/2019

Lab ID: 1904351-050 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: MRA
Chloride	89	60		mg/Kg	20	4/9/2019 7:05:51 PM	44242
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	4/9/2019 9:11:31 PM	44183
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/9/2019 9:11:31 PM	44183
Surr: DNOP	51.2	70-130	S	%Rec	1	4/9/2019 9:11:31 PM	44183
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/12/2019 7:31:36 PM	44150
Surr: BFB	87.4	73.8-119		%Rec	1	4/12/2019 7:31:36 PM	44150
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.024		mg/Kg	1	4/12/2019 7:31:36 PM	44150
Toluene	ND	0.048		mg/Kg	1	4/12/2019 7:31:36 PM	44150
Ethylbenzene	ND	0.048		mg/Kg	1	4/12/2019 7:31:36 PM	44150
Xylenes, Total	ND	0.096		mg/Kg	1	4/12/2019 7:31:36 PM	44150
Surr: 4-Bromofluorobenzene	87.8	80-120		%Rec	1	4/12/2019 7:31:36 PM	44150

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP308
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-051 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	140	60		mg/Kg	20	4/9/2019 7:18:15 PM	44242
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/9/2019 9:33:52 PM	44183
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/9/2019 9:33:52 PM	44183
Surr: DNOP	44.3	70-130	S	%Rec	1	4/9/2019 9:33:52 PM	44183
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/12/2019 7:54:51 PM	44150
Surr: BFB	91.4	73.8-119		%Rec	1	4/12/2019 7:54:51 PM	44150
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.023		mg/Kg	1	4/12/2019 7:54:51 PM	44150
Toluene	ND	0.046		mg/Kg	1	4/12/2019 7:54:51 PM	44150
Ethylbenzene	ND	0.046		mg/Kg	1	4/12/2019 7:54:51 PM	44150
Xylenes, Total	ND	0.093		mg/Kg	1	4/12/2019 7:54:51 PM	44150
Surr: 4-Bromofluorobenzene	91.7	80-120		%Rec	1	4/12/2019 7:54:51 PM	44150

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP309

Project: LVP SWD

Collection Date: 4/3/2019

Lab ID: 1904351-052 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	120	60		mg/Kg	20	4/9/2019 7:30:40 PM	44242
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	4/9/2019 9:56:09 PM	44184
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/9/2019 9:56:09 PM	44184
Surr: DNOP	43.8	70-130	S	%Rec	1	4/9/2019 9:56:09 PM	44184
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/12/2019 8:18:03 PM	44150
Surr: BFB	91.8	73.8-119		%Rec	1	4/12/2019 8:18:03 PM	44150
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.024		mg/Kg	1	4/12/2019 8:18:03 PM	44150
Toluene	ND	0.049		mg/Kg	1	4/12/2019 8:18:03 PM	44150
Ethylbenzene	ND	0.049		mg/Kg	1	4/12/2019 8:18:03 PM	44150
Xylenes, Total	ND	0.097		mg/Kg	1	4/12/2019 8:18:03 PM	44150
Surr: 4-Bromofluorobenzene	91.6	80-120		%Rec	1	4/12/2019 8:18:03 PM	44150

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP310
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-053 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	MRA
Chloride	130	60		mg/Kg	20	4/9/2019 7:43:04 PM	44242
EPA METHOD 8015D MOD: GASOLINE RANGE	!					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/10/2019 11:12:24 PM	44151
Surr: BFB	101	70-130		%Rec	1	4/10/2019 11:12:24 PM	44151
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS					Analyst	Irm
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/9/2019 11:25:25 PM	44184
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/9/2019 11:25:25 PM	44184
Surr: DNOP	32.1	70-130	S	%Rec	1	4/9/2019 11:25:25 PM	44184
EPA METHOD 8260B: VOLATILES SHORT LIST	Г					Analyst	RAA
Benzene	ND	0.023		mg/Kg	1	4/10/2019 11:12:24 PM	44151
Toluene	ND	0.046		mg/Kg	1	4/10/2019 11:12:24 PM	44151
Ethylbenzene	ND	0.046		mg/Kg	1	4/10/2019 11:12:24 PM	44151
Xylenes, Total	ND	0.092		mg/Kg	1	4/10/2019 11:12:24 PM	44151
Surr: 1,2-Dichloroethane-d4	85.2	70-130		%Rec	1	4/10/2019 11:12:24 PM	44151
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	4/10/2019 11:12:24 PM	44151
Surr: Dibromofluoromethane	89.9	70-130		%Rec	1	4/10/2019 11:12:24 PM	44151
Surr: Toluene-d8	94.8	70-130		%Rec	1	4/10/2019 11:12:24 PM	44151

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP311
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-054 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	310	60		mg/Kg	20	4/9/2019 7:55:29 PM	44242
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/11/2019 12:38:18 AM	44151
Surr: BFB	105	70-130		%Rec	1	4/11/2019 12:38:18 AM	44151
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	4/9/2019 11:47:37 PM	44184
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/9/2019 11:47:37 PM	44184
Surr: DNOP	34.1	70-130	S	%Rec	1	4/9/2019 11:47:37 PM	44184
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst	: RAA
Benzene	ND	0.023		mg/Kg	1	4/11/2019 12:38:18 AM	44151
Toluene	ND	0.046		mg/Kg	1	4/11/2019 12:38:18 AM	44151
Ethylbenzene	ND	0.046		mg/Kg	1	4/11/2019 12:38:18 AM	44151
Xylenes, Total	ND	0.093		mg/Kg	1	4/11/2019 12:38:18 AM	44151
Surr: 1,2-Dichloroethane-d4	86.9	70-130		%Rec	1	4/11/2019 12:38:18 AM	44151
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	4/11/2019 12:38:18 AM	44151
Surr: Dibromofluoromethane	93.2	70-130		%Rec	1	4/11/2019 12:38:18 AM	44151
Surr: Toluene-d8	94.9	70-130		%Rec	1	4/11/2019 12:38:18 AM	44151

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

Qualifiers:

- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode
- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP312
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-055 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	MRA
Chloride	100	60		mg/Kg	20	4/9/2019 8:07:53 PM	44242
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst:	RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/11/2019 2:04:10 AM	44151
Surr: BFB	101	70-130		%Rec	1	4/11/2019 2:04:10 AM	44151
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS					Analyst:	Irm
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	4/10/2019 12:09:57 AM	44184
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/10/2019 12:09:57 AM	44184
Surr: DNOP	31.2	70-130	S	%Rec	1	4/10/2019 12:09:57 AM	44184
EPA METHOD 8260B: VOLATILES SHORT LIST	-					Analyst:	RAA
Benzene	ND	0.024		mg/Kg	1	4/11/2019 2:04:10 AM	44151
Toluene	ND	0.048		mg/Kg	1	4/11/2019 2:04:10 AM	44151
Ethylbenzene	ND	0.048		mg/Kg	1	4/11/2019 2:04:10 AM	44151
Xylenes, Total	ND	0.096		mg/Kg	1	4/11/2019 2:04:10 AM	44151
Surr: 1,2-Dichloroethane-d4	86.4	70-130		%Rec	1	4/11/2019 2:04:10 AM	44151
Surr: 4-Bromofluorobenzene	99.4	70-130		%Rec	1	4/11/2019 2:04:10 AM	44151
Surr: Dibromofluoromethane	90.4	70-130		%Rec	1	4/11/2019 2:04:10 AM	44151
Surr: Toluene-d8	93.8	70-130		%Rec	1	4/11/2019 2:04:10 AM	44151

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP313
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-056 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	MRA
Chloride	140	61		mg/Kg	20	4/9/2019 8:20:17 PM	44242
EPA METHOD 8015D MOD: GASOLINE RANGE	<u> </u>					Analyst:	RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/11/2019 2:32:48 AM	44151
Surr: BFB	102	70-130		%Rec	1	4/11/2019 2:32:48 AM	44151
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS					Analyst:	Irm
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/10/2019 12:32:16 AM	44184
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/10/2019 12:32:16 AM	44184
Surr: DNOP	20.3	70-130	S	%Rec	1	4/10/2019 12:32:16 AM	44184
EPA METHOD 8260B: VOLATILES SHORT LIST	Г					Analyst:	RAA
Benzene	ND	0.024		mg/Kg	1	4/11/2019 2:32:48 AM	44151
Toluene	ND	0.049		mg/Kg	1	4/11/2019 2:32:48 AM	44151
Ethylbenzene	ND	0.049		mg/Kg	1	4/11/2019 2:32:48 AM	44151
Xylenes, Total	ND	0.098		mg/Kg	1	4/11/2019 2:32:48 AM	44151
Surr: 1,2-Dichloroethane-d4	82.9	70-130		%Rec	1	4/11/2019 2:32:48 AM	44151
Surr: 4-Bromofluorobenzene	99.7	70-130		%Rec	1	4/11/2019 2:32:48 AM	44151
Surr: Dibromofluoromethane	89.2	70-130		%Rec	1	4/11/2019 2:32:48 AM	44151
Surr: Toluene-d8	96.0	70-130		%Rec	1	4/11/2019 2:32:48 AM	44151

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP314
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-057 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	MRA
Chloride	220	60		mg/Kg	20	4/9/2019 8:57:31 PM	44242
EPA METHOD 8015D MOD: GASOLINE RANGE	<u> </u>					Analyst:	RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/11/2019 3:01:33 AM	44151
Surr: BFB	103	70-130		%Rec	1	4/11/2019 3:01:33 AM	44151
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS					Analyst:	Irm
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/10/2019 12:54:26 AM	44184
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/10/2019 12:54:26 AM	44184
Surr: DNOP	38.1	70-130	S	%Rec	1	4/10/2019 12:54:26 AM	44184
EPA METHOD 8260B: VOLATILES SHORT LIST	Г					Analyst:	RAA
Benzene	ND	0.024		mg/Kg	1	4/11/2019 3:01:33 AM	44151
Toluene	ND	0.048		mg/Kg	1	4/11/2019 3:01:33 AM	44151
Ethylbenzene	ND	0.048		mg/Kg	1	4/11/2019 3:01:33 AM	44151
Xylenes, Total	ND	0.095		mg/Kg	1	4/11/2019 3:01:33 AM	44151
Surr: 1,2-Dichloroethane-d4	85.3	70-130		%Rec	1	4/11/2019 3:01:33 AM	44151
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	4/11/2019 3:01:33 AM	44151
Surr: Dibromofluoromethane	90.3	70-130		%Rec	1	4/11/2019 3:01:33 AM	44151
Surr: Toluene-d8	95.6	70-130		%Rec	1	4/11/2019 3:01:33 AM	44151

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP315
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-058 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	MRA
Chloride	ND	60		mg/Kg	20	4/9/2019 9:09:55 PM	44242
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst:	RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/11/2019 3:30:03 AM	44151
Surr: BFB	101	70-130		%Rec	1	4/11/2019 3:30:03 AM	44151
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS					Analyst:	Irm
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/10/2019 1:16:50 AM	44184
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/10/2019 1:16:50 AM	44184
Surr: DNOP	41.1	70-130	S	%Rec	1	4/10/2019 1:16:50 AM	44184
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst:	RAA
Benzene	ND	0.024		mg/Kg	1	4/11/2019 3:30:03 AM	44151
Toluene	ND	0.048		mg/Kg	1	4/11/2019 3:30:03 AM	44151
Ethylbenzene	ND	0.048		mg/Kg	1	4/11/2019 3:30:03 AM	44151
Xylenes, Total	ND	0.097		mg/Kg	1	4/11/2019 3:30:03 AM	44151
Surr: 1,2-Dichloroethane-d4	82.9	70-130		%Rec	1	4/11/2019 3:30:03 AM	44151
Surr: 4-Bromofluorobenzene	98.0	70-130		%Rec	1	4/11/2019 3:30:03 AM	44151
Surr: Dibromofluoromethane	89.0	70-130		%Rec	1	4/11/2019 3:30:03 AM	44151
Surr: Toluene-d8	94.8	70-130		%Rec	1	4/11/2019 3:30:03 AM	44151

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP316
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-059 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	MRA
Chloride	120	60		mg/Kg	20	4/9/2019 9:22:20 PM	44242
EPA METHOD 8015D MOD: GASOLINE RANGE	į					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/11/2019 3:58:39 AM	44151
Surr: BFB	101	70-130		%Rec	1	4/11/2019 3:58:39 AM	44151
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/10/2019 1:39:09 AM	44184
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/10/2019 1:39:09 AM	44184
Surr: DNOP	42.9	70-130	S	%Rec	1	4/10/2019 1:39:09 AM	44184
EPA METHOD 8260B: VOLATILES SHORT LIST	Г					Analyst	RAA
Benzene	ND	0.023		mg/Kg	1	4/11/2019 3:58:39 AM	44151
Toluene	ND	0.046		mg/Kg	1	4/11/2019 3:58:39 AM	44151
Ethylbenzene	ND	0.046		mg/Kg	1	4/11/2019 3:58:39 AM	44151
Xylenes, Total	ND	0.092		mg/Kg	1	4/11/2019 3:58:39 AM	44151
Surr: 1,2-Dichloroethane-d4	83.7	70-130		%Rec	1	4/11/2019 3:58:39 AM	44151
Surr: 4-Bromofluorobenzene	98.4	70-130		%Rec	1	4/11/2019 3:58:39 AM	44151
Surr: Dibromofluoromethane	89.7	70-130		%Rec	1	4/11/2019 3:58:39 AM	44151
Surr: Toluene-d8	94.2	70-130		%Rec	1	4/11/2019 3:58:39 AM	44151

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

Qualifiers:

- Value above quantitation range
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode
- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP317
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-060 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	120	60		mg/Kg	20	4/9/2019 9:59:34 PM	44242
EPA METHOD 8015D MOD: GASOLINE RANG	E					Analyst	RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/11/2019 4:27:18 AM	44151
Surr: BFB	103	70-130		%Rec	1	4/11/2019 4:27:18 AM	44151
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/10/2019 2:01:30 AM	44184
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/10/2019 2:01:30 AM	44184
Surr: DNOP	31.3	70-130	S	%Rec	1	4/10/2019 2:01:30 AM	44184
EPA METHOD 8260B: VOLATILES SHORT LIS	ST .					Analyst	RAA
Benzene	ND	0.025		mg/Kg	1	4/11/2019 4:27:18 AM	44151
Toluene	ND	0.050		mg/Kg	1	4/11/2019 4:27:18 AM	44151
Ethylbenzene	ND	0.050		mg/Kg	1	4/11/2019 4:27:18 AM	44151
Xylenes, Total	ND	0.099		mg/Kg	1	4/11/2019 4:27:18 AM	44151
Surr: 1,2-Dichloroethane-d4	83.1	70-130		%Rec	1	4/11/2019 4:27:18 AM	44151
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	4/11/2019 4:27:18 AM	44151
Surr: Dibromofluoromethane	89.2	70-130		%Rec	1	4/11/2019 4:27:18 AM	44151
Surr: Toluene-d8	92.7	70-130		%Rec	1	4/11/2019 4:27:18 AM	44151

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP318
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-061 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	MRA
Chloride	200	60		mg/Kg	20	4/9/2019 10:11:59 PM	44242
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/11/2019 4:55:53 AM	44151
Surr: BFB	102	70-130		%Rec	1	4/11/2019 4:55:53 AM	44151
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS					Analyst	Irm
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	4/10/2019 2:23:40 AM	44184
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/10/2019 2:23:40 AM	44184
Surr: DNOP	30.3	70-130	S	%Rec	1	4/10/2019 2:23:40 AM	44184
EPA METHOD 8260B: VOLATILES SHORT LIST	Г					Analyst	RAA
Benzene	ND	0.024		mg/Kg	1	4/11/2019 4:55:53 AM	44151
Toluene	ND	0.047		mg/Kg	1	4/11/2019 4:55:53 AM	44151
Ethylbenzene	ND	0.047		mg/Kg	1	4/11/2019 4:55:53 AM	44151
Xylenes, Total	ND	0.094		mg/Kg	1	4/11/2019 4:55:53 AM	44151
Surr: 1,2-Dichloroethane-d4	83.6	70-130		%Rec	1	4/11/2019 4:55:53 AM	44151
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	4/11/2019 4:55:53 AM	44151
Surr: Dibromofluoromethane	89.6	70-130		%Rec	1	4/11/2019 4:55:53 AM	44151
Surr: Toluene-d8	93.4	70-130		%Rec	1	4/11/2019 4:55:53 AM	44151

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

Qualifiers:

- Value above quantitation range
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode
- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP319

Project: LVP SWD

Collection Date: 4/3/2019

Lab ID: 1904351-062 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	130	60		mg/Kg	20	4/9/2019 10:24:23 PM	44242
EPA METHOD 8015D MOD: GASOLINE RANGE	į					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/11/2019 5:24:34 AM	44151
Surr: BFB	105	70-130		%Rec	1	4/11/2019 5:24:34 AM	44151
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/10/2019 2:45:57 AM	44184
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/10/2019 2:45:57 AM	44184
Surr: DNOP	38.6	70-130	S	%Rec	1	4/10/2019 2:45:57 AM	44184
EPA METHOD 8260B: VOLATILES SHORT LIST	Г					Analyst	RAA
Benzene	ND	0.024		mg/Kg	1	4/11/2019 5:24:34 AM	44151
Toluene	ND	0.049		mg/Kg	1	4/11/2019 5:24:34 AM	44151
Ethylbenzene	ND	0.049		mg/Kg	1	4/11/2019 5:24:34 AM	44151
Xylenes, Total	ND	0.097		mg/Kg	1	4/11/2019 5:24:34 AM	44151
Surr: 1,2-Dichloroethane-d4	84.8	70-130		%Rec	1	4/11/2019 5:24:34 AM	44151
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	4/11/2019 5:24:34 AM	44151
Surr: Dibromofluoromethane	91.8	70-130		%Rec	1	4/11/2019 5:24:34 AM	44151
Surr: Toluene-d8	94.7	70-130		%Rec	1	4/11/2019 5:24:34 AM	44151

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP320

Project: LVP SWD

Collection Date: 4/3/2019

Lab ID: 1904351-063 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	140	60		mg/Kg	20	4/9/2019 10:36:48 PM	44242
EPA METHOD 8015D MOD: GASOLINE RANGE	<u> </u>					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/11/2019 5:53:04 AM	44151
Surr: BFB	102	70-130		%Rec	1	4/11/2019 5:53:04 AM	44151
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS					Analyst	Irm
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/10/2019 3:08:20 AM	44184
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/10/2019 3:08:20 AM	44184
Surr: DNOP	36.4	70-130	S	%Rec	1	4/10/2019 3:08:20 AM	44184
EPA METHOD 8260B: VOLATILES SHORT LIST	Г					Analyst	RAA
Benzene	ND	0.024		mg/Kg	1	4/11/2019 5:53:04 AM	44151
Toluene	ND	0.048		mg/Kg	1	4/11/2019 5:53:04 AM	44151
Ethylbenzene	ND	0.048		mg/Kg	1	4/11/2019 5:53:04 AM	44151
Xylenes, Total	ND	0.095		mg/Kg	1	4/11/2019 5:53:04 AM	44151
Surr: 1,2-Dichloroethane-d4	85.5	70-130		%Rec	1	4/11/2019 5:53:04 AM	44151
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	4/11/2019 5:53:04 AM	44151
Surr: Dibromofluoromethane	89.8	70-130		%Rec	1	4/11/2019 5:53:04 AM	44151
Surr: Toluene-d8	94.9	70-130		%Rec	1	4/11/2019 5:53:04 AM	44151

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP321
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-064 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	190	60		mg/Kg	20	4/9/2019 10:49:13 PM	44242
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/11/2019 6:21:41 AM	44151
Surr: BFB	102	70-130		%Rec	1	4/11/2019 6:21:41 AM	44151
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/10/2019 3:30:36 AM	44184
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/10/2019 3:30:36 AM	44184
Surr: DNOP	22.9	70-130	S	%Rec	1	4/10/2019 3:30:36 AM	44184
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst	RAA
Benzene	ND	0.025		mg/Kg	1	4/11/2019 6:21:41 AM	44151
Toluene	ND	0.050		mg/Kg	1	4/11/2019 6:21:41 AM	44151
Ethylbenzene	ND	0.050		mg/Kg	1	4/11/2019 6:21:41 AM	44151
Xylenes, Total	ND	0.10		mg/Kg	1	4/11/2019 6:21:41 AM	44151
Surr: 1,2-Dichloroethane-d4	84.1	70-130		%Rec	1	4/11/2019 6:21:41 AM	44151
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	4/11/2019 6:21:41 AM	44151
Surr: Dibromofluoromethane	90.1	70-130		%Rec	1	4/11/2019 6:21:41 AM	44151
Surr: Toluene-d8	93.9	70-130		%Rec	1	4/11/2019 6:21:41 AM	44151

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP322

Project: LVP SWD

Collection Date: 4/3/2019

Lab ID: 1904351-065 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	120	60		mg/Kg	20	4/9/2019 11:26:28 PM	44242
EPA METHOD 8015D MOD: GASOLINE RANGE	!					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/11/2019 6:50:18 AM	44151
Surr: BFB	102	70-130		%Rec	1	4/11/2019 6:50:18 AM	44151
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/10/2019 3:52:54 AM	44184
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/10/2019 3:52:54 AM	44184
Surr: DNOP	26.2	70-130	S	%Rec	1	4/10/2019 3:52:54 AM	44184
EPA METHOD 8260B: VOLATILES SHORT LIST	Г					Analyst	RAA
Benzene	ND	0.023		mg/Kg	1	4/11/2019 6:50:18 AM	44151
Toluene	ND	0.046		mg/Kg	1	4/11/2019 6:50:18 AM	44151
Ethylbenzene	ND	0.046		mg/Kg	1	4/11/2019 6:50:18 AM	44151
Xylenes, Total	ND	0.091		mg/Kg	1	4/11/2019 6:50:18 AM	44151
Surr: 1,2-Dichloroethane-d4	84.9	70-130		%Rec	1	4/11/2019 6:50:18 AM	44151
Surr: 4-Bromofluorobenzene	98.4	70-130		%Rec	1	4/11/2019 6:50:18 AM	44151
Surr: Dibromofluoromethane	91.1	70-130		%Rec	1	4/11/2019 6:50:18 AM	44151
Surr: Toluene-d8	94.4	70-130		%Rec	1	4/11/2019 6:50:18 AM	44151

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP323
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-066 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	240	60		mg/Kg	20	4/9/2019 11:38:54 PM	44242
EPA METHOD 8015D MOD: GASOLINE RANG	E					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/11/2019 7:18:48 AM	44151
Surr: BFB	102	70-130		%Rec	1	4/11/2019 7:18:48 AM	44151
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/10/2019 4:15:08 AM	44184
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/10/2019 4:15:08 AM	44184
Surr: DNOP	39.5	70-130	S	%Rec	1	4/10/2019 4:15:08 AM	44184
EPA METHOD 8260B: VOLATILES SHORT LIS	ST					Analyst	RAA
Benzene	ND	0.023		mg/Kg	1	4/11/2019 7:18:48 AM	44151
Toluene	ND	0.046		mg/Kg	1	4/11/2019 7:18:48 AM	44151
Ethylbenzene	ND	0.046		mg/Kg	1	4/11/2019 7:18:48 AM	44151
Xylenes, Total	ND	0.093		mg/Kg	1	4/11/2019 7:18:48 AM	44151
Surr: 1,2-Dichloroethane-d4	83.8	70-130		%Rec	1	4/11/2019 7:18:48 AM	44151
Surr: 4-Bromofluorobenzene	99.9	70-130		%Rec	1	4/11/2019 7:18:48 AM	44151
Surr: Dibromofluoromethane	90.8	70-130		%Rec	1	4/11/2019 7:18:48 AM	44151
Surr: Toluene-d8	95.1	70-130		%Rec	1	4/11/2019 7:18:48 AM	44151

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP324
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-067 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	190	60		mg/Kg	20	4/9/2019 11:51:18 PM	44242
EPA METHOD 8015D MOD: GASOLINE RANGE	į					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/11/2019 7:47:30 AM	44151
Surr: BFB	104	70-130		%Rec	1	4/11/2019 7:47:30 AM	44151
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/10/2019 4:37:19 AM	44184
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/10/2019 4:37:19 AM	44184
Surr: DNOP	19.1	70-130	S	%Rec	1	4/10/2019 4:37:19 AM	44184
EPA METHOD 8260B: VOLATILES SHORT LIST	Г					Analyst	RAA
Benzene	ND	0.025		mg/Kg	1	4/11/2019 7:47:30 AM	44151
Toluene	ND	0.049		mg/Kg	1	4/11/2019 7:47:30 AM	44151
Ethylbenzene	ND	0.049		mg/Kg	1	4/11/2019 7:47:30 AM	44151
Xylenes, Total	ND	0.098		mg/Kg	1	4/11/2019 7:47:30 AM	44151
Surr: 1,2-Dichloroethane-d4	81.8	70-130		%Rec	1	4/11/2019 7:47:30 AM	44151
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	4/11/2019 7:47:30 AM	44151
Surr: Dibromofluoromethane	87.1	70-130		%Rec	1	4/11/2019 7:47:30 AM	44151
Surr: Toluene-d8	92.4	70-130		%Rec	1	4/11/2019 7:47:30 AM	44151

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP325
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-068 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	MRA
Chloride	280	59		mg/Kg	20	4/10/2019 1:43:56 PM	44258
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/11/2019 8:16:06 AM	44151
Surr: BFB	104	70-130		%Rec	1	4/11/2019 8:16:06 AM	44151
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS					Analyst	Irm
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/10/2019 4:59:34 AM	44184
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/10/2019 4:59:34 AM	44184
Surr: DNOP	21.4	70-130	S	%Rec	1	4/10/2019 4:59:34 AM	44184
EPA METHOD 8260B: VOLATILES SHORT LIST	Г					Analyst	RAA
Benzene	ND	0.024		mg/Kg	1	4/11/2019 8:16:06 AM	44151
Toluene	ND	0.049		mg/Kg	1	4/11/2019 8:16:06 AM	44151
Ethylbenzene	ND	0.049		mg/Kg	1	4/11/2019 8:16:06 AM	44151
Xylenes, Total	ND	0.098		mg/Kg	1	4/11/2019 8:16:06 AM	44151
Surr: 1,2-Dichloroethane-d4	83.7	70-130		%Rec	1	4/11/2019 8:16:06 AM	44151
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	4/11/2019 8:16:06 AM	44151
Surr: Dibromofluoromethane	87.7	70-130		%Rec	1	4/11/2019 8:16:06 AM	44151
Surr: Toluene-d8	94.1	70-130		%Rec	1	4/11/2019 8:16:06 AM	44151

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

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP326
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-069 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	210	60		mg/Kg	20	4/10/2019 1:56:20 PM	44258
EPA METHOD 8015D MOD: GASOLINE RANGE	≣					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/11/2019 8:44:36 AM	44151
Surr: BFB	104	70-130		%Rec	1	4/11/2019 8:44:36 AM	44151
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	4/10/2019 5:21:36 AM	44184
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	4/10/2019 5:21:36 AM	44184
Surr: DNOP	20.0	70-130	S	%Rec	1	4/10/2019 5:21:36 AM	44184
EPA METHOD 8260B: VOLATILES SHORT LIS	Т					Analyst	RAA
Benzene	ND	0.023		mg/Kg	1	4/11/2019 8:44:36 AM	44151
Toluene	ND	0.047		mg/Kg	1	4/11/2019 8:44:36 AM	44151
Ethylbenzene	ND	0.047		mg/Kg	1	4/11/2019 8:44:36 AM	44151
Xylenes, Total	ND	0.093		mg/Kg	1	4/11/2019 8:44:36 AM	44151
Surr: 1,2-Dichloroethane-d4	86.6	70-130		%Rec	1	4/11/2019 8:44:36 AM	44151
Surr: 4-Bromofluorobenzene	99.8	70-130		%Rec	1	4/11/2019 8:44:36 AM	44151
Surr: Dibromofluoromethane	89.2	70-130		%Rec	1	4/11/2019 8:44:36 AM	44151
Surr: Toluene-d8	96.2	70-130		%Rec	1	4/11/2019 8:44:36 AM	44151

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

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP327

Project: LVP SWD

Collection Date: 4/3/2019

Lab ID: 1904351-070 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	280	60		mg/Kg	20	4/10/2019 2:08:45 PM	44258
EPA METHOD 8015D MOD: GASOLINE RANG	E					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/11/2019 9:13:12 AM	44151
Surr: BFB	102	70-130		%Rec	1	4/11/2019 9:13:12 AM	44151
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/10/2019 5:43:41 AM	44184
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/10/2019 5:43:41 AM	44184
Surr: DNOP	24.7	70-130	S	%Rec	1	4/10/2019 5:43:41 AM	44184
EPA METHOD 8260B: VOLATILES SHORT LIS	ST					Analyst	RAA
Benzene	ND	0.025		mg/Kg	1	4/11/2019 9:13:12 AM	44151
Toluene	ND	0.049		mg/Kg	1	4/11/2019 9:13:12 AM	44151
Ethylbenzene	ND	0.049		mg/Kg	1	4/11/2019 9:13:12 AM	44151
Xylenes, Total	ND	0.099		mg/Kg	1	4/11/2019 9:13:12 AM	44151
Surr: 1,2-Dichloroethane-d4	81.3	70-130		%Rec	1	4/11/2019 9:13:12 AM	44151
Surr: 4-Bromofluorobenzene	97.6	70-130		%Rec	1	4/11/2019 9:13:12 AM	44151
Surr: Dibromofluoromethane	87.9	70-130		%Rec	1	4/11/2019 9:13:12 AM	44151
Surr: Toluene-d8	95.9	70-130		%Rec	1	4/11/2019 9:13:12 AM	44151

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP328
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-071 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	MRA
Chloride	170	60		mg/Kg	20	4/10/2019 2:21:10 PM	44258
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/11/2019 9:41:51 AM	44151
Surr: BFB	102	70-130		%Rec	1	4/11/2019 9:41:51 AM	44151
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS					Analyst	Irm
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/10/2019 6:05:45 AM	44184
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/10/2019 6:05:45 AM	44184
Surr: DNOP	21.3	70-130	S	%Rec	1	4/10/2019 6:05:45 AM	44184
EPA METHOD 8260B: VOLATILES SHORT LIST	-					Analyst	RAA
Benzene	ND	0.025		mg/Kg	1	4/11/2019 9:41:51 AM	44151
Toluene	ND	0.049		mg/Kg	1	4/11/2019 9:41:51 AM	44151
Ethylbenzene	ND	0.049		mg/Kg	1	4/11/2019 9:41:51 AM	44151
Xylenes, Total	ND	0.098		mg/Kg	1	4/11/2019 9:41:51 AM	44151
Surr: 1,2-Dichloroethane-d4	83.1	70-130		%Rec	1	4/11/2019 9:41:51 AM	44151
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	4/11/2019 9:41:51 AM	44151
Surr: Dibromofluoromethane	90.6	70-130		%Rec	1	4/11/2019 9:41:51 AM	44151
Surr: Toluene-d8	95.5	70-130		%Rec	1	4/11/2019 9:41:51 AM	44151

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

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SP329

Collection Date: 4/3/2019

Lab ID: 1904351-072 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	88	60		mg/Kg	20	4/10/2019 2:58:24 PM	44258
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/11/2019 2:52:49 PM	44151
Surr: BFB	101	70-130		%Rec	1	4/11/2019 2:52:49 PM	44151
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/9/2019 11:35:05 PM	44185
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/9/2019 11:35:05 PM	44185
Surr: DNOP	23.7	70-130	S	%Rec	1	4/9/2019 11:35:05 PM	44185
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst	RAA
Benzene	ND	0.025		mg/Kg	1	4/11/2019 2:52:49 PM	44151
Toluene	ND	0.050		mg/Kg	1	4/11/2019 2:52:49 PM	44151
Ethylbenzene	ND	0.050		mg/Kg	1	4/11/2019 2:52:49 PM	44151
Xylenes, Total	ND	0.099		mg/Kg	1	4/11/2019 2:52:49 PM	44151
Surr: 1,2-Dichloroethane-d4	83.3	70-130		%Rec	1	4/11/2019 2:52:49 PM	44151
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	4/11/2019 2:52:49 PM	44151
Surr: Dibromofluoromethane	89.7	70-130		%Rec	1	4/11/2019 2:52:49 PM	44151
Surr: Toluene-d8	94.3	70-130		%Rec	1	4/11/2019 2:52:49 PM	44151

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP330
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-073 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	MRA
Chloride	100	60		mg/Kg	20	4/10/2019 3:10:48 PM	44258
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/11/2019 8:07:23 PM	44153
Surr: BFB	101	70-130		%Rec	1	4/11/2019 8:07:23 PM	44153
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS					Analyst	Irm
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/10/2019 12:49:16 AM	44185
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/10/2019 12:49:16 AM	44185
Surr: DNOP	16.3	70-130	S	%Rec	1	4/10/2019 12:49:16 AM	44185
EPA METHOD 8260B: VOLATILES SHORT LIST	-					Analyst	RAA
Benzene	ND	0.024		mg/Kg	1	4/11/2019 8:07:23 PM	44153
Toluene	ND	0.048		mg/Kg	1	4/11/2019 8:07:23 PM	44153
Ethylbenzene	ND	0.048		mg/Kg	1	4/11/2019 8:07:23 PM	44153
Xylenes, Total	ND	0.096		mg/Kg	1	4/11/2019 8:07:23 PM	44153
Surr: 1,2-Dichloroethane-d4	83.5	70-130		%Rec	1	4/11/2019 8:07:23 PM	44153
Surr: 4-Bromofluorobenzene	95.9	70-130		%Rec	1	4/11/2019 8:07:23 PM	44153
Surr: Dibromofluoromethane	90.8	70-130		%Rec	1	4/11/2019 8:07:23 PM	44153
Surr: Toluene-d8	93.2	70-130		%Rec	1	4/11/2019 8:07:23 PM	44153

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP331
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-074 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	MRA
Chloride	130	60		mg/Kg	20	4/10/2019 3:23:12 PM	44258
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/11/2019 9:33:11 PM	44153
Surr: BFB	103	70-130		%Rec	1	4/11/2019 9:33:11 PM	44153
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS					Analyst	Irm
Diesel Range Organics (DRO)	ND	8.6		mg/Kg	1	4/10/2019 1:13:50 AM	44185
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	4/10/2019 1:13:50 AM	44185
Surr: DNOP	36.5	70-130	S	%Rec	1	4/10/2019 1:13:50 AM	44185
EPA METHOD 8260B: VOLATILES SHORT LIST	Г					Analyst	RAA
Benzene	ND	0.023		mg/Kg	1	4/11/2019 9:33:11 PM	44153
Toluene	ND	0.047		mg/Kg	1	4/11/2019 9:33:11 PM	44153
Ethylbenzene	ND	0.047		mg/Kg	1	4/11/2019 9:33:11 PM	44153
Xylenes, Total	ND	0.093		mg/Kg	1	4/11/2019 9:33:11 PM	44153
Surr: 1,2-Dichloroethane-d4	82.5	70-130		%Rec	1	4/11/2019 9:33:11 PM	44153
Surr: 4-Bromofluorobenzene	98.1	70-130		%Rec	1	4/11/2019 9:33:11 PM	44153
Surr: Dibromofluoromethane	87.5	70-130		%Rec	1	4/11/2019 9:33:11 PM	44153
Surr: Toluene-d8	92.6	70-130		%Rec	1	4/11/2019 9:33:11 PM	44153

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP332
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-075 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	180	60		mg/Kg	20	4/10/2019 3:35:36 PM	44258
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/11/2019 10:58:44 PM	44153
Surr: BFB	105	70-130		%Rec	1	4/11/2019 10:58:44 PM	44153
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS					Analyst	Irm
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/10/2019 1:38:36 AM	44185
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/10/2019 1:38:36 AM	44185
Surr: DNOP	12.8	70-130	S	%Rec	1	4/10/2019 1:38:36 AM	44185
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst	RAA
Benzene	ND	0.024		mg/Kg	1	4/11/2019 10:58:44 PM	44153
Toluene	ND	0.049		mg/Kg	1	4/11/2019 10:58:44 PM	44153
Ethylbenzene	ND	0.049		mg/Kg	1	4/11/2019 10:58:44 PM	44153
Xylenes, Total	ND	0.098		mg/Kg	1	4/11/2019 10:58:44 PM	44153
Surr: 1,2-Dichloroethane-d4	82.3	70-130		%Rec	1	4/11/2019 10:58:44 PM	44153
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	4/11/2019 10:58:44 PM	44153
Surr: Dibromofluoromethane	88.0	70-130		%Rec	1	4/11/2019 10:58:44 PM	44153
Surr: Toluene-d8	93.5	70-130		%Rec	1	4/11/2019 10:58:44 PM	44153

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP333
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-076 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	220	60		mg/Kg	20	4/10/2019 3:48:00 PM	44258
EPA METHOD 8015D MOD: GASOLINE RANGE	į					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/12/2019 1:21:56 AM	44153
Surr: BFB	102	70-130		%Rec	1	4/12/2019 1:21:56 AM	44153
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	4/10/2019 2:03:13 AM	44185
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/10/2019 2:03:13 AM	44185
Surr: DNOP	13.7	70-130	S	%Rec	1	4/10/2019 2:03:13 AM	44185
EPA METHOD 8260B: VOLATILES SHORT LIST	Г					Analyst	RAA
Benzene	ND	0.025		mg/Kg	1	4/12/2019 1:21:56 AM	44153
Toluene	ND	0.049		mg/Kg	1	4/12/2019 1:21:56 AM	44153
Ethylbenzene	ND	0.049		mg/Kg	1	4/12/2019 1:21:56 AM	44153
Xylenes, Total	ND	0.099		mg/Kg	1	4/12/2019 1:21:56 AM	44153
Surr: 1,2-Dichloroethane-d4	83.0	70-130		%Rec	1	4/12/2019 1:21:56 AM	44153
Surr: 4-Bromofluorobenzene	99.3	70-130		%Rec	1	4/12/2019 1:21:56 AM	44153
Surr: Dibromofluoromethane	89.4	70-130		%Rec	1	4/12/2019 1:21:56 AM	44153
Surr: Toluene-d8	95.3	70-130		%Rec	1	4/12/2019 1:21:56 AM	44153

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP334
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-077 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	250	60		mg/Kg	20	4/10/2019 4:00:24 PM	44258
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/12/2019 1:50:39 AM	44153
Surr: BFB	101	70-130		%Rec	1	4/12/2019 1:50:39 AM	44153
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS					Analyst	Irm
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	4/10/2019 2:27:55 AM	44185
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/10/2019 2:27:55 AM	44185
Surr: DNOP	37.1	70-130	S	%Rec	1	4/10/2019 2:27:55 AM	44185
EPA METHOD 8260B: VOLATILES SHORT LIST	Г					Analyst	RAA
Benzene	ND	0.024		mg/Kg	1	4/12/2019 1:50:39 AM	44153
Toluene	ND	0.048		mg/Kg	1	4/12/2019 1:50:39 AM	44153
Ethylbenzene	ND	0.048		mg/Kg	1	4/12/2019 1:50:39 AM	44153
Xylenes, Total	ND	0.097		mg/Kg	1	4/12/2019 1:50:39 AM	44153
Surr: 1,2-Dichloroethane-d4	84.7	70-130		%Rec	1	4/12/2019 1:50:39 AM	44153
Surr: 4-Bromofluorobenzene	94.3	70-130		%Rec	1	4/12/2019 1:50:39 AM	44153
Surr: Dibromofluoromethane	92.5	70-130		%Rec	1	4/12/2019 1:50:39 AM	44153
Surr: Toluene-d8	95.0	70-130		%Rec	1	4/12/2019 1:50:39 AM	44153

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP335
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-078 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	150	60		mg/Kg	20	4/10/2019 4:12:49 PM	44258
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/12/2019 2:19:13 AM	44153
Surr: BFB	107	70-130		%Rec	1	4/12/2019 2:19:13 AM	44153
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	4/10/2019 2:52:23 AM	44185
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/10/2019 2:52:23 AM	44185
Surr: DNOP	34.5	70-130	S	%Rec	1	4/10/2019 2:52:23 AM	44185
EPA METHOD 8260B: VOLATILES SHORT LIST	Г					Analyst	RAA
Benzene	ND	0.025		mg/Kg	1	4/12/2019 2:19:13 AM	44153
Toluene	ND	0.049		mg/Kg	1	4/12/2019 2:19:13 AM	44153
Ethylbenzene	ND	0.049		mg/Kg	1	4/12/2019 2:19:13 AM	44153
Xylenes, Total	ND	0.099		mg/Kg	1	4/12/2019 2:19:13 AM	44153
Surr: 1,2-Dichloroethane-d4	83.2	70-130		%Rec	1	4/12/2019 2:19:13 AM	44153
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	4/12/2019 2:19:13 AM	44153
Surr: Dibromofluoromethane	90.0	70-130		%Rec	1	4/12/2019 2:19:13 AM	44153
Surr: Toluene-d8	95.3	70-130		%Rec	1	4/12/2019 2:19:13 AM	44153

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

Qualifiers:

- Value above quantitation range
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode
- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP336
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-079 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	MRA
Chloride	280	60		mg/Kg	20	4/10/2019 4:25:13 PM	44258
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/12/2019 2:47:40 AM	44153
Surr: BFB	102	70-130		%Rec	1	4/12/2019 2:47:40 AM	44153
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/10/2019 3:16:59 AM	44185
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/10/2019 3:16:59 AM	44185
Surr: DNOP	34.2	70-130	S	%Rec	1	4/10/2019 3:16:59 AM	44185
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst	RAA
Benzene	ND	0.025		mg/Kg	1	4/12/2019 2:47:40 AM	44153
Toluene	ND	0.049		mg/Kg	1	4/12/2019 2:47:40 AM	44153
Ethylbenzene	ND	0.049		mg/Kg	1	4/12/2019 2:47:40 AM	44153
Xylenes, Total	ND	0.098		mg/Kg	1	4/12/2019 2:47:40 AM	44153
Surr: 1,2-Dichloroethane-d4	82.2	70-130		%Rec	1	4/12/2019 2:47:40 AM	44153
Surr: 4-Bromofluorobenzene	95.7	70-130		%Rec	1	4/12/2019 2:47:40 AM	44153
Surr: Dibromofluoromethane	89.5	70-130		%Rec	1	4/12/2019 2:47:40 AM	44153
Surr: Toluene-d8	96.6	70-130		%Rec	1	4/12/2019 2:47:40 AM	44153

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP337
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-080 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	130	60		mg/Kg	20	4/10/2019 4:37:37 PM	44258
EPA METHOD 8015D MOD: GASOLINE RANGE	<u> </u>					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/12/2019 3:16:19 AM	44153
Surr: BFB	104	70-130		%Rec	1	4/12/2019 3:16:19 AM	44153
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/10/2019 3:41:30 AM	44185
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/10/2019 3:41:30 AM	44185
Surr: DNOP	35.5	70-130	S	%Rec	1	4/10/2019 3:41:30 AM	44185
EPA METHOD 8260B: VOLATILES SHORT LIST	Г					Analyst	RAA
Benzene	ND	0.025		mg/Kg	1	4/12/2019 3:16:19 AM	44153
Toluene	ND	0.049		mg/Kg	1	4/12/2019 3:16:19 AM	44153
Ethylbenzene	ND	0.049		mg/Kg	1	4/12/2019 3:16:19 AM	44153
Xylenes, Total	ND	0.099		mg/Kg	1	4/12/2019 3:16:19 AM	44153
Surr: 1,2-Dichloroethane-d4	82.7	70-130		%Rec	1	4/12/2019 3:16:19 AM	44153
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	4/12/2019 3:16:19 AM	44153
Surr: Dibromofluoromethane	89.5	70-130		%Rec	1	4/12/2019 3:16:19 AM	44153
Surr: Toluene-d8	94.1	70-130		%Rec	1	4/12/2019 3:16:19 AM	44153

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

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP338
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-081 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	MRA
Chloride	190	59		mg/Kg	20	4/10/2019 4:50:02 PM	44258
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/12/2019 3:44:57 AM	44153
Surr: BFB	105	70-130		%Rec	1	4/12/2019 3:44:57 AM	44153
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/10/2019 4:06:08 AM	44185
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/10/2019 4:06:08 AM	44185
Surr: DNOP	33.9	70-130	S	%Rec	1	4/10/2019 4:06:08 AM	44185
EPA METHOD 8260B: VOLATILES SHORT LIST	Г					Analyst	RAA
Benzene	ND	0.023		mg/Kg	1	4/12/2019 3:44:57 AM	44153
Toluene	ND	0.047		mg/Kg	1	4/12/2019 3:44:57 AM	44153
Ethylbenzene	ND	0.047		mg/Kg	1	4/12/2019 3:44:57 AM	44153
Xylenes, Total	ND	0.094		mg/Kg	1	4/12/2019 3:44:57 AM	44153
Surr: 1,2-Dichloroethane-d4	83.0	70-130		%Rec	1	4/12/2019 3:44:57 AM	44153
Surr: 4-Bromofluorobenzene	99.8	70-130		%Rec	1	4/12/2019 3:44:57 AM	44153
Surr: Dibromofluoromethane	89.4	70-130		%Rec	1	4/12/2019 3:44:57 AM	44153
Surr: Toluene-d8	94.8	70-130		%Rec	1	4/12/2019 3:44:57 AM	44153

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP339
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-082 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	150	60		mg/Kg	20	4/10/2019 5:27:16 PM	44258
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/12/2019 4:13:35 AM	44153
Surr: BFB	101	70-130		%Rec	1	4/12/2019 4:13:35 AM	44153
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS					Analyst	Irm
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	4/10/2019 4:30:38 AM	44185
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/10/2019 4:30:38 AM	44185
Surr: DNOP	37.1	70-130	S	%Rec	1	4/10/2019 4:30:38 AM	44185
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst	RAA
Benzene	ND	0.023		mg/Kg	1	4/12/2019 4:13:35 AM	44153
Toluene	ND	0.047		mg/Kg	1	4/12/2019 4:13:35 AM	44153
Ethylbenzene	ND	0.047		mg/Kg	1	4/12/2019 4:13:35 AM	44153
Xylenes, Total	ND	0.094		mg/Kg	1	4/12/2019 4:13:35 AM	44153
Surr: 1,2-Dichloroethane-d4	80.0	70-130		%Rec	1	4/12/2019 4:13:35 AM	44153
Surr: 4-Bromofluorobenzene	97.9	70-130		%Rec	1	4/12/2019 4:13:35 AM	44153
Surr: Dibromofluoromethane	91.4	70-130		%Rec	1	4/12/2019 4:13:35 AM	44153
Surr: Toluene-d8	92.3	70-130		%Rec	1	4/12/2019 4:13:35 AM	44153

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP340
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-083 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	220	60		mg/Kg	20	4/10/2019 5:39:41 PM	44258
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/12/2019 4:42:07 AM	44153
Surr: BFB	105	70-130		%Rec	1	4/12/2019 4:42:07 AM	44153
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS					Analyst	Irm
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	4/10/2019 4:55:17 AM	44185
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/10/2019 4:55:17 AM	44185
Surr: DNOP	39.3	70-130	S	%Rec	1	4/10/2019 4:55:17 AM	44185
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst	RAA
Benzene	ND	0.025		mg/Kg	1	4/12/2019 4:42:07 AM	44153
Toluene	ND	0.049		mg/Kg	1	4/12/2019 4:42:07 AM	44153
Ethylbenzene	ND	0.049		mg/Kg	1	4/12/2019 4:42:07 AM	44153
Xylenes, Total	ND	0.099		mg/Kg	1	4/12/2019 4:42:07 AM	44153
Surr: 1,2-Dichloroethane-d4	81.3	70-130		%Rec	1	4/12/2019 4:42:07 AM	44153
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	4/12/2019 4:42:07 AM	44153
Surr: Dibromofluoromethane	88.3	70-130		%Rec	1	4/12/2019 4:42:07 AM	44153
Surr: Toluene-d8	96.3	70-130		%Rec	1	4/12/2019 4:42:07 AM	44153

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP341
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-084 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	120	60		mg/Kg	20	4/10/2019 5:52:06 PM	44258
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/12/2019 5:10:47 AM	44153
Surr: BFB	104	70-130		%Rec	1	4/12/2019 5:10:47 AM	44153
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/10/2019 5:19:41 AM	44185
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/10/2019 5:19:41 AM	44185
Surr: DNOP	38.6	70-130	S	%Rec	1	4/10/2019 5:19:41 AM	44185
EPA METHOD 8260B: VOLATILES SHORT LIST	Г					Analyst	RAA
Benzene	ND	0.025		mg/Kg	1	4/12/2019 5:10:47 AM	44153
Toluene	ND	0.050		mg/Kg	1	4/12/2019 5:10:47 AM	44153
Ethylbenzene	ND	0.050		mg/Kg	1	4/12/2019 5:10:47 AM	44153
Xylenes, Total	ND	0.099		mg/Kg	1	4/12/2019 5:10:47 AM	44153
Surr: 1,2-Dichloroethane-d4	80.6	70-130		%Rec	1	4/12/2019 5:10:47 AM	44153
Surr: 4-Bromofluorobenzene	98.7	70-130		%Rec	1	4/12/2019 5:10:47 AM	44153
Surr: Dibromofluoromethane	88.7	70-130		%Rec	1	4/12/2019 5:10:47 AM	44153
Surr: Toluene-d8	94.2	70-130		%Rec	1	4/12/2019 5:10:47 AM	44153

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Collection Date: 4/3/2019

Lab ID: 1904351-085 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	MRA
Chloride	110	60		mg/Kg	20	4/10/2019 6:04:30 PM	44258
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst:	RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/12/2019 5:39:23 AM	44153
Surr: BFB	104	70-130		%Rec	1	4/12/2019 5:39:23 AM	44153
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS					Analyst	Irm
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	4/10/2019 5:44:11 AM	44185
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/10/2019 5:44:11 AM	44185
Surr: DNOP	34.8	70-130	S	%Rec	1	4/10/2019 5:44:11 AM	44185
EPA METHOD 8260B: VOLATILES SHORT LIST	Г					Analyst	RAA
Benzene	ND	0.024		mg/Kg	1	4/12/2019 5:39:23 AM	44153
Toluene	ND	0.049		mg/Kg	1	4/12/2019 5:39:23 AM	44153
Ethylbenzene	ND	0.049		mg/Kg	1	4/12/2019 5:39:23 AM	44153
Xylenes, Total	ND	0.098		mg/Kg	1	4/12/2019 5:39:23 AM	44153
Surr: 1,2-Dichloroethane-d4	82.5	70-130		%Rec	1	4/12/2019 5:39:23 AM	44153
Surr: 4-Bromofluorobenzene	98.4	70-130		%Rec	1	4/12/2019 5:39:23 AM	44153
Surr: Dibromofluoromethane	89.1	70-130		%Rec	1	4/12/2019 5:39:23 AM	44153
Surr: Toluene-d8	96.3	70-130		%Rec	1	4/12/2019 5:39:23 AM	44153

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

Qualifiers:

- Value above quantitation range
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode
- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SW10
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-086 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	MRA
Chloride	120	60		mg/Kg	20	4/10/2019 6:16:55 PM	44258
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/12/2019 6:08:04 AM	44153
Surr: BFB	106	70-130		%Rec	1	4/12/2019 6:08:04 AM	44153
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	4/10/2019 6:08:34 AM	44185
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/10/2019 6:08:34 AM	44185
Surr: DNOP	37.5	70-130	S	%Rec	1	4/10/2019 6:08:34 AM	44185
EPA METHOD 8260B: VOLATILES SHORT LIST	Г					Analyst	RAA
Benzene	ND	0.025		mg/Kg	1	4/12/2019 6:08:04 AM	44153
Toluene	ND	0.049		mg/Kg	1	4/12/2019 6:08:04 AM	44153
Ethylbenzene	ND	0.049		mg/Kg	1	4/12/2019 6:08:04 AM	44153
Xylenes, Total	ND	0.099		mg/Kg	1	4/12/2019 6:08:04 AM	44153
Surr: 1,2-Dichloroethane-d4	82.8	70-130		%Rec	1	4/12/2019 6:08:04 AM	44153
Surr: 4-Bromofluorobenzene	99.7	70-130		%Rec	1	4/12/2019 6:08:04 AM	44153
Surr: Dibromofluoromethane	90.2	70-130		%Rec	1	4/12/2019 6:08:04 AM	44153
Surr: Toluene-d8	96.3	70-130		%Rec	1	4/12/2019 6:08:04 AM	44153

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SW11
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-087 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	110	60		mg/Kg	20	4/10/2019 7:18:56 PM	44272
EPA METHOD 8015D MOD: GASOLINE RANGE	<u> </u>					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/12/2019 6:36:44 AM	44153
Surr: BFB	106	70-130		%Rec	1	4/12/2019 6:36:44 AM	44153
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	4/10/2019 6:33:05 AM	44185
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/10/2019 6:33:05 AM	44185
Surr: DNOP	34.6	70-130	S	%Rec	1	4/10/2019 6:33:05 AM	44185
EPA METHOD 8260B: VOLATILES SHORT LIST	Г					Analyst	RAA
Benzene	ND	0.023		mg/Kg	1	4/12/2019 6:36:44 AM	44153
Toluene	ND	0.046		mg/Kg	1	4/12/2019 6:36:44 AM	44153
Ethylbenzene	ND	0.046		mg/Kg	1	4/12/2019 6:36:44 AM	44153
Xylenes, Total	ND	0.092		mg/Kg	1	4/12/2019 6:36:44 AM	44153
Surr: 1,2-Dichloroethane-d4	83.0	70-130		%Rec	1	4/12/2019 6:36:44 AM	44153
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	4/12/2019 6:36:44 AM	44153
Surr: Dibromofluoromethane	88.8	70-130		%Rec	1	4/12/2019 6:36:44 AM	44153
Surr: Toluene-d8	95.8	70-130		%Rec	1	4/12/2019 6:36:44 AM	44153

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

Qualifiers:

- Value above quantitation range
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified at testcode
- H Holding times for preparation or analysis exceeded
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SW12
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-088 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	MRA
Chloride	75	60		mg/Kg	20	4/10/2019 8:20:59 PM	44272
EPA METHOD 8015D MOD: GASOLINE RANGE	!					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/12/2019 7:05:16 AM	44153
Surr: BFB	102	70-130		%Rec	1	4/12/2019 7:05:16 AM	44153
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	4/10/2019 6:57:25 AM	44185
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/10/2019 6:57:25 AM	44185
Surr: DNOP	36.8	70-130	S	%Rec	1	4/10/2019 6:57:25 AM	44185
EPA METHOD 8260B: VOLATILES SHORT LIST	Г					Analyst	RAA
Benzene	ND	0.024		mg/Kg	1	4/12/2019 7:05:16 AM	44153
Toluene	ND	0.048		mg/Kg	1	4/12/2019 7:05:16 AM	44153
Ethylbenzene	ND	0.048		mg/Kg	1	4/12/2019 7:05:16 AM	44153
Xylenes, Total	ND	0.097		mg/Kg	1	4/12/2019 7:05:16 AM	44153
Surr: 1,2-Dichloroethane-d4	80.8	70-130		%Rec	1	4/12/2019 7:05:16 AM	44153
Surr: 4-Bromofluorobenzene	97.9	70-130		%Rec	1	4/12/2019 7:05:16 AM	44153
Surr: Dibromofluoromethane	88.4	70-130		%Rec	1	4/12/2019 7:05:16 AM	44153
Surr: Toluene-d8	93.0	70-130		%Rec	1	4/12/2019 7:05:16 AM	44153

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SW13
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-089 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	MRA
Chloride	130	60		mg/Kg	20	4/10/2019 8:33:23 PM	44272
EPA METHOD 8015D MOD: GASOLINE RANGE	<u> </u>					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/12/2019 7:33:52 AM	44153
Surr: BFB	98.1	70-130		%Rec	1	4/12/2019 7:33:52 AM	44153
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS					Analyst	Irm
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/10/2019 7:21:52 AM	44185
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/10/2019 7:21:52 AM	44185
Surr: DNOP	34.7	70-130	S	%Rec	1	4/10/2019 7:21:52 AM	44185
EPA METHOD 8260B: VOLATILES SHORT LIST	Γ					Analyst	RAA
Benzene	ND	0.024		mg/Kg	1	4/12/2019 7:33:52 AM	44153
Toluene	ND	0.047		mg/Kg	1	4/12/2019 7:33:52 AM	44153
Ethylbenzene	ND	0.047		mg/Kg	1	4/12/2019 7:33:52 AM	44153
Xylenes, Total	ND	0.094		mg/Kg	1	4/12/2019 7:33:52 AM	44153
Surr: 1,2-Dichloroethane-d4	83.3	70-130		%Rec	1	4/12/2019 7:33:52 AM	44153
Surr: 4-Bromofluorobenzene	93.5	70-130		%Rec	1	4/12/2019 7:33:52 AM	44153
Surr: Dibromofluoromethane	90.6	70-130		%Rec	1	4/12/2019 7:33:52 AM	44153
Surr: Toluene-d8	93.4	70-130		%Rec	1	4/12/2019 7:33:52 AM	44153

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SW14
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-090 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	MRA
Chloride	130	60		mg/Kg	20	4/10/2019 8:45:48 PM	44272
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/12/2019 8:02:27 AM	44153
Surr: BFB	103	70-130		%Rec	1	4/12/2019 8:02:27 AM	44153
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS					Analyst	: Irm
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	4/10/2019 7:46:14 AM	44185
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/10/2019 7:46:14 AM	44185
Surr: DNOP	32.6	70-130	S	%Rec	1	4/10/2019 7:46:14 AM	44185
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst	RAA
Benzene	ND	0.024		mg/Kg	1	4/12/2019 8:02:27 AM	44153
Toluene	ND	0.048		mg/Kg	1	4/12/2019 8:02:27 AM	44153
Ethylbenzene	ND	0.048		mg/Kg	1	4/12/2019 8:02:27 AM	44153
Xylenes, Total	ND	0.097		mg/Kg	1	4/12/2019 8:02:27 AM	44153
Surr: 1,2-Dichloroethane-d4	79.8	70-130		%Rec	1	4/12/2019 8:02:27 AM	44153
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	4/12/2019 8:02:27 AM	44153
Surr: Dibromofluoromethane	86.8	70-130		%Rec	1	4/12/2019 8:02:27 AM	44153
Surr: Toluene-d8	95.1	70-130		%Rec	1	4/12/2019 8:02:27 AM	44153

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SW15
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-091 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	110	60		mg/Kg	20	4/10/2019 8:58:12 PM	44272
EPA METHOD 8015D MOD: GASOLINE RANGE	<u> </u>					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/12/2019 8:31:01 AM	44153
Surr: BFB	104	70-130		%Rec	1	4/12/2019 8:31:01 AM	44153
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS					Analyst	Irm
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/10/2019 8:10:52 AM	44185
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	4/10/2019 8:10:52 AM	44185
Surr: DNOP	33.1	70-130	S	%Rec	1	4/10/2019 8:10:52 AM	44185
EPA METHOD 8260B: VOLATILES SHORT LIST	Γ					Analyst	RAA
Benzene	ND	0.024		mg/Kg	1	4/12/2019 8:31:01 AM	44153
Toluene	ND	0.047		mg/Kg	1	4/12/2019 8:31:01 AM	44153
Ethylbenzene	ND	0.047		mg/Kg	1	4/12/2019 8:31:01 AM	44153
Xylenes, Total	ND	0.094		mg/Kg	1	4/12/2019 8:31:01 AM	44153
Surr: 1,2-Dichloroethane-d4	81.6	70-130		%Rec	1	4/12/2019 8:31:01 AM	44153
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	4/12/2019 8:31:01 AM	44153
Surr: Dibromofluoromethane	87.3	70-130		%Rec	1	4/12/2019 8:31:01 AM	44153
Surr: Toluene-d8	94.7	70-130		%Rec	1	4/12/2019 8:31:01 AM	44153

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SW16
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-092 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	110	60	mg/Kg	20	4/10/2019 9:10:37 PM	44272
EPA METHOD 8015D MOD: GASOLINE RANGE	<u>:</u>				Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/12/2019 8:59:35 AM	44153
Surr: BFB	102	70-130	%Rec	1	4/12/2019 8:59:35 AM	44153
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	4/10/2019 4:49:23 AM	44186
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	4/10/2019 4:49:23 AM	44186
Surr: DNOP	102	70-130	%Rec	1	4/10/2019 4:49:23 AM	44186
EPA METHOD 8260B: VOLATILES SHORT LIST	Г				Analyst	RAA
Benzene	ND	0.024	mg/Kg	1	4/12/2019 8:59:35 AM	44153
Toluene	ND	0.047	mg/Kg	1	4/12/2019 8:59:35 AM	44153
Ethylbenzene	ND	0.047	mg/Kg	1	4/12/2019 8:59:35 AM	44153
Xylenes, Total	ND	0.095	mg/Kg	1	4/12/2019 8:59:35 AM	44153
Surr: 1,2-Dichloroethane-d4	82.8	70-130	%Rec	1	4/12/2019 8:59:35 AM	44153
Surr: 4-Bromofluorobenzene	98.8	70-130	%Rec	1	4/12/2019 8:59:35 AM	44153
Surr: Dibromofluoromethane	89.3	70-130	%Rec	1	4/12/2019 8:59:35 AM	44153
Surr: Toluene-d8	94.9	70-130	%Rec	1	4/12/2019 8:59:35 AM	44153

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SW17
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-093 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	110	60	mg/Kg	20	4/10/2019 9:23:02 PM	44272
EPA METHOD 8015D MOD: GASOLINE RANGE	<u>:</u>				Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/9/2019 12:38:07 PM	44157
Surr: BFB	102	70-130	%Rec	1	4/9/2019 12:38:07 PM	44157
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS				Analyst	JME
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	4/10/2019 6:01:36 AM	44186
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	4/10/2019 6:01:36 AM	44186
Surr: DNOP	85.5	70-130	%Rec	1	4/10/2019 6:01:36 AM	44186
EPA METHOD 8260B: VOLATILES SHORT LIST	Г				Analyst	RAA
Benzene	ND	0.025	mg/Kg	1	4/9/2019 12:38:07 PM	44157
Toluene	ND	0.049	mg/Kg	1	4/9/2019 12:38:07 PM	44157
Ethylbenzene	ND	0.049	mg/Kg	1	4/9/2019 12:38:07 PM	44157
Xylenes, Total	ND	0.099	mg/Kg	1	4/9/2019 12:38:07 PM	44157
Surr: 1,2-Dichloroethane-d4	86.2	70-130	%Rec	1	4/9/2019 12:38:07 PM	44157
Surr: 4-Bromofluorobenzene	104	70-130	%Rec	1	4/9/2019 12:38:07 PM	44157
Surr: Dibromofluoromethane	88.6	70-130	%Rec	1	4/9/2019 12:38:07 PM	44157
Surr: Toluene-d8	94.4	70-130	%Rec	1	4/9/2019 12:38:07 PM	44157

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SW18
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-094 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	130	60	mg/Kg	20	4/10/2019 9:35:27 PM	44272
EPA METHOD 8015D MOD: GASOLINE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/9/2019 2:04:01 PM	44157
Surr: BFB	104	70-130	%Rec	1	4/9/2019 2:04:01 PM	44157
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	9.2	mg/Kg	1	4/10/2019 6:25:45 AM	44186
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	4/10/2019 6:25:45 AM	44186
Surr: DNOP	74.1	70-130	%Rec	1	4/10/2019 6:25:45 AM	44186
EPA METHOD 8260B: VOLATILES SHORT LIST	Г				Analyst	: RAA
Benzene	ND	0.025	mg/Kg	1	4/9/2019 2:04:01 PM	44157
Toluene	ND	0.049	mg/Kg	1	4/9/2019 2:04:01 PM	44157
Ethylbenzene	ND	0.049	mg/Kg	1	4/9/2019 2:04:01 PM	44157
Xylenes, Total	ND	0.098	mg/Kg	1	4/9/2019 2:04:01 PM	44157
Surr: 1,2-Dichloroethane-d4	85.8	70-130	%Rec	1	4/9/2019 2:04:01 PM	44157
Surr: 4-Bromofluorobenzene	102	70-130	%Rec	1	4/9/2019 2:04:01 PM	44157
Surr: Dibromofluoromethane	87.9	70-130	%Rec	1	4/9/2019 2:04:01 PM	44157
Surr: Toluene-d8	94.2	70-130	%Rec	1	4/9/2019 2:04:01 PM	44157

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SW19

Collection Date: 4/3/2019

Lab ID: 1904351-095 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	96	60	mg/Kg	20	4/10/2019 9:47:52 PM	44272
EPA METHOD 8015D MOD: GASOLINE RANGE	<u> </u>				Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/9/2019 2:32:32 PM	44157
Surr: BFB	103	70-130	%Rec	1	4/9/2019 2:32:32 PM	44157
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS				Analyst	CLP
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	4/10/2019 4:28:55 PM	44186
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/10/2019 4:28:55 PM	44186
Surr: DNOP	97.2	70-130	%Rec	1	4/10/2019 4:28:55 PM	44186
EPA METHOD 8260B: VOLATILES SHORT LIST	Γ				Analyst	RAA
Benzene	ND	0.025	mg/Kg	1	4/9/2019 2:32:32 PM	44157
Toluene	ND	0.049	mg/Kg	1	4/9/2019 2:32:32 PM	44157
Ethylbenzene	ND	0.049	mg/Kg	1	4/9/2019 2:32:32 PM	44157
Xylenes, Total	ND	0.099	mg/Kg	1	4/9/2019 2:32:32 PM	44157
Surr: 1,2-Dichloroethane-d4	84.8	70-130	%Rec	1	4/9/2019 2:32:32 PM	44157
Surr: 4-Bromofluorobenzene	104	70-130	%Rec	1	4/9/2019 2:32:32 PM	44157
Surr: Dibromofluoromethane	86.6	70-130	%Rec	1	4/9/2019 2:32:32 PM	44157
Surr: Toluene-d8	92.1	70-130	%Rec	1	4/9/2019 2:32:32 PM	44157

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SW20
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-096 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	110	60	mg/Kg	20	4/10/2019 10:25:05 PM	44272
EPA METHOD 8015D MOD: GASOLINE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	4/9/2019 3:01:07 PM	44157
Surr: BFB	97.7	70-130	%Rec	1	4/9/2019 3:01:07 PM	44157
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS				Analyst	CLP
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	4/10/2019 4:53:19 PM	44186
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/10/2019 4:53:19 PM	44186
Surr: DNOP	96.3	70-130	%Rec	1	4/10/2019 4:53:19 PM	44186
EPA METHOD 8260B: VOLATILES SHORT LIST	-				Analyst	RAA
Benzene	ND	0.023	mg/Kg	1	4/9/2019 3:01:07 PM	44157
Toluene	ND	0.046	mg/Kg	1	4/9/2019 3:01:07 PM	44157
Ethylbenzene	ND	0.046	mg/Kg	1	4/9/2019 3:01:07 PM	44157
Xylenes, Total	ND	0.092	mg/Kg	1	4/9/2019 3:01:07 PM	44157
Surr: 1,2-Dichloroethane-d4	84.9	70-130	%Rec	1	4/9/2019 3:01:07 PM	44157
Surr: 4-Bromofluorobenzene	98.7	70-130	%Rec	1	4/9/2019 3:01:07 PM	44157
Surr: Dibromofluoromethane	88.8	70-130	%Rec	1	4/9/2019 3:01:07 PM	44157
Surr: Toluene-d8	92.8	70-130	%Rec	1	4/9/2019 3:01:07 PM	44157

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SW21
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-097 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	MRA
Chloride	360	60	mg/Kg	20	4/10/2019 10:37:30 PM	44272
EPA METHOD 8015D MOD: GASOLINE RANGE	<u> </u>				Analyst:	RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/9/2019 3:29:39 PM	44157
Surr: BFB	100	70-130	%Rec	1	4/9/2019 3:29:39 PM	44157
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS				Analyst	CLP
Diesel Range Organics (DRO)	ND	8.9	mg/Kg	1	4/10/2019 5:17:45 PM	44186
Motor Oil Range Organics (MRO)	ND	44	mg/Kg	1	4/10/2019 5:17:45 PM	44186
Surr: DNOP	79.3	70-130	%Rec	1	4/10/2019 5:17:45 PM	44186
EPA METHOD 8260B: VOLATILES SHORT LIST	Γ				Analyst	RAA
Benzene	ND	0.024	mg/Kg	1	4/9/2019 3:29:39 PM	44157
Toluene	ND	0.049	mg/Kg	1	4/9/2019 3:29:39 PM	44157
Ethylbenzene	ND	0.049	mg/Kg	1	4/9/2019 3:29:39 PM	44157
Xylenes, Total	ND	0.097	mg/Kg	1	4/9/2019 3:29:39 PM	44157
Surr: 1,2-Dichloroethane-d4	84.3	70-130	%Rec	1	4/9/2019 3:29:39 PM	44157
Surr: 4-Bromofluorobenzene	100	70-130	%Rec	1	4/9/2019 3:29:39 PM	44157
Surr: Dibromofluoromethane	88.7	70-130	%Rec	1	4/9/2019 3:29:39 PM	44157
Surr: Toluene-d8	91.5	70-130	%Rec	1	4/9/2019 3:29:39 PM	44157

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SW22

Project: LVP SWD

Collection Date: 4/3/2019

Lab ID: 1904351-098 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	71	60	mg/Kg	20	4/10/2019 10:49:55 PM	44272
EPA METHOD 8015D MOD: GASOLINE RANG	E				Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/9/2019 3:58:10 PM	44157
Surr: BFB	103	70-130	%Rec	1	4/9/2019 3:58:10 PM	44157
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	CLP
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	4/10/2019 5:42:05 PM	44186
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/10/2019 5:42:05 PM	44186
Surr: DNOP	126	70-130	%Rec	1	4/10/2019 5:42:05 PM	44186
EPA METHOD 8260B: VOLATILES SHORT LIS	ST .				Analyst	RAA
Benzene	ND	0.024	mg/Kg	1	4/9/2019 3:58:10 PM	44157
Toluene	ND	0.047	mg/Kg	1	4/9/2019 3:58:10 PM	44157
Ethylbenzene	ND	0.047	mg/Kg	1	4/9/2019 3:58:10 PM	44157
Xylenes, Total	ND	0.095	mg/Kg	1	4/9/2019 3:58:10 PM	44157
Surr: 1,2-Dichloroethane-d4	82.1	70-130	%Rec	1	4/9/2019 3:58:10 PM	44157
Surr: 4-Bromofluorobenzene	105	70-130	%Rec	1	4/9/2019 3:58:10 PM	44157
Surr: Dibromofluoromethane	88.0	70-130	%Rec	1	4/9/2019 3:58:10 PM	44157
Surr: Toluene-d8	93.4	70-130	%Rec	1	4/9/2019 3:58:10 PM	44157

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SW23
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-099 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	MRA
Chloride	110	60	mg/Kg	20	4/10/2019 11:02:20 PM	44272
EPA METHOD 8015D MOD: GASOLINE RANGE	=				Analyst:	RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/9/2019 4:26:39 PM	44157
Surr: BFB	103	70-130	%Rec	1	4/9/2019 4:26:39 PM	44157
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS				Analyst	CLP
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	4/10/2019 6:06:20 PM	44186
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	4/10/2019 6:06:20 PM	44186
Surr: DNOP	93.9	70-130	%Rec	1	4/10/2019 6:06:20 PM	44186
EPA METHOD 8260B: VOLATILES SHORT LIS	Т				Analyst	RAA
Benzene	ND	0.024	mg/Kg	1	4/9/2019 4:26:39 PM	44157
Toluene	ND	0.048	mg/Kg	1	4/9/2019 4:26:39 PM	44157
Ethylbenzene	ND	0.048	mg/Kg	1	4/9/2019 4:26:39 PM	44157
Xylenes, Total	ND	0.097	mg/Kg	1	4/9/2019 4:26:39 PM	44157
Surr: 1,2-Dichloroethane-d4	85.3	70-130	%Rec	1	4/9/2019 4:26:39 PM	44157
Surr: 4-Bromofluorobenzene	104	70-130	%Rec	1	4/9/2019 4:26:39 PM	44157
Surr: Dibromofluoromethane	85.5	70-130	%Rec	1	4/9/2019 4:26:39 PM	44157
Surr: Toluene-d8	92.7	70-130	%Rec	1	4/9/2019 4:26:39 PM	44157

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SW24
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-100 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	260	60	mg/Kg	20	4/10/2019 11:14:45 PM	44272
EPA METHOD 8015D MOD: GASOLINE RANGE	=				Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/9/2019 4:55:17 PM	44157
Surr: BFB	101	70-130	%Rec	1	4/9/2019 4:55:17 PM	44157
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS				Analyst	CLP
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	4/10/2019 6:30:27 PM	44186
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	4/10/2019 6:30:27 PM	44186
Surr: DNOP	82.4	70-130	%Rec	1	4/10/2019 6:30:27 PM	44186
EPA METHOD 8260B: VOLATILES SHORT LIST	Т				Analyst	RAA
Benzene	ND	0.024	mg/Kg	1	4/9/2019 4:55:17 PM	44157
Toluene	ND	0.048	mg/Kg	1	4/9/2019 4:55:17 PM	44157
Ethylbenzene	ND	0.048	mg/Kg	1	4/9/2019 4:55:17 PM	44157
Xylenes, Total	ND	0.097	mg/Kg	1	4/9/2019 4:55:17 PM	44157
Surr: 1,2-Dichloroethane-d4	85.5	70-130	%Rec	1	4/9/2019 4:55:17 PM	44157
Surr: 4-Bromofluorobenzene	101	70-130	%Rec	1	4/9/2019 4:55:17 PM	44157
Surr: Dibromofluoromethane	89.9	70-130	%Rec	1	4/9/2019 4:55:17 PM	44157
Surr: Toluene-d8	92.6	70-130	%Rec	1	4/9/2019 4:55:17 PM	44157

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

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SW25
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-101 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	MRA
Chloride	130	60	mg/Kg	20	4/10/2019 11:27:09 PM	44272
EPA METHOD 8015D MOD: GASOLINE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/9/2019 5:23:49 PM	44157
Surr: BFB	100	70-130	%Rec	1	4/9/2019 5:23:49 PM	44157
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS				Analyst	CLP
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	4/10/2019 6:54:31 PM	44186
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/10/2019 6:54:31 PM	44186
Surr: DNOP	85.7	70-130	%Rec	1	4/10/2019 6:54:31 PM	44186
EPA METHOD 8260B: VOLATILES SHORT LIST					Analyst	RAA
Benzene	ND	0.024	mg/Kg	1	4/9/2019 5:23:49 PM	44157
Toluene	ND	0.048	mg/Kg	1	4/9/2019 5:23:49 PM	44157
Ethylbenzene	ND	0.048	mg/Kg	1	4/9/2019 5:23:49 PM	44157
Xylenes, Total	ND	0.096	mg/Kg	1	4/9/2019 5:23:49 PM	44157
Surr: 1,2-Dichloroethane-d4	84.5	70-130	%Rec	1	4/9/2019 5:23:49 PM	44157
Surr: 4-Bromofluorobenzene	101	70-130	%Rec	1	4/9/2019 5:23:49 PM	44157
Surr: Dibromofluoromethane	87.2	70-130	%Rec	1	4/9/2019 5:23:49 PM	44157
Surr: Toluene-d8	93.0	70-130	%Rec	1	4/9/2019 5:23:49 PM	44157

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SW26
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-102 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	380	60	mg/Kg	20	4/10/2019 11:39:34 PM	44272
EPA METHOD 8015D MOD: GASOLINE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/9/2019 5:52:23 PM	44157
Surr: BFB	102	70-130	%Rec	1	4/9/2019 5:52:23 PM	44157
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS				Analyst	CLP
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	4/10/2019 7:18:33 PM	44186
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/10/2019 7:18:33 PM	44186
Surr: DNOP	88.8	70-130	%Rec	1	4/10/2019 7:18:33 PM	44186
EPA METHOD 8260B: VOLATILES SHORT LIST	Г				Analyst	RAA
Benzene	ND	0.024	mg/Kg	1	4/9/2019 5:52:23 PM	44157
Toluene	ND	0.048	mg/Kg	1	4/9/2019 5:52:23 PM	44157
Ethylbenzene	ND	0.048	mg/Kg	1	4/9/2019 5:52:23 PM	44157
Xylenes, Total	ND	0.097	mg/Kg	1	4/9/2019 5:52:23 PM	44157
Surr: 1,2-Dichloroethane-d4	85.6	70-130	%Rec	1	4/9/2019 5:52:23 PM	44157
Surr: 4-Bromofluorobenzene	100	70-130	%Rec	1	4/9/2019 5:52:23 PM	44157
Surr: Dibromofluoromethane	89.5	70-130	%Rec	1	4/9/2019 5:52:23 PM	44157
Surr: Toluene-d8	91.9	70-130	%Rec	1	4/9/2019 5:52:23 PM	44157

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SW27

Project: LVP SWD

Collection Date: 4/3/2019

Lab ID: 1904351-103 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	MRA
Chloride	120	60	mg/Kg	20	4/10/2019 11:51:59 PM	44272
EPA METHOD 8015D MOD: GASOLINE RANGE	Ξ				Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/9/2019 6:21:06 PM	44157
Surr: BFB	103	70-130	%Rec	1	4/9/2019 6:21:06 PM	44157
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS				Analyst	CLP
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	4/10/2019 7:42:31 PM	44186
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/10/2019 7:42:31 PM	44186
Surr: DNOP	81.9	70-130	%Rec	1	4/10/2019 7:42:31 PM	44186
EPA METHOD 8260B: VOLATILES SHORT LIS	Т				Analyst	RAA
Benzene	ND	0.024	mg/Kg	1	4/9/2019 6:21:06 PM	44157
Toluene	ND	0.047	mg/Kg	1	4/9/2019 6:21:06 PM	44157
Ethylbenzene	ND	0.047	mg/Kg	1	4/9/2019 6:21:06 PM	44157
Xylenes, Total	ND	0.094	mg/Kg	1	4/9/2019 6:21:06 PM	44157
Surr: 1,2-Dichloroethane-d4	85.0	70-130	%Rec	1	4/9/2019 6:21:06 PM	44157
Surr: 4-Bromofluorobenzene	104	70-130	%Rec	1	4/9/2019 6:21:06 PM	44157
Surr: Dibromofluoromethane	90.0	70-130	%Rec	1	4/9/2019 6:21:06 PM	44157
Surr: Toluene-d8	94.7	70-130	%Rec	1	4/9/2019 6:21:06 PM	44157

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SW28
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-104 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	130	60	mg/Kg	20	4/11/2019 12:04:23 AM	44272
EPA METHOD 8015D MOD: GASOLINE RANGE	=				Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	4/9/2019 6:49:38 PM	44157
Surr: BFB	104	70-130	%Rec	1	4/9/2019 6:49:38 PM	44157
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS				Analyst	CLP
Diesel Range Organics (DRO)	ND	9.1	mg/Kg	1	4/10/2019 8:06:25 PM	44186
Motor Oil Range Organics (MRO)	ND	45	mg/Kg	1	4/10/2019 8:06:25 PM	44186
Surr: DNOP	82.7	70-130	%Rec	1	4/10/2019 8:06:25 PM	44186
EPA METHOD 8260B: VOLATILES SHORT LIST	Т				Analyst	RAA
Benzene	ND	0.023	mg/Kg	1	4/9/2019 6:49:38 PM	44157
Toluene	ND	0.046	mg/Kg	1	4/9/2019 6:49:38 PM	44157
Ethylbenzene	ND	0.046	mg/Kg	1	4/9/2019 6:49:38 PM	44157
Xylenes, Total	ND	0.092	mg/Kg	1	4/9/2019 6:49:38 PM	44157
Surr: 1,2-Dichloroethane-d4	86.6	70-130	%Rec	1	4/9/2019 6:49:38 PM	44157
Surr: 4-Bromofluorobenzene	105	70-130	%Rec	1	4/9/2019 6:49:38 PM	44157
Surr: Dibromofluoromethane	90.0	70-130	%Rec	1	4/9/2019 6:49:38 PM	44157
Surr: Toluene-d8	93.0	70-130	%Rec	1	4/9/2019 6:49:38 PM	44157

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD

Client Sample ID: SW29

Collection Date: 4/3/2019

Lab ID: 1904351-105 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	93	60	mg/Kg	20	4/11/2019 12:16:48 AM	44272
EPA METHOD 8015D MOD: GASOLINE RANGE	=				Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	4/9/2019 7:18:10 PM	44157
Surr: BFB	102	70-130	%Rec	1	4/9/2019 7:18:10 PM	44157
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS				Analyst	CLP
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	4/10/2019 8:30:17 PM	44186
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/10/2019 8:30:17 PM	44186
Surr: DNOP	76.1	70-130	%Rec	1	4/10/2019 8:30:17 PM	44186
EPA METHOD 8260B: VOLATILES SHORT LIS	Т				Analyst	RAA
Benzene	ND	0.024	mg/Kg	1	4/9/2019 7:18:10 PM	44157
Toluene	ND	0.049	mg/Kg	1	4/9/2019 7:18:10 PM	44157
Ethylbenzene	ND	0.049	mg/Kg	1	4/9/2019 7:18:10 PM	44157
Xylenes, Total	ND	0.097	mg/Kg	1	4/9/2019 7:18:10 PM	44157
Surr: 1,2-Dichloroethane-d4	86.2	70-130	%Rec	1	4/9/2019 7:18:10 PM	44157
Surr: 4-Bromofluorobenzene	103	70-130	%Rec	1	4/9/2019 7:18:10 PM	44157
Surr: Dibromofluoromethane	88.7	70-130	%Rec	1	4/9/2019 7:18:10 PM	44157
Surr: Toluene-d8	92.4	70-130	%Rec	1	4/9/2019 7:18:10 PM	44157

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

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SW30

Project: LVP SWD

Collection Date: 4/3/2019

Lab ID: 1904351-106 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	110	60	mg/Kg	20	4/11/2019 12:54:01 AM	44272
EPA METHOD 8015D MOD: GASOLINE RANGE	.				Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	4/9/2019 7:46:51 PM	44157
Surr: BFB	103	70-130	%Rec	1	4/9/2019 7:46:51 PM	44157
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS				Analyst	CLP
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	4/10/2019 8:54:04 PM	44186
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	4/10/2019 8:54:04 PM	44186
Surr: DNOP	89.6	70-130	%Rec	1	4/10/2019 8:54:04 PM	44186
EPA METHOD 8260B: VOLATILES SHORT LIST	Т				Analyst	RAA
Benzene	ND	0.023	mg/Kg	1	4/9/2019 7:46:51 PM	44157
Toluene	ND	0.046	mg/Kg	1	4/9/2019 7:46:51 PM	44157
Ethylbenzene	ND	0.046	mg/Kg	1	4/9/2019 7:46:51 PM	44157
Xylenes, Total	ND	0.093	mg/Kg	1	4/9/2019 7:46:51 PM	44157
Surr: 1,2-Dichloroethane-d4	84.4	70-130	%Rec	1	4/9/2019 7:46:51 PM	44157
Surr: 4-Bromofluorobenzene	105	70-130	%Rec	1	4/9/2019 7:46:51 PM	44157
Surr: Dibromofluoromethane	87.9	70-130	%Rec	1	4/9/2019 7:46:51 PM	44157
Surr: Toluene-d8	92.5	70-130	%Rec	1	4/9/2019 7:46:51 PM	44157

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Date Reported: 4/16/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP257
Project: LVP SWD
Collection Date: 4/3/2019

Lab ID: 1904351-107 **Matrix:** SOIL **Received Date:** 4/5/2019 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	130	60		mg/Kg	20	4/11/2019 11:35:22 AM	44289
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	CLP
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/11/2019 8:30:06 AM	44266
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/11/2019 8:30:06 AM	44266
Surr: DNOP	139	70-130	S	%Rec	1	4/11/2019 8:30:06 AM	44266
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/14/2019 12:59:46 AM	44270
Surr: BFB	88.0	73.8-119		%Rec	1	4/14/2019 12:59:46 AM	44270
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.023		mg/Kg	1	4/14/2019 12:59:46 AM	44270
Toluene	ND	0.046		mg/Kg	1	4/14/2019 12:59:46 AM	44270
Ethylbenzene	ND	0.046		mg/Kg	1	4/14/2019 12:59:46 AM	44270
Xylenes, Total	ND	0.093		mg/Kg	1	4/14/2019 12:59:46 AM	44270
Surr: 4-Bromofluorobenzene	89.3	80-120		%Rec	1	4/14/2019 12:59:46 AM	44270

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

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1904351**

16-Apr-19

Client: WPX Energy Project: LVP SWD

Sample ID: MB-44224 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 44224 RunNo: 59030

Prep Date: 4/9/2019 Analysis Date: 4/9/2019 SeqNo: 1986298 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride ND 1.5

Sample ID: LCS-44224 SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 44224 RunNo: 59030

Prep Date: 4/9/2019 Analysis Date: 4/9/2019 SeqNo: 1986300 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride 14 1.5 15.00 0 96.2 90 110

Sample ID: MB-44240 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 44240 RunNo: 59030

Prep Date: 4/9/2019 Analysis Date: 4/9/2019 SeqNo: 1986360 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride ND 1.5

Sample ID: LCS-44240 SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 44240 RunNo: 59030

Prep Date: 4/9/2019 Analysis Date: 4/9/2019 SeqNo: 1986362 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride 14 1.5 15.00 0 96.1 90 110

Sample ID: MB-44223 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: **PBS** Batch ID: **44223** RunNo: **59031**

Prep Date: 4/9/2019 Analysis Date: 4/9/2019 SeqNo: 1986954 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride ND 1.5

Sample ID: LCS-44223 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 44223 RunNo: 59031

Prep Date: 4/9/2019 Analysis Date: 4/9/2019 SeqNo: 1986955 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride 14 1.5 15.00 0 93.9 90 110

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1904351**

16-Apr-19

Client: WPX Energy
Project: LVP SWD

Sample ID: MB-44242 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 44242 RunNo: 59031

Prep Date: 4/9/2019 Analysis Date: 4/9/2019 SeqNo: 1986985 Units: mq/Kq

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride ND 1.5

Sample ID: LCS-44242 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 44242 RunNo: 59031

Prep Date: 4/9/2019 Analysis Date: 4/9/2019 SeqNo: 1986986 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride 14 1.5 15.00 0 95.0 90 110

Sample ID: MB-44258 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 44258 RunNo: 59068

Prep Date: 4/10/2019 Analysis Date: 4/10/2019 SeqNo: 1988358 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride ND 1.5

Sample ID: LCS-44258 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 44258 RunNo: 59068

Prep Date: 4/10/2019 Analysis Date: 4/10/2019 SeqNo: 1988359 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride 14 1.5 15.00 0 91.9 90 110

Sample ID: MB-44272 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 44272 RunNo: 59068

Prep Date: 4/10/2019 Analysis Date: 4/10/2019 SeqNo: 1988388 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride ND 1.5

Sample ID: LCS-44272 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 44272 RunNo: 59068

Prep Date: 4/10/2019 Analysis Date: 4/10/2019 SeqNo: 1988389 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride 14 1.5 15.00 0 92.0 90 110

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1904351**

16-Apr-19

Client: WPX Energy
Project: LVP SWD

Sample ID: MB-44289 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: **PBS** Batch ID: **44289** RunNo: **59093**

Prep Date: 4/11/2019 Analysis Date: 4/11/2019 SeqNo: 1989069 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride ND 1.5

Sample ID: LCS-44289 SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 44289 RunNo: 59093

Prep Date: 4/11/2019 Analysis Date: 4/11/2019 SeqNo: 1989070 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride 15 1.5 15.00 0 96.9 90 110

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1904351**

16-Apr-19

Client:	WPX Energy
Project:	LVP SWD

LVP SV	VD					
Sample ID: MB-44152	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics				
Client ID: PBS	Batch ID: 44152	RunNo: 58967				
Prep Date: 4/5/2019	Analysis Date: 4/8/2019	SeqNo: 1983700 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	101 70 130				
Surr: DNOP	10 10.00	101 70 130				
Sample ID: LCS-44152	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics				
Client ID: LCSS	Batch ID: 44152	RunNo: 58967				
Prep Date: 4/5/2019	Analysis Date: 4/8/2019	SeqNo: 1984046 Units: mg/Kg				
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit	Qual			
Diesel Range Organics (DRO)	44 10 50.00	0 87.1 63.9 124				
Surr: DNOP	4.7 5.000	94.2 70 130				
Sample ID: LCS-44183	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics				
Client ID: LCSS	Batch ID: 44183	RunNo: 59005				
Prep Date: 4/8/2019	Analysis Date: 4/9/2019	SeqNo: 1985348 Units: mg/Kg	Units: mg/Kg			
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit	Qual			
Diesel Range Organics (DRO)	52 10 50.00	0 104 63.9 124				
Surr: DNOP	4.6 5.000	91.8 70 130				
Sample ID: MB-44183	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics				
Client ID: PBS	Batch ID: 44183	RunNo: 59005				
Prep Date: 4/8/2019	Analysis Date: 4/9/2019	SeqNo: 1985349 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	9.7 10.00	97.5 70 130				
Sample ID: LCS-44185	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics	_			
Client ID: LCSS	Batch ID: 44185	RunNo: 59005				
Prep Date: 4/8/2019	Analysis Date: 4/9/2019	SeqNo: 1985350 Units: mg/Kg				
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit	Qual			
Diesel Range Organics (DRO)	50 10 50.00	0 100 63.9 124				
Surr: DNOP	4.5 5.000	89.6 70 130				

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1904351**

16-Apr-19

Client:	WPX Energy
Project:	LVP SWD

Eve sv	νυ 					
Sample ID: MB-44185	SampType: MBLK	TestCode: EPA Method	8015M/D: Diesel Range Organics			
Client ID: PBS	Batch ID: 44185	RunNo: 59005				
Prep Date: 4/8/2019	Analysis Date: 4/9/2019	SeqNo: 1985351	Units: mg/Kg			
Analyte		e SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual			
Diesel Range Organics (DRO)	ND 10					
Motor Oil Range Organics (MRO)	ND 50					
Surr: DNOP	9.2 10.0	0 92.0 70	130			
Sample ID: LCS-44182	SampType: LCS	TestCode: EPA Method	8015M/D: Diesel Range Organics			
Client ID: LCSS	Batch ID: 44182	RunNo: 59005				
Prep Date: 4/8/2019	Analysis Date: 4/9/2019	SeqNo: 1985352	Units: mg/Kg			
Analyte	Result PQL SPK valu	e SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual			
Diesel Range Organics (DRO)	51 10 50.0	0 0 102 63.9	124			
Surr: DNOP	4.6 5.00	0 92.2 70	130			
Sample ID: MB-44182	SampType: MBLK	TestCode: EPA Method	8015M/D: Diesel Range Organics			
Client ID: PBS	Batch ID: 44182	RunNo: 59005				
Prep Date: 4/8/2019	Analysis Date: 4/9/2019	SeqNo: 1985353	Units: mg/Kg			
Analyte	Result PQL SPK valu	e SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual			
Diesel Range Organics (DRO)	ND 10					
Motor Oil Range Organics (MRO)	ND 50					
Surr: DNOP	10 10.0	0 104 70	130			
Sample ID: LCS-44184	SampType: LCS	TestCode: EPA Method	8015M/D: Diesel Range Organics			
Client ID: LCSS	Batch ID: 44184	RunNo: 59005				
Prep Date: 4/8/2019	Analysis Date: 4/9/2019	SeqNo: 1985355	Units: mg/Kg			
Analyte	Result PQL SPK valu	e SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual			
Diesel Range Organics (DRO)	49 10 50.0	0 0 98.2 63.9	124			
Surr: DNOP	4.4 5.00	0 87.3 70	130			
Sample ID: MB-44184	SampType: MBLK	TestCode: EPA Method	8015M/D: Diesel Range Organics			
Client ID: PBS	Batch ID: 44184	RunNo: 59005				
Prep Date: 4/8/2019	Analysis Date: 4/9/2019	SeqNo: 1985356	Units: mg/Kg			
Analyte	Result PQL SPK valu	e SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual			
Diesel Range Organics (DRO)	ND 10					
Motor Oil Range Organics (MRO)	ND 50					
Surr: DNOP	9.0 10.0	0 90.4 70	130			

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1904351**

16-Apr-19

Client: WPX Energy Project: LVP SWD

Sample ID: LCS-44186	SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics						e Organics			
Client ID: LCSS	Batch	n ID: 44	186	F	RunNo: 5	9005				
Prep Date: 4/8/2019	Analysis D	oate: 4/	9/2019	8	SeqNo: 1	985475	Units: mg/h	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	10	50.00	0	107	63.9	124			
Surr: DNOP	4.8		5.000		96.4	70	130			
Sample ID: MB-44186	SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics									
Client ID: PBS	Batch	n ID: 44	186	F	RunNo: 5	9005				
Prep Date: 4/8/2019	Analysis D	oate: 4/	9/2019	8	SeqNo: 1	985476	Units: mg/h	(g		
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	14		10.00		136	70	130			S

Sample ID: 1904351-032AMS	SampT	SampType: MS TestCode: EPA Method 8015						sel Range	e Organics	
Client ID: SP289	Batch	ch ID: 44183 RunNo: 59005								
Prep Date: 4/8/2019	Analysis D	ate: 4/	9/2019	SeqNo: 1985479			Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	9.5	47.71	0	101	53.5	126			
Surr: DNOP	4.3		4.771		89.6	70	130			

Sample ID: 1904351-032AMSE	SampT	уре: М \$	SD	TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: SP289	Batch ID: 44183			RunNo: 59005						
Prep Date: 4/8/2019	Analysis Date: 4/9/2019			SeqNo: 1985480			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	9.0	44.92	0	102	53.5	126	5.33	21.7	
Surr: DNOP	4.1		4.492		92.2	70	130	0	0	

Sample ID: 1904351-052AMS	SampType: MS			TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: SP309	Batch ID: 44184 Analysis Date: 4/9/2019			RunNo: 59005							
Prep Date: 4/8/2019				SeqNo: 1985729			Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	48	9.9	49.60	0	97.0	53.5	126				
Surr: DNOP	1.7		4.960		33.7	70	130			S	

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1904351**

16-Apr-19

Client: WPX Energy Project: LVP SWD

Sample ID: 1904351-052AMSE	SampTy	ype: MS	SD.	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: SP309	Batch	ID: 441	184	F	RunNo: 5	9005				
Prep Date: 4/8/2019	Analysis Da	ate: 4/	9/2019	8	SeqNo: 1	985730	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	9.6	48.03	0	94.5	53.5	126	5.79	21.7	
Surr: DNOP	1.5		4.803		30.7	70	130	0	0	S
Sample ID: 1904351-012AMS	SampTy	ype: MS	;	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	·
Client ID: SP269	Batch	ID: 441	182	F	RunNo: 5	9025				

Sample ID: 1904351-012AMS	SampT	ype: MS	3	Tes	tCode: E l	PA Method	8015M/D: Di	esel Range	e Organics	
Client ID: SP269	Batch	n ID: 44	182	F	RunNo: 5	9025				
Prep Date: 4/8/2019	Analysis D	ate: 4/	9/2019	S	SeqNo: 1	986168	Units: mg/k	ζg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	9.8	49.12	0	92.6	53.5	126			
Surr: DNOP	3.6		4.912		73.9	70	130			

Sample ID: 1904351-092AMS	SampT	уре: М \$	3	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: SW16	Batch	ID: 44	186	R	RunNo: 5	9025				
Prep Date: 4/8/2019	Analysis D	ate: 4/	10/2019	S	SeqNo: 1	986170	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	9.7	48.73	0	85.5	53.5	126			
Surr: DNOP	3.5		4.873		71.1	70	130			

Sample ID: 1904351-012AMSD	SampT	/pe: MS	SD	Tes	tCode: El	PA Method	8015M/D: Di	esel Range	e Organics	
Client ID: SP269	Batch	ID: 44	182	F	RunNo: 5	9025				
Prep Date: 4/8/2019	Analysis Da	ate: 4/	9/2019	S	SeqNo: 1	986171	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	9.3	46.73	0	94.1	53.5	126	3.39	21.7	
Surr: DNOP	3.5		4.673		75.5	70	130	0	0	

Sample ID: 1904351-092AMSI	SampT	/pe: MS	SD	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: SW16	Batch	ID: 44	186	F	RunNo: 5	9025				
Prep Date: 4/8/2019	Analysis Da	ate: 4/	10/2019	S	SeqNo: 1	986173	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	9.6	47.80	0	89.3	53.5	126	2.42	21.7	
Surr: DNOP	3.5		4.780		74.2	70	130	0	0	

Sample ID: MB-44266	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: PBS	Batch ID: 44266	RunNo: 59043
Prep Date: 4/10/2019	Analysis Date: 4/11/2019	SeqNo: 1989013 Units: mg/Kg
Analyte	Result PQL SPK value S	PK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1904351**

16-Apr-19

Client:	WPX Energy
Project:	LVP SWD

Sample ID: MB-44266	Samp1	Гуре: МЕ	BLK	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: PBS	Batc	h ID: 44 2	266	F	RunNo: 5 9	9043			•	
Prep Date: 4/10/2019	Analysis D	Date: 4/	11/2019	S	SeqNo: 19	989013	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10					<u> </u>			
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		106	70	130			
Sample ID: LCS-44266	SampT	Гуре: LC	s	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: LCSS	Batcl	h ID: 442	266	F	RunNo: 5 9	9043				
Prep Date: 4/10/2019	Analysis D)ate: 4/	11/2019	S	SeqNo: 19	989014	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	92.2	63.9	124			
Surr: DNOP	4.7		5.000		94.0	70	130			
Sample ID: 1904351-072AMS	SampT	Гуре: МЅ	3	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: SP329	Batcl	h ID: 44 1	185	F	RunNo: 59	9076				
Prep Date: 4/8/2019	Analysis D)ate: 4/	12/2019	S	SeqNo: 19	989747	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	9.2	46.21	0	95.2	53.5	126			
Surr: DNOP	2.3		4.621		49.1	70	130			S
Sample ID: 1904351-072AMSI	SampT	Гуре: МЅ	SD	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: SP329	Batch	h ID: 44 1	185	F	RunNo: 5 9	9076				
Prep Date: 4/8/2019	Analysis D)ate: 4/	12/2019	S	SeqNo: 19	989748	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
J										
Diesel Range Organics (DRO)	42	10	50.86	0	82.8	53.5	126	4.36	21.7	
•	42 1.6	10	50.86 5.086	0	82.8 31.4	53.5 70	126 130	4.36 0	21.7 0	S
Diesel Range Organics (DRO)	1.6	10 Гуре: МЕ	5.086		31.4	70		0	0	S
Diesel Range Organics (DRO) Surr: DNOP	1.6 SampT		5.086	Tes	31.4	70 PA Method	130	0	0	S
Diesel Range Organics (DRO) Surr: DNOP Sample ID: MB-44296	1.6 SampT	Гуре: МЕ h ID: 442	5.086 BLK 296	Tes	31.4 tCode: EF	70 PA Method 9115	130	0 esel Rango	0	S
Diesel Range Organics (DRO) Surr: DNOP Sample ID: MB-44296 Client ID: PBS	1.6 SampT Batcl	Гуре: МЕ h ID: 442	5.086 BLK 296 12/2019	Tes	31.4 tCode: EF RunNo: 5 9	70 PA Method 9115	130 8015M/D: Di d	0 esel Rango	0	S Qual
Diesel Range Organics (DRO) Surr: DNOP Sample ID: MB-44296 Client ID: PBS Prep Date: 4/11/2019	1.6 SampT Batcl Analysis E	Гуре: МЕ h ID: 44 2 Date: 4 /	5.086 BLK 296 12/2019	Tes F	31.4 tCode: EF RunNo: 59 SeqNo: 19	70 PA Method 9115 990924	130 8015M/D: Did Units: %Red	0 esel Rango	0 e Organics	
Diesel Range Organics (DRO) Surr: DNOP Sample ID: MB-44296 Client ID: PBS Prep Date: 4/11/2019 Analyte	1.6 SampT Batcl Analysis E Result 10	Гуре: МЕ h ID: 44 2 Date: 4 /	5.086 BLK 296 12/2019 SPK value 10.00	Tes F S SPK Ref Val	31.4 tCode: EF RunNo: 59 SeqNo: 19 %REC 105	70 PA Method 9115 990924 LowLimit 70	130 8015M/D: Did Units: %Red HighLimit	0 esel Rango C %RPD	O Organics RPDLimit	

Qualifiers:

Analyte

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

Prep Date: 4/11/2019

W Sample container temperature is out of limit as specified at testcode

Analysis Date: 4/12/2019

PQL

Result

H Holding times for preparation or analysis exceeded

%REC

SeqNo: 1990925

LowLimit

Units: %Rec

%RPD

HighLimit

PQL Practical Quanitative Limit

SPK value SPK Ref Val

8 % Recovery outside of range due to dilution or matrix

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RPDLimit

Qual

Hall Environmental Analysis Laboratory, Inc.

4.6

WO#: **1904351**

16-Apr-19

Client: WPX Energy
Project: LVP SWD

Surr: DNOP

Sample ID: LCS-44296 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: **LCSS** Batch ID: **44296** RunNo: **59115**

Prep Date: 4/11/2019 Analysis Date: 4/12/2019 SeqNo: 1990925 Units: %Rec

5.000

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

92.9

130

70

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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WPX Energy

Client:

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904351**

16-Apr-19

Project:	LVP SWI	· ·									
Sample ID:	MB-44149	SampTy	ype: MI	BLK	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	e	
Client ID:	PBS	Batch	ID: 44	149	F	RunNo: 59	9056				
Prep Date:	4/5/2019	Analysis Da	ate: 4/	/10/2019	5	SeqNo: 19	987604	Units: mg/k	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang Surr: BFB	ge Organics (GRO)	ND 880	5.0	1000		88.2	73.8	119			
Sample ID:	LCS-44149	SampTy	/pe: LC	s	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	е	
Client ID:	LCSS	Batch	ID: 44	149	F	RunNo: 59	9056				
Prep Date:	4/5/2019	Analysis Da	ate: 4/	/10/2019	5	SeqNo: 19	987605	Units: mg/k	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
_	ge Organics (GRO)	25	5.0		0	99.0	80.1	123			
Surr: BFB		1000		1000		99.6	73.8	119			
Sample ID:	1904351-014AMS	SampTy	ype: M \$	3	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	e	
Client ID:	SP271	Batch	ID: 44	149	F	RunNo: 59	9056				
Prep Date:	4/5/2019	Analysis Da	ate: 4/	/10/2019	5	SeqNo: 19	987608	Units: mg/k	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
_	ge Organics (GRO)	23	4.7	23.54	0	97.0	69.1	142			
Surr: BFB		950		941.6		101	73.8	119			
Sample ID:	1904351-014AMSE	SampTy	/pe: M \$	SD	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	е	
Client ID:	SP271	Batch	ID: 44	149	F	RunNo: 59	9056				
Prep Date:	4/5/2019	Analysis Da	ate: 4/	10/2019	5	SeqNo: 19	987609	Units: mg/h	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
_	ge Organics (GRO)	23	5.0		0	91.5	69.1	142	0.143	20	
Surr: BFB		990		997.0		99.2	73.8	119	0	0	
Sample ID:	MB-44150	SampTy	ype: MI	3LK	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	е	
Client ID:	PBS	Batch	ID: 44	150	F	RunNo: 59	9056				
Prep Date:	4/5/2019	Analysis Da	ate: 4/	/10/2019	5	SeqNo: 19	987630	Units: mg/k	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	ge Organics (GRO)	ND	5.0								
Surr: BFB		900		1000		89.8	73.8	119			
Sample ID:	LCS-44150	SampTy	ype: LC	s	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	е	
Client ID:	LCSS	Batch	ID: 44	150	F	RunNo: 5 9	9056				
Prep Date:	4/5/2019	Analysis Da	ate: 4/	/10/2019	ę	SeqNo: 19	987631	Units: mg/k	(g		

Qualifiers:

Analyte

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

Result

PQL

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

SPK value SPK Ref Val %REC

S % Recovery outside of range due to dilution or matrix

LowLimit

HighLimit

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RPDLimit

%RPD

Qual

WPX Energy

LVP SWD

Client:

Project:

Hall Environmental Analysis Laboratory, Inc.

Result

910

WO#: **1904351**

16-Apr-19

Sample ID: LCS-44150	SampT	ype: LC	s	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	е	
Client ID: LCSS	Batch	ID: 44	150	F	RunNo: 5	9056				
Prep Date: 4/5/2019	Analysis D	ate: 4/	10/2019	S	SeqNo: 1	987631	Units: mg/k	(g		
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	80.1	123			
Surr: BFB	1000		1000		102	73.8	119			
Sample ID: 1904351-034AMS	SampT	уре: М \$	6	Tes	tCode: EI	PA Method	8015D: Gaso	oline Rang	e	
Client ID: SP291	Batch	ID: 44	150	F	RunNo: 5	9056				
Prep Date: 4/5/2019	Analysis D	ate: 4/	11/2019	S	SeqNo: 1	987634	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	24.88	0	92.0	69.1	142			
Surr: BFB	1000		995.0		101	73.8	119			
Sample ID: 1904351-034AMS	D SampT	уре: М \$	SD	Tes	tCode: EI	PA Method	8015D: Gaso	oline Rang	е	
Client ID: SP291	Batch	ID: 44	150	F	RunNo: 5	9056				
Prep Date: 4/5/2019	Analysis D	ate: 4/	11/2019	S	SeqNo: 1	987635	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.7	23.36	0	90.7	69.1	142	7.71	20	
Surr: BFB	970		934.6		104	73.8	119	0	0	
Sample ID: MB-44253	SampT	уре: МЕ	BLK	Tes	tCode: EI	PA Method	8015D: Gaso	line Rang	е	
Client ID: PBS	Batch	ID: 44	253	F	RunNo: 5	9130				
Prep Date: 4/10/2019	Analysis D	ate: 4/	13/2019	S	SeqNo: 1	990394	Units: %Re	С		

Sample ID: LCS-44253	SampTy	/pe: LC	S	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	е		
Client ID: LCSS	Batch	ID: 44 2	253	F	RunNo: 5	9130					
Prep Date: 4/10/2019	Analysis Da	ate: 4/	13/2019	S	SeqNo: 1	990395	Units: %Rec	:			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: BFB	1000		1000		103	73.8	119				

SPK value SPK Ref Val %REC LowLimit

1000

90.5

HighLimit

119

73.8

%RPD

RPDLimit

Qual

Sample ID: MB-44270	SampT	уре: МЕ	BLK	Test	tCode: El	PA Method	8015D: Gaso	line Rang	е	
Client ID: PBS	Batch	1D: 44 2	270	R	RunNo: 5	9130				
Prep Date: 4/10/2019	Analysis D	ate: 4/	13/2019	S	SeqNo: 1	990417	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	880		1000		87.7	73.8	119			

Qualifiers:

Analyte Surr: BFB

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1904351**

16-Apr-19

Client: WPX Energy Project: LVP SWD

Sample ID: LCS-44270	SampT	ype: LC	S	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	е	
Client ID: LCSS	Batcl	n ID: 442	270	F	RunNo: 5	9130				
Prep Date: 4/10/2019	Analysis D	Date: 4/	14/2019	5	SeqNo: 1	990418	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	94.2	80.1	123			
Surr: BFB	980		1000		97.7	73.8	119			
Sample ID: 1904351-107AMS	SampT	уре: МЅ	;	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	·
Client ID: CDOE7	Dotal	. ID: 446	20	_	DunNlas E	0400				

Sample ID: 1904351-107AMS	Samp	ype: M \$	5	Tes	tCode: El	PA Method	8015D: Gasc	line Rang	е	
Client ID: SP257	Batc	h ID: 44	270	F	RunNo: 5	9130				
Prep Date: 4/10/2019	Analysis [Date: 4/	14/2019	8	SeqNo: 1	990420	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.6	22.83	0	94.8	69.1	142			
Surr: BFB	890		913.2		97.9	73.8	119			

Sample ID: 1904351-107AMSE	SampT	ype: M \$	SD	Test	tCode: El	PA Method	8015D: Gaso	line Rang	е	
Client ID: SP257	Batch	n ID: 44	270	R	RunNo: 5	9130				
Prep Date: 4/10/2019	Analysis D	ate: 4/	14/2019	S	SeqNo: 1	990421	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.7	23.36	0	89.2	69.1	142	3.82	20	
Surr: BFB	920		934.6		98.1	73.8	119	0	0	

Sample ID: MB-44274	SampTy	/pe: ME	BLK	Test	tCode: El	PA Method	8015D: Gasol	ine Range	•	
Client ID: PBS	Batch	ID: 44	274	F	RunNo: 5	9134				
Prep Date: 4/10/2019	Analysis Da	ate: 4/	/14/2019	S	SeqNo: 1	990660	Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	940		1000		93.7	73.8	119			

Sample ID: LCS-44274	SampTy	pe: LC	S	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	е	
Client ID: LCSS	Batch	ID: 442	274	F	RunNo: 5	9134				
Prep Date: 4/10/2019	Analysis Da	ite: 4/	14/2019	S	SeqNo: 1	990661	Units: %Red	•		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		107	73.8	119			

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Hall Environmental Analysis Laboratory, Inc.

WO#: 1904351

16-Apr-19

Client: WPX Energy **Project:** LVP SWD

Sample ID: MB-44149	SampT	уре: МЕ	BLK	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: PBS	Batch	n ID: 44 ′	149	F	RunNo: 5 9	9056				
Prep Date: 4/5/2019	Analysis D	oate: 4/	10/2019	S	SeqNo: 1	987683	Units: mg/K	g		
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								
Xvlenes Total	ND	0.10								

0.88

1.000 87.7 80 120 Surr: 4-Bromofluorobenzene

Sample ID: LCS-44149	SampT	ype: LC	S	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: LCSS	Batch	n ID: 44 ′	149	F	RunNo: 5	9056				
Prep Date: 4/5/2019	Analysis D	Date: 4/	10/2019	8	SeqNo: 1	987684	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	91.1	80	120			
Toluene	0.94	0.050	1.000	0	94.5	80	120			
Ethylbenzene	0.92	0.050	1.000	0	92.5	80	120			
Xylenes, Total	2.8	0.10	3.000	0	92.9	80	120			
Surr: 4-Bromofluorobenzene	0.87		1.000		86.9	80	120			

Sample ID: 1904351-013AMS	Samp	Туре: М	3	Tes	tCode: E	PA Method	8021B: Volat	tiles		
Client ID: SP270	Bato	h ID: 44	149	F	RunNo: 5	9056				
Prep Date: 4/5/2019	Analysis I	Date: 4/	10/2019	5	SeqNo: 1	987686	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.025	0.9950	0.009951	88.8	63.9	127			
Toluene	0.93	0.050	0.9950	0.01419	92.1	69.9	131			
Ethylbenzene	0.91	0.050	0.9950	0	91.9	71	132			
Xylenes, Total	2.8	0.10	2.985	0.01478	92.6	71.8	131			
Surr: 4-Bromofluorobenzene	0.88		0.9950		88.8	80	120			

Sample ID: 1904351-013AM	SD SampT	ype: MS	SD.	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: SP270	Batch	n ID: 441	149	F	RunNo: 5	9056				
Prep Date: 4/5/2019	Analysis D	oate: 4/	10/2019	S	SeqNo: 1	987687	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.025	0.9921	0.009951	88.1	63.9	127	1.06	20	
Toluene	0.94	0.050	0.9921	0.01419	93.4	69.9	131	1.06	20	
Ethylbenzene	0.94	0.050	0.9921	0	94.7	71	132	2.75	20	
Xylenes, Total	2.8	0.099	2.976	0.01478	94.5	71.8	131	1.76	20	
Surr: 4-Bromofluorobenzene	0.88		0.9921		89.1	80	120	0	0	

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL

Sample container temperature is out of limit as specified at testcode

Holding times for preparation or analysis exceeded

 PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1904351**

16-Apr-19

Client: WPX Energy Project: LVP SWD

Sample ID: MB-44150	SampT	Гуре: МЕ	BLK	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: PBS	Batcl	h ID: 44	150	F	RunNo: 5	9056				
Prep Date: 4/5/2019	Analysis D	Date: 4/	10/2019	S	SeqNo: 1	987707	Units: mg/K	g		
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	0.90		1.000		89.8	80	120			

Sample ID: LCS-44150	SampT	Гуре: LC	S	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID: LCSS										
Prep Date: 4/5/2019	,					987708	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	1.000	0	96.6	80	120			
Toluene	1.0	0.050	1.000	0	100	80	120			
Ethylbenzene	1.0	0.050	1.000	0	100	80	120			
Xylenes, Total	3.0	0.10	3.000	0	101	80	120			
Surr: 4-Bromofluorobenzene	0.92		1.000		92.3	80	120			

Sample ID: 1904351-033AMS	Samp1	Гуре: М S	3	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: SP290	Batcl	h ID: 44	150	F	RunNo: 5	9056				
Prep Date: 4/5/2019	Analysis D	Date: 4/	11/2019	8	SeqNo: 1	987710	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.75	0.025	0.9852	0	75.7	63.9	127			
Toluene	0.81	0.049	0.9852	0.01609	80.1	69.9	131			
Ethylbenzene	0.80	0.049	0.9852	0	81.6	71	132			
Xylenes, Total	2.4	0.099	2.956	0.01520	81.7	71.8	131			
Surr: 4-Bromofluorobenzene	0.90		0.9852		91.6	80	120			

Sample ID: 1904351-033AM	TestCode: EPA Method 8021B: Volatiles									
Client ID: SP290	Batch	n ID: 441	150	F	RunNo: 5	9056				
Prep Date: 4/5/2019	Analysis D	ate: 4/	11/2019	9	SeqNo: 1	987711	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.81	0.025	0.9980	0	81.7	63.9	127	8.88	20	
Toluene	0.85	0.050	0.9980	0.01609	83.6	69.9	131	5.42	20	
Ethylbenzene	0.85	0.050	0.9980	0	85.5	71	132	5.97	20	
Xylenes, Total	2.6	0.10	2.994	0.01520	85.5	71.8	131	5.75	20	
Surr: 4-Bromofluorobenzene	0.94		0.9980		93.7	80	120	0	0	

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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WPX Energy

LVP SWD

Client:

Project:

Toluene Ethylbenzene

Xylenes, Total

Surr: 4-Bromofluorobenzene

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904351**

16-Apr-19

Sample ID: MB-44253	SampType: MBLK	TestCode: EPA Method	8021B: Volatiles	
Client ID: PBS	Batch ID: 44253	RunNo: 59130		
Prep Date: 4/10/2019	Analysis Date: 4/13/2019	SeqNo: 1990440	Units: %Rec	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Surr: 4-Bromofluorobenzene	0.90 1.000	90.4 80	120	
Sample ID: LCS-44253	SampType: LCS	TestCode: EPA Method	8021B: Volatiles	
Client ID: LCSS	Batch ID: 44253	RunNo: 59130		
Prep Date: 4/10/2019	Analysis Date: 4/13/2019	SeqNo: 1990441	Units: %Rec	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Surr: 4-Bromofluorobenzene	0.96 1.000	95.5 80	120	
Sample ID: MB-44270	SampType: MBLK	TestCode: EPA Method	8021B: Volatiles	
Client ID: PBS	Batch ID: 44270	RunNo: 59130		
Prep Date: 4/10/2019	Analysis Date: 4/13/2019	SeqNo: 1990477	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Benzene	ND 0.025			

Sample ID: LCS-44270	SampT	ype: LC	S	Tes	od 8021B: Volatiles						
Client ID: LCSS	Batch	n ID: 442	270	F	RunNo: 5 9						
Prep Date: 4/10/2019	Analysis D	ate: 4/	14/2019	8	SeqNo: 19	990499	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.92	0.025	1.000	0	91.8	80	120				
Toluene	0.96	0.050	1.000	0	95.5	80	120				
Ethylbenzene	0.95	0.050	1.000	0	95.4	80	120				
Xylenes, Total	2.9	0.10	3.000	0	96.2	80	120				
Surr: 4-Bromofluorobenzene	0.91		1.000		90.7	80	120				

88.6

80

120

Sample ID: MB-44274 SampType: MBLK					Test	tCode: El	PA Method	8021B: Volat	iles			
	Client ID: PBS	Batch	ID: 442	274	R	RunNo: 5 9	9134					
Prep Date: 4/10/2019 Analysis Date: 4/14/2019					S	SeqNo: 19	990691	Units: %Rec	;			
	Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
	Surr: 4-Bromofluorobenzene	0.93		1 000		92.6	80	120		<u> </u>	<u> </u>	

Surr: 4-Bromofluorobenzene 0.93 1.000 92.6 80 120

0.050

0.050

0.10

1.000

ND

ND

ND

0.89

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1904351**

16-Apr-19

Client: WPX Energy
Project: LVP SWD

Sample ID: LCS-44274 SampType: LCS TestCode: EPA Method 8021B: Volatiles

Client ID: **LCSS** Batch ID: **44274** RunNo: **59134**

Prep Date: 4/10/2019 Analysis Date: 4/14/2019 SeqNo: 1990692 Units: %Rec

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Surr: 4-Bromofluorobenzene 0.93 1.000 92.5 80 120

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Hall Environmental Analysis Laboratory, Inc.

0.51

0.45

0.47

0.5000

0.5000

0.5000

WO#: **1904351**

16-Apr-19

Client: WPX Energy Project: LVP SWD

Sample ID: Ics-44148	Samp1	Гуре: LC	S	TestCode: EPA Method 8260B: Volatiles Short List						
Client ID: LCSS	Batcl	h ID: 44 1	148	F	RunNo: 58	8990				
Prep Date: 4/5/2019	Analysis [)ate: 4/ 6	8/2019	S	SeqNo: 1984861			(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.82	0.025	1.000	0	81.6	70	130			
Toluene	0.98	0.050	1.000	0	98.4	70	130			
Ethylbenzene	0.99	0.050	1.000	0	99.0	70	130			
Xylenes, Total	3.0	0.10	3.000	0	99.9	70	130			
Surr: 1,2-Dichloroethane-d4	0.44		0.5000		87.6	70	130			
Surr: 4-Bromofluorobenzene	0.52		0.5000		104	70	130			
Surr: Dibromofluoromethane	0.45		0.5000		90.1	70	130			
Surr: Toluene-d8	0.48		0.5000		95.5	70	130			
Sample ID: mb-44148	Samp1	Гуре: МВ	BLK	Tes	tCode: El	PA Method	8260B: Volat	iles Short	List	
Client ID: PBS	Batcl	h ID: 44 1	148	F	RunNo: 5	8990				
Prep Date: 4/5/2019	Analysis [)ate: 4/	8/2019	S	SeqNo: 1	984862	Units: mg/K	(g		
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								

Sample ID: Ics-44157	SampT	ype: LC	S	TestCode: EPA Method 8260B: Volatiles Short List						
Client ID: LCSS	Batch	n ID: 44 ′	157	F	RunNo: 5	9006				
Prep Date: 4/8/2019	Analysis D	ate: 4/	9/2019	S	SeqNo: 1985358 Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.82	0.025	1.000	0	82.2	70	130			
Toluene	0.97	0.050	1.000	0	96.8	70	130			
Ethylbenzene	0.98	0.050	1.000	0	97.5	70	130			
Xylenes, Total	2.9	0.10	3.000	0	98.0	70	130			
Surr: 1,2-Dichloroethane-d4	0.44		0.5000		87.5	70	130			
Surr: 4-Bromofluorobenzene	0.53		0.5000		105	70	130			
Surr: Dibromofluoromethane	0.46		0.5000		92.5	70	130			
Surr: Toluene-d8	0.47		0.5000		93.8	70	130			

Qualifiers:

E Value above quantitation range

Surr: 4-Bromofluorobenzene

Surr: Dibromofluoromethane

Surr: Toluene-d8

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

102

90.1

93.6

70

70

70

130

130

130

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1904351**

16-Apr-19

Client: WPX Energy Project: LVP SWD

Sample ID: mb-44157	SampT	ype: ME	BLK	TestCode: EPA Method 8260B: Volatiles Short List						
Client ID: PBS	Batcl	Batch ID: 44157			RunNo: 5	9006				
Prep Date: 4/8/2019	Analysis Date: 4/9/2019			S	SeqNo: 1985359 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: 1,2-Dichloroethane-d4	0.42		0.5000		84.8	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		99.8	70	130			
Surr: Dibromofluoromethane	0.45		0.5000		91.0	70	130			
Surr: Toluene-d8	0.46		0.5000		92.7	70	130			

Sample ID: 1904351-093ams	SampType: MS			TestCode: EPA Method 8260B: Volatiles Short List						
Client ID: SW17	Batch ID: 44157			F						
Prep Date: 4/8/2019	Analysis D	ate: 4/	9/2019	S	SeqNo: 1985797		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.85	0.024	0.9551	0	89.3	68.9	131			
Toluene	1.0	0.048	0.9551	0	109	64.3	137			
Ethylbenzene	1.1	0.048	0.9551	0	112	70	130			
Xylenes, Total	3.3	0.096	2.865	0	114	70	130			
Surr: 1,2-Dichloroethane-d4	0.41		0.4776		85.2	70	130			
Surr: 4-Bromofluorobenzene	0.51		0.4776		108	70	130			
Surr: Dibromofluoromethane	0.42		0.4776		87.5	70	130			
Surr: Toluene-d8	0.45		0.4776		93.6	70	130			

Sample ID: 1904351-093amsd	mple ID: 1904351-093amsd SampType: MSD					TestCode: EPA Method 8260B: Volatiles Short List					
Client ID: SW17	Batcl	n ID: 441	157	F	RunNo: 5 9	9006					
Prep Date: 4/8/2019	Analysis D	ate: 4/ 9	9/2019	S	SeqNo: 1	985798	Units: mg/K	g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.87	0.025	0.9881	0	88.1	68.9	131	2.01	20		
Toluene	1.1	0.049	0.9881	0	109	64.3	137	2.74	20		
Ethylbenzene	1.1	0.049	0.9881	0	109	70	130	0.435	0		
Xylenes, Total	3.2	0.099	2.964	0	108	70	130	1.45	0		
Surr: 1,2-Dichloroethane-d4	0.42		0.4941		85.1	70	130	0	0		
Surr: 4-Bromofluorobenzene	0.50		0.4941		101	70	130	0	0		
Surr: Dibromofluoromethane	0.45		0.4941		90.1	70	130	0	0		
Surr: Toluene-d8	0.47		0.4941		94.5	70	130	0	0		

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1904351**

16-Apr-19

Client: WPX Energy Project: LVP SWD

Sample ID: 1904351-053ams	SampT	ype: MS	5	TestCode: EPA Method 8260B: Volatiles Short List						
Client ID: SP310	Batcl	n ID: 44 ′	151	F	RunNo: 5	9036				
Prep Date: 4/5/2019	Analysis D	oate: 4/	10/2019	S	SeqNo: 1	988280	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.73	0.024	0.9470	0	77.2	68.9	131			
Toluene	0.92	0.047	0.9470	0.007329	95.9	64.3	137			
Ethylbenzene	0.95	0.047	0.9470	0	100	70	130			
Xylenes, Total	2.8	0.095	2.841	0	99.6	70	130			
Surr: 1,2-Dichloroethane-d4	0.40		0.4735		85.1	70	130			
Surr: 4-Bromofluorobenzene	0.49		0.4735		103	70	130			
Surr: Dibromofluoromethane	0.43		0.4735		91.5	70	130			
Surr: Toluene-d8	0.44		0.4735		93.4	70	130			

Sample ID: 1904351-053amsd	SampT	ype: MS	SD.	TestCode: EPA Method 8260B: Volatiles Short List						
Client ID: SP310	Batch	1D: 44 1	151	F	RunNo: 5	9036				
Prep Date: 4/5/2019	Analysis D	ate: 4/	11/2019	S	SeqNo: 19	988281	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.74	0.024	0.9634	0	77.3	68.9	131	1.86	20	
Toluene	0.95	0.048	0.9634	0.007329	97.7	64.3	137	3.62	20	
Ethylbenzene	0.97	0.048	0.9634	0	100	70	130	1.88	0	
Xylenes, Total	2.9	0.096	2.890	0	102	70	130	3.96	0	
Surr: 1,2-Dichloroethane-d4	0.39		0.4817		81.3	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.49		0.4817		101	70	130	0	0	
Surr: Dibromofluoromethane	0.42		0.4817		87.8	70	130	0	0	
Surr: Toluene-d8	0.46		0.4817		95.6	70	130	0	0	

Sample ID: Ics-44151	SampT	ype: LC	S	TestCode: EPA Method 8260B: Volatiles Short List						
Client ID: LCSS	Batcl	n ID: 44 ′	151	F	RunNo: 59036					
Prep Date: 4/5/2019	Analysis D	oate: 4/	10/2019	S	SeqNo: 1988300 Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.85	0.025	1.000	0	84.6	70	130			
Toluene	1.0	0.050	1.000	0	102	70	130			
Ethylbenzene	1.0	0.050	1.000	0	101	70	130			
Xylenes, Total	3.1	0.10	3.000	0	103	70	130			
Surr: 1,2-Dichloroethane-d4	0.43		0.5000		85.1	70	130			
Surr: 4-Bromofluorobenzene	0.52		0.5000		104	70	130			
Surr: Dibromofluoromethane	0.46		0.5000		92.4	70	130			
Surr: Toluene-d8	0.47		0.5000		93.7	70	130			

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1904351**

16-Apr-19

Client: WPX Energy Project: LVP SWD

Sample ID: mb-44151	SampT	SampType: MBLK			TestCode: EPA Method 8260B: Volatiles Short List					
Client ID: PBS	Batch ID: 44151			F	RunNo: 59036					
Prep Date: 4/5/2019	Analysis Date: 4/10/2019			5	SeqNo: 19	988301	Units: mg/K	(g		
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: 1,2-Dichloroethane-d4	0.43		0.5000		86.3	70	130			
Surr: 4-Bromofluorobenzene	0.51		0.5000		102	70	130			
Surr: Dibromofluoromethane	0.46		0.5000		92.2	70	130			
Surr: Toluene-d8	0.48		0.5000		95.8	70	130			

Sample ID: 1904351-073ams	TestCode: EPA Method 8260B: Volatiles Short List										
Client ID: SP330	Batc	h ID: 44	153	F	RunNo: 59108						
Prep Date: 4/5/2019	Analysis [Analysis Date: 4/11/2019			SeqNo: 1	989624	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.67	0.023	0.9251	0	72.6	68.9	131				
Toluene	0.85	0.046	0.9251	0	91.7	64.3	137				
Ethylbenzene	0.87	0.046	0.9251	0	93.7	70	130				
Xylenes, Total	2.6	0.093	2.775	0	95.3	70	130				
Surr: 1,2-Dichloroethane-d4	0.39		0.4625		83.8	70	130				
Surr: 4-Bromofluorobenzene	0.45		0.4625		97.8	70	130				
Surr: Dibromofluoromethane	0.41		0.4625		88.3	70	130				
Surr: Toluene-d8	0.43		0.4625		93.2	70	130				

Sample ID: 1904351-073ams	TestCode: EPA Method 8260B: Volatiles Short List												
Client ID: SP330	Client ID: SP330 Batch ID: 44153					RunNo: 59108							
Prep Date: 4/5/2019	Analysis [oate: 4/	11/2019	8	SeqNo: 1989625			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Benzene	0.77	0.025	0.9881	0	77.4	68.9	131	13.0	20				
Toluene	0.96	0.049	0.9881	0	97.1	64.3	137	12.3	20				
Ethylbenzene	1.0	0.049	0.9881	0	101	70	130	14.4	0				
Xylenes, Total	3.0	0.099	2.964	0	100	70	130	11.9	0				
Surr: 1,2-Dichloroethane-d4	0.41		0.4941		83.2	70	130	0	0				
Surr: 4-Bromofluorobenzene	0.49		0.4941		100	70	130	0	0				
Surr: Dibromofluoromethane	0.44		0.4941		89.3	70	130	0	0				
Surr: Toluene-d8	0.47		0.4941		94.8	70	130	0	0				

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1904351**

16-Apr-19

Client: WPX Energy Project: LVP SWD

Sample ID: Ics-44153	SampT	ype: LC	S	Tes	TestCode: EPA Method 8260B: Volatiles Short List						
Client ID: LCSS	Batcl	Batch ID: 44153			RunNo: 5						
Prep Date: 4/5/2019	Analysis Date: 4/11/2019			5	SeqNo: 1989809 Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.83	0.025	1.000	0	83.1	70	130				
Toluene	0.99	0.050	1.000	0	99.4	70	130				
Ethylbenzene	1.0	0.050	1.000	0	101	70	130				
Xylenes, Total	3.0	0.10	3.000	0	101	70	130				
Surr: 1,2-Dichloroethane-d4	0.41		0.5000		82.8	70	130				
Surr: 4-Bromofluorobenzene	0.49		0.5000		99.0	70	130				
Surr: Dibromofluoromethane	0.46		0.5000		91.2	70	130				
Surr: Toluene-d8	0.47		0.5000		93.1	70	130				

Sample ID: mb-44153	Samp1	Type: ME	BLK	TestCode: EPA Method 8260B: Volatiles Short List							
Client ID: PBS	Batcl	h ID: 44	153	F	RunNo: 59108						
Prep Date: 4/5/2019	Analysis D	Analysis Date: 4/11/2019			SeqNo: 1989834 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: 1,2-Dichloroethane-d4	0.41		0.5000		82.7	70	130				
Surr: 4-Bromofluorobenzene	0.49		0.5000		97.1	70	130				
Surr: Dibromofluoromethane	0.45		0.5000		90.3	70	130				
Surr: Toluene-d8	0.48		0.5000		96.0	70	130				

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

Page 128 of 131

Hall Environmental Analysis Laboratory, Inc.

WO#: **1904351**

16-Apr-19

Client:	WPX Energy
Project:	LVP SWD

Sample ID: Ics-44148	SampType: Lo	cs	Tes	tCode: EF	PA Method	8015D Mod:	Gasoline	Range		
Client ID: LCSS	Batch ID: 44	1148	F	RunNo: 58	3990					
Prep Date: 4/5/2019	Analysis Date: 4	/8/2019	S	SeqNo: 19	984917	Units: mg/K	(g			
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	24 5.0		0	97.2	70	130				
Surr: BFB	500	500.0		100	70	130				
Sample ID: mb-44148	SampType: M	BLK	Tes	TestCode: EPA Method 8015D Mod: Gasoline Range						
Client ID: PBS	Batch ID: 44	148	R	RunNo: 58990						
Prep Date: 4/5/2019	Analysis Date: 4	/8/2019	S	SeqNo: 1984918 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	510	500.0		102	70	130				
Sample ID: Ics-44157	SampType: Lo	cs	Test	tCode: EF	PA Method	8015D Mod:	Gasoline	Range		
Client ID: LCSS	Batch ID: 44	157	R	RunNo: 59006						
Prep Date: 4/8/2019	Analysis Date: 4	/9/2019	S	SeqNo: 19	985838	Units: mg/K	ίg			
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	24 5.0		0	97.7	70	130				
Surr: BFB	510	500.0		102	70	130				
Sample ID: mb-44157	SampType: M	BLK	TestCode: EPA Method 8015D Mod: Gasoline Range							
Client ID: PBS	Batch ID: 44	157	RunNo: 59006							
Prep Date: 4/8/2019	Analysis Date: 4	/9/2019	S	SeqNo: 19	985839	Units: mg/K	(g			
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	ND 5.0			00.4	70	400				
Surr: BFB	500	500.0		99.4	70	130				
Sample ID: 1904351-054ams	SampType: M	S	Test	tCode: EF	PA Method	8015D Mod:	Gasoline	Range		
Client ID: SP311	Batch ID: 44	151	R	RunNo: 5 9	9036					
Prep Date: 4/5/2019	Analysis Date: 4	/11/2019	S	SeqNo: 19	988311	Units: mg/K	(g			
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	22 4.9		0	90.1	68.2	135				
Surr: BFB	510	494.1		102	70	130				
Sample ID: 1904351-054amsd	SampType: M	SD	Test	tCode: EF	PA Method	8015D Mod:	Gasoline	Range		
Client ID: SP311	Batch ID: 44	151	RunNo: 59036							
Prep Date: 4/5/2019	Analysis Date: 4	/11/2019	S	SeqNo: 19	988313	Units: mg/K	(g			
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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Hall Environmental Analysis Laboratory, Inc.

PQL

5.0

500.0

Result

ND

520

WO#: **1904351**

16-Apr-19

Client: WPX Energy Project: LVP SWD

Sample ID: 1904351-054ams	d SampT	SampType: MSD TestCode: EPA Method						Gasoline	Range	
Client ID: SP311	Batch	n ID: 44	151	F	RunNo: 59036					
Prep Date: 4/5/2019	Analysis D	ate: 4/	11/2019	5	SeqNo: 1	988313	Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	24.75	0	89.4	68.2	135	0.604	20	
Surr: BFB	490		495.0		99.6	70	130	0	0	
Sample ID: Ics-44151	SampT	ype: LC	s	Tes	8015D Mod:	Gasoline	Range			
Client ID: LCSS	Batch	n ID: 44	151	F	RunNo: 5	9036				
Prep Date: 4/5/2019	Analysis D	ate: 4/	10/2019	SeqNo: 1988353			Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	97.3	70	130			
Surr: BFB	510		500.0		102	70	130			
Sample ID: mb-44151	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015D Mod:	Gasoline	Range	
Client ID: PBS	Batch	n ID: 44	151	F	RunNo: 5	9036				
Prep Date: 4/5/2019	Analysis D	ate: 4/	10/2019	9	SeqNo: 1	988355	Units: mg/k	S g		

Sample ID: 1904351-074ams	SampT	ype: MS	8	Test	tCode: El	PA Method	8015D Mod:	Gasoline I	Range	
Client ID: SP331	Batch	n ID: 44	153	F	RunNo: 5	9108				
Prep Date: 4/5/2019	Analysis D	ate: 4/	11/2019	S	SeqNo: 1	989662	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	4.7	23.36	0	86.4	68.2	135			
Surr: BFB	470		467.3		101	70	130			

SPK value SPK Ref Val %REC LowLimit HighLimit

103

70

Sample ID: 1904351-074amsd	SampT	ype: MS	SD	TestCode: EPA Method 8015D Mod: Gasoline Range							
Client ID: SP331	Batch	ID: 44	153	R	RunNo: 5	9108					
Prep Date: 4/5/2019	Analysis D	ate: 4/	11/2019	SeqNo: 1989663			Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	23	4.9	24.41	0	93.8	68.2	135	12.6	20		
Surr: BFB	500		488.3		102	70	130	0	0		

Sample ID: Ics-44153	SampType: LCS	TestCode: EPA Method 8015D Mod: Gasoline Range
Client ID: LCSS	Batch ID: 44153	RunNo: 59108
Prep Date: 4/5/2019	Analysis Date: 4/11/2019	SeqNo: 1989689 Units: mg/Kg
Analyte	Result PQL SPK value S	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Qualifiers:

Analyte

Surr: BFB

Gasoline Range Organics (GRO)

E Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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%RPD

130

RPDLimit

Qual

Hall Environmental Analysis Laboratory, Inc.

WO#: 1904351

16-Apr-19

Client: WPX Energy **Project:** LVP SWD

Sample ID: Ics-44153	SampT	ype: LC	S	TestCode: EPA Method 8015D Mod: Gasoline Range							
Client ID: LCSS	Batch	1D: 44	153	R	RunNo: 5	9108					
Prep Date: 4/5/2019	Analysis Date: 4/11/2019			SeqNo: 1989689			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	70	130				
Surr: BFB	510		500.0		102	70	130				

Sample ID: mb-44153	SampT	ype: ME	BLK	Test	tCode: El	PA Method	8015D Mod:	Gasoline l	Range	
Client ID: PBS	Batch	ID: 44	153	R	RunNo: 5	9108				
Prep Date: 4/5/2019	Analysis D	ate: 4/	11/2019	S	SeqNo: 1	989691	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								

Surr: BFB

500

500.0

101

70

130

Qualifiers:

Value above quantitation range

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

Sample container temperature is out of limit as specified at testcode

Holding times for preparation or analysis exceeded

 PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix

Page 131 of 131



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

С	lient Name:	WPX ENER	RGY CARLSE	3 Work	Order Numbe	er: 190	4351			Rcpti	No: 1
R	eceived By:	Leah Baca	a	4/5/201	9 8:45:00 AM			Lash	Bace	٩	
C	ompleted By:	Leah Baca	a	4/5/201	9 9:55:41 AM			Lad	Bace	4	
R	eviewed By:							- Sur	72		
<u>Cł</u>	nain of Cust	tody									
1.	Is Chain of Cu	stody comp	lete?			Yes	V	No		Not Present]
2.	How was the	sample deliv	ered?			Cou	rier				
,	oa In										
	<i>og In</i> Was an attem	pt made to c	ool the samn	es?		Yes	V	No		NA []
		,				100					_
4.	Were all samp	les received	at a tempera	ture of >0° C t	o 6.0°C	Yes	V	No		NA 🗆]
_	Service and the service and th										
5.	Sample(s) in p	proper contai	ner(s)?			Yes	~	No			
6	Sufficient sam	ple volume fo	or indicated te	st(s)?		Yes	~	No	П		
	Are samples (e			20 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -	d?	Yes	✓	No			
	Was preservat			point process	~.	Yes	П	No		NA 🗆	
							_				
9.	VOA vials have	e zero heads	pace?			Yes		No		No VOA Vials	
10.	Were any sam	ple containe	ers received b	roken?		Yes		No	~	# of preserved	
11										bottles checked	
	Does paperwo (Note discrepa			į		Yes	V	No	ш	for pH: (<2	? or >12 unless noted)
	Are matrices o					Yes	~	No		Adjusted?	
13.	Is it clear what	analyses we	ere requested	?		Yes	~	No			
	Were all holdin					Yes	✓	No		Checked by:	
	(If no, notify cu	stomer for a	uthorization.)								
Spe	ecial Handli	ng (if app	licable)								
15.	Was client not	tified of all di	screpancies v	vith this order?		Yes		No		NA 🗸	9
	Person I	Notified:		400000000000000000000000000000000000000	Date						
	By Who	m:			Via:	eM.	ail 🗍	Phone	Fax	☐ In Person	
	Regardi	ng:							ADALAH RESEARCH SERVICE		
	Client In	structions:							*********		
16	. Additional ren	narks:				-					
17	Cooler Inforr	nation									
	Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal D	ate	Signed	Ву	-	
	1	3.6	Good	Yes							
	2	2.4	Good	Yes						The state of the s	

NTAL	Аіт Bubbles (Y or N)	Page 596 of Strain of Stra
ENVIRONMEN YSIS LABORAT environmental.com Albuquerque, NM 87109 Fax 505-345-4107	(AOV-imə2) 07S8	Debbie (Central Cass)
TIRO FLAE mental.cc srque, NN 505-345-	8260B (VOA)	
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IALL ENVIRON NALYSIS LABC www.hallenvironmental.com ns NE - Albuquerque, NM 8 5-3975 Fax 505-345-41	Anions (PCIMO ₃ , NO ₂ , PO ₄ , SO ₄)	\times
LEE	PAH's (8310 or 8270 SIMS) RCRA 8 Metals	Re 7017
HALL ANAI ANAI www.ha Hawkins NE 505-345-3975	EDB (Method 504.1)	
AN www wkins N	TPH (Method 418.1)	
ANA www.h 4901 Hawkins NE Tel. 505-345-397	TPH 8015B (GRO / DRO / MRO)	\times
4901 Tel.	BTEX + MTBE + TPH (Gas only)	
	BTEX + MTBE + TMB's (8021)	Nemarks.
tara tara	No. 735.	-002 -003 -003 -003 -003 -003 -003 -003
S day tun	Smith D No 3.6,2.4 C HEAL NO.	Date Date
<u> </u>	s ativ	1. Course
Turn-Around Time: Standard Project Name:	Project Manager: Cris Zou Sampler: Cuut On Ice: X Yes Sample Temperature: Container Preservi	Hoz (1) Received by: Received by:
Chain-of-Custody Record WPX (ar156ad) g Address: on file	Level 4 (Full Validation) Sample Request ID	5P258 SP260 SP261 SP262 SP262 SP269 SP269 SP269 SP269 SP269 SP269 SP269
-of-Cus	□ Other Matrix	Soil Relinquished by: Relinquished by:
Chain-Calient: Walling Address: 3/29/	Consider the semant of Fax#: Control Standard	Time:
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Page 597 of 782 Received by OCD: 3/27/2023_10:08:09 AM Air Bubbles (Y or N) **ANALYSIS LABORATORY** HALL ENVIRONMENTAL 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. 4901 Hawkins NE - Albuquerque, NM 87109 Fax 505-345-4107 Pase 2 of (AOV-ima2) 07S8 www.hallenvironmental.com **Analysis Request** (AOV) 808S8 8081 Pesticides / 8082 PCB's Anions (FC)NO3,NO2,PO4,SO4) X RCRA 8 Metals Tel. 505-345-3975 (SMIS 07S8 10 0188) e'HA9 EDB (Method 504.1) TPH (Method 418.1) TPH 8015B (GRO / DRO / MRO) X Remarks: BTEX + MTBE + TPH (Gas only) +(X3J)# MTBE + TMB's (8021) X 1:50 410-120-120--016 010 -019 -023 -0 22 らから ちん Time HEAL No. Gen Snith 3.6.2.4 Date Kris Rove LY SWD □ Rush Preservative Sample Temperature: 30 N Yes Turn-Around Time: Project Manager: Standard Project Name: Container Type and # 70Z(1) Project #: Received by: Sampler: On Ice: □ Level 4 (Full Validation) Sample Request ID Chain-of-Custody Record THE THE 37298 57277 86279 SP 280 SP275 86278 SP274 18EJS 26272 Calsbad 86273 58270 37271 たった lein Relinquished by: Relinquished by: Other Matrix XX 3 Mailing Address: QA/QC Package: Time 公元 11.50 email or Fax#: □ EDD (Type) Accreditation Time: □ Standard □ NELAP Phone #: 7/3/2019 Client: Date Date:

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	□ Rus		JWS GV			iger:	Kris Rave			perature: 3.6	Preservative Type	. (6											\rightarrow		1	2	
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Chain-of-Custody Record	(alshad		- F. k				☐ Level 4 (Full Validation)				Sample Request ID	SP282	SP283	SP284	SP 285	38278	58287	SP 288	5P289	58290	SP241	58292		by:	i Jawa	by:	
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Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

July 10, 2019

Kris Rowe WPX Energy 5315 Buena Vista Drive Carlsbad, NM 88220 TEL: (505) 386-9693

FAX:

RE: LVP SWD 1 OrderNo.: 1906E98

Dear Kris Rowe:

Hall Environmental Analysis Laboratory received 60 sample(s) on 6/27/2019 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 #NM0901

Sincerely,

Andy Freeman

Laboratory Manager

Indes

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD 1

Collection Date: 6/26/2019

Lab ID: 1906E98-001 **Matrix:** SOIL **Received Date:** 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	smb
Chloride	260	60	mg/Kg	20	7/1/2019 1:33:49 PM	45930
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	том
Diesel Range Organics (DRO)	ND	8.6	mg/Kg	1	6/30/2019 4:13:53 AM	45903
Motor Oil Range Organics (MRO)	ND	43	mg/Kg	1	6/30/2019 4:13:53 AM	45903
Surr: DNOP	89.3	70-130	%Rec	1	6/30/2019 4:13:53 AM	45903
EPA METHOD 8015D: GASOLINE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	6/28/2019 9:07:41 PM	45877
Surr: BFB	99.5	73.8-119	%Rec	1	6/28/2019 9:07:41 PM	45877
EPA METHOD 8260B: VOLATILES					Analyst	RAA
Benzene	ND	0.025	mg/Kg	1	6/29/2019 11:39:57 PM	45877
Toluene	ND	0.049	mg/Kg	1	6/29/2019 11:39:57 PM	45877
Ethylbenzene	ND	0.049	mg/Kg	1	6/29/2019 11:39:57 PM	45877
Xylenes, Total	ND	0.099	mg/Kg	1	6/29/2019 11:39:57 PM	45877
Surr: Dibromofluoromethane	87.7	70-130	%Rec	1	6/29/2019 11:39:57 PM	45877
Surr: 1,2-Dichloroethane-d4	86.1	70-130	%Rec	1	6/29/2019 11:39:57 PM	45877
Surr: Toluene-d8	97.2	70-130	%Rec	1	6/29/2019 11:39:57 PM	45877
Surr: 4-Bromofluorobenzene	98.7	70-130	%Rec	1	6/29/2019 11:39:57 PM	45877

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 1 of 73

Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP343

Project: LVP SWD 1

Collection Date: 6/26/2019

Lab ID: 1906E98-002 **Matrix:** SOIL **Received Date:** 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	smb
Chloride	220	60		mg/Kg	20	7/1/2019 1:46:13 PM	45930
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	TOM
Diesel Range Organics (DRO)	ND	8.8		mg/Kg	1	6/30/2019 4:38:22 AM	45903
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	6/30/2019 4:38:22 AM	45903
Surr: DNOP	68.1	70-130	S	%Rec	1	6/30/2019 4:38:22 AM	45903
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/28/2019 9:30:18 PM	45877
Surr: BFB	101	73.8-119		%Rec	1	6/28/2019 9:30:18 PM	45877
EPA METHOD 8260B: VOLATILES						Analyst:	RAA
Benzene	ND	0.025		mg/Kg	1	6/30/2019 12:09:05 AM	45877
Toluene	ND	0.049		mg/Kg	1	6/30/2019 12:09:05 AM	45877
Ethylbenzene	ND	0.049		mg/Kg	1	6/30/2019 12:09:05 AM	45877
Xylenes, Total	ND	0.098		mg/Kg	1	6/30/2019 12:09:05 AM	45877
Surr: Dibromofluoromethane	91.6	70-130		%Rec	1	6/30/2019 12:09:05 AM	45877
Surr: 1,2-Dichloroethane-d4	86.2	70-130		%Rec	1	6/30/2019 12:09:05 AM	45877
Surr: Toluene-d8	109	70-130		%Rec	1	6/30/2019 12:09:05 AM	45877
Surr: 4-Bromofluorobenzene	94.3	70-130		%Rec	1	6/30/2019 12:09:05 AM	45877

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP344

Project: LVP SWD 1

Collection Date: 6/26/2019

Lab ID: 1906E98-003 **Matrix:** SOIL **Received Date:** 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	810	60		mg/Kg	20	7/1/2019 1:58:37 PM	45930
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst	TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/30/2019 5:02:52 AM	45903
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/30/2019 5:02:52 AM	45903
Surr: DNOP	66.8	70-130	S	%Rec	1	6/30/2019 5:02:52 AM	45903
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/29/2019 11:07:11 PM	45880
Surr: BFB	94.5	73.8-119		%Rec	1	6/29/2019 11:07:11 PM	45880
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.024		mg/Kg	1	6/29/2019 11:07:11 PM	45880
Toluene	ND	0.048		mg/Kg	1	6/29/2019 11:07:11 PM	45880
Ethylbenzene	ND	0.048		mg/Kg	1	6/29/2019 11:07:11 PM	45880
Xylenes, Total	ND	0.097		mg/Kg	1	6/29/2019 11:07:11 PM	45880
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	6/29/2019 11:07:11 PM	45880

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: SP345

Project: LVP SWD 1

Collection Date: 6/26/2019

Lab ID: 1906E98-004 **Matrix:** SOIL **Received Date:** 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	400	61		mg/Kg	20	7/1/2019 2:11:02 PM	45930
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst	TOM
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	6/30/2019 5:27:12 AM	45903
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/30/2019 5:27:12 AM	45903
Surr: DNOP	46.1	70-130	S	%Rec	1	6/30/2019 5:27:12 AM	45903
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/30/2019 12:19:12 AM	45880
Surr: BFB	101	73.8-119		%Rec	1	6/30/2019 12:19:12 AM	45880
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.025		mg/Kg	1	6/30/2019 12:19:12 AM	45880
Toluene	ND	0.050		mg/Kg	1	6/30/2019 12:19:12 AM	45880
Ethylbenzene	ND	0.050		mg/Kg	1	6/30/2019 12:19:12 AM	45880
Xylenes, Total	ND	0.10		mg/Kg	1	6/30/2019 12:19:12 AM	45880
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	1	6/30/2019 12:19:12 AM	45880

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Project: LVP SWD 1
Collection Date: 6/26/2019

Lab ID: 1906E98-005 **Matrix:** SOIL **Received Date:** 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: smb
Chloride	230	60	mg/Kg	20	7/1/2019 2:23:26 PM	45930
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: ТОМ
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	6/30/2019 5:51:40 AM	45903
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	6/30/2019 5:51:40 AM	45903
Surr: DNOP	83.7	70-130	%Rec	1	6/30/2019 5:51:40 AM	45903
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	6/30/2019 1:32:13 AM	45880
Surr: BFB	96.5	73.8-119	%Rec	1	6/30/2019 1:32:13 AM	45880
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.025	mg/Kg	1	6/30/2019 1:32:13 AM	45880
Toluene	ND	0.050	mg/Kg	1	6/30/2019 1:32:13 AM	45880
Ethylbenzene	ND	0.050	mg/Kg	1	6/30/2019 1:32:13 AM	45880
Xylenes, Total	ND	0.099	mg/Kg	1	6/30/2019 1:32:13 AM	45880
Surr: 4-Bromofluorobenzene	102	80-120	%Rec	1	6/30/2019 1:32:13 AM	45880

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD 1

Collection Date: 6/26/2019

Lab ID: 1906E98-006 **Matrix:** SOIL **Received Date:** 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: smb
Chloride	250	60	mg/Kg	20	7/1/2019 2:35:50 PM	45930
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: TOM
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	6/30/2019 6:16:09 AM	45903
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	6/30/2019 6:16:09 AM	45903
Surr: DNOP	83.3	70-130	%Rec	1	6/30/2019 6:16:09 AM	45903
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	6/30/2019 1:56:18 AM	45880
Surr: BFB	94.3	73.8-119	%Rec	1	6/30/2019 1:56:18 AM	45880
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.024	mg/Kg	1	6/30/2019 1:56:18 AM	45880
Toluene	ND	0.049	mg/Kg	1	6/30/2019 1:56:18 AM	45880
Ethylbenzene	ND	0.049	mg/Kg	1	6/30/2019 1:56:18 AM	45880
Xylenes, Total	ND	0.097	mg/Kg	1	6/30/2019 1:56:18 AM	45880
Surr: 4-Bromofluorobenzene	99.4	80-120	%Rec	1	6/30/2019 1:56:18 AM	45880

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD 1

Collection Date: 6/26/2019

Lab ID: 1906E98-007 **Matrix:** SOIL **Received Date:** 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	120	59		mg/Kg	20	7/1/2019 2:48:15 PM	45930
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	TOM
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	6/30/2019 6:40:37 AM	45903
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	6/30/2019 6:40:37 AM	45903
Surr: DNOP	51.9	70-130	S	%Rec	1	6/30/2019 6:40:37 AM	45903
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/30/2019 2:20:41 AM	45880
Surr: BFB	98.0	73.8-119		%Rec	1	6/30/2019 2:20:41 AM	45880
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.024		mg/Kg	1	6/30/2019 2:20:41 AM	45880
Toluene	ND	0.049		mg/Kg	1	6/30/2019 2:20:41 AM	45880
Ethylbenzene	ND	0.049		mg/Kg	1	6/30/2019 2:20:41 AM	45880
Xylenes, Total	ND	0.098		mg/Kg	1	6/30/2019 2:20:41 AM	45880
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	6/30/2019 2:20:41 AM	45880

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Project: LVP SWD 1
Collection Date: 6/26/2019

Lab ID: 1906E98-008 **Matrix:** SOIL **Received Date:** 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: smb
Chloride	220	60		mg/Kg	20	7/1/2019 3:00:40 PM	45930
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	: TOM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/1/2019 10:48:00 AM	45905
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/1/2019 10:48:00 AM	45905
Surr: DNOP	58.6	70-130	S	%Rec	1	7/1/2019 10:48:00 AM	45905
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/30/2019 2:44:54 AM	45880
Surr: BFB	96.8	73.8-119		%Rec	1	6/30/2019 2:44:54 AM	45880
EPA METHOD 8021B: VOLATILES						Analyst	: RAA
Benzene	ND	0.024		mg/Kg	1	6/30/2019 2:44:54 AM	45880
Toluene	ND	0.048		mg/Kg	1	6/30/2019 2:44:54 AM	45880
Ethylbenzene	ND	0.048		mg/Kg	1	6/30/2019 2:44:54 AM	45880
Xylenes, Total	ND	0.096		mg/Kg	1	6/30/2019 2:44:54 AM	45880
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	6/30/2019 2:44:54 AM	45880

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD 1

Collection Date: 6/26/2019

Lab ID: 1906E98-009 **Matrix:** SOIL **Received Date:** 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	smb
Chloride	250	60	mg/Kg	20	7/1/2019 3:37:54 PM	45930
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	TOM
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	7/1/2019 12:00:21 PM	45905
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	7/1/2019 12:00:21 PM	45905
Surr: DNOP	79.2	70-130	%Rec	1	7/1/2019 12:00:21 PM	45905
EPA METHOD 8015D: GASOLINE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	6/30/2019 3:09:07 AM	45880
Surr: BFB	95.1	73.8-119	%Rec	1	6/30/2019 3:09:07 AM	45880
EPA METHOD 8021B: VOLATILES					Analyst	RAA
Benzene	ND	0.024	mg/Kg	1	6/30/2019 3:09:07 AM	45880
Toluene	ND	0.048	mg/Kg	1	6/30/2019 3:09:07 AM	45880
Ethylbenzene	ND	0.048	mg/Kg	1	6/30/2019 3:09:07 AM	45880
Xylenes, Total	ND	0.096	mg/Kg	1	6/30/2019 3:09:07 AM	45880
Surr: 4-Bromofluorobenzene	99.5	80-120	%Rec	1	6/30/2019 3:09:07 AM	45880

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP351
Project: LVP SWD 1
Collection Date: 6/26/2019

Lab ID: 1906E98-010 **Matrix:** SOIL **Received Date:** 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: smb
Chloride	330	60	mg/Kg	20	7/1/2019 3:50:18 PM	45930
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: TOM
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	7/1/2019 12:24:32 PM	45905
Motor Oil Range Organics (MRO)	ND	51	mg/Kg	1	7/1/2019 12:24:32 PM	45905
Surr: DNOP	78.8	70-130	%Rec	1	7/1/2019 12:24:32 PM	45905
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	6/30/2019 3:33:25 AM	45880
Surr: BFB	103	73.8-119	%Rec	1	6/30/2019 3:33:25 AM	45880
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.024	mg/Kg	1	6/30/2019 3:33:25 AM	45880
Toluene	ND	0.048	mg/Kg	1	6/30/2019 3:33:25 AM	45880
Ethylbenzene	ND	0.048	mg/Kg	1	6/30/2019 3:33:25 AM	45880
Xylenes, Total	ND	0.096	mg/Kg	1	6/30/2019 3:33:25 AM	45880
Surr: 4-Bromofluorobenzene	109	80-120	%Rec	1	6/30/2019 3:33:25 AM	45880

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD 1

Collection Date: 6/26/2019

Lab ID: 1906E98-011 **Matrix:** SOIL **Received Date:** 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	smb
Chloride	240	60	mg/Kg	20	7/1/2019 10:43:53 PM	45938
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	TOM
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	7/1/2019 12:48:46 PM	45905
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	7/1/2019 12:48:46 PM	45905
Surr: DNOP	80.4	70-130	%Rec	1	7/1/2019 12:48:46 PM	45905
EPA METHOD 8015D: GASOLINE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	6/30/2019 3:57:37 AM	45880
Surr: BFB	97.7	73.8-119	%Rec	1	6/30/2019 3:57:37 AM	45880
EPA METHOD 8021B: VOLATILES					Analyst	RAA
Benzene	ND	0.025	mg/Kg	1	6/30/2019 3:57:37 AM	45880
Toluene	ND	0.049	mg/Kg	1	6/30/2019 3:57:37 AM	45880
Ethylbenzene	ND	0.049	mg/Kg	1	6/30/2019 3:57:37 AM	45880
Xylenes, Total	ND	0.098	mg/Kg	1	6/30/2019 3:57:37 AM	45880
Surr: 4-Bromofluorobenzene	102	80-120	%Rec	1	6/30/2019 3:57:37 AM	45880

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP353
Project: LVP SWD 1
Collection Date: 6/26/2019

Lab ID: 1906E98-012 **Matrix:** SOIL **Received Date:** 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: smb
Chloride	170	60	mg/Kg	20	7/1/2019 10:56:17 PM	45938
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: TOM
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	7/1/2019 1:13:02 PM	45905
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	7/1/2019 1:13:02 PM	45905
Surr: DNOP	82.3	70-130	%Rec	1	7/1/2019 1:13:02 PM	45905
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: RAA
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	6/30/2019 4:21:40 AM	45880
Surr: BFB	97.9	73.8-119	%Rec	1	6/30/2019 4:21:40 AM	45880
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.025	mg/Kg	1	6/30/2019 4:21:40 AM	45880
Toluene	ND	0.050	mg/Kg	1	6/30/2019 4:21:40 AM	45880
Ethylbenzene	ND	0.050	mg/Kg	1	6/30/2019 4:21:40 AM	45880
Xylenes, Total	ND	0.099	mg/Kg	1	6/30/2019 4:21:40 AM	45880
Surr: 4-Bromofluorobenzene	101	80-120	%Rec	1	6/30/2019 4:21:40 AM	45880

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP354

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:15:00 PM

 Lab ID:
 1906E98-013
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	240	60		mg/Kg	20	7/1/2019 11:08:42 PM	45938
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst	TOM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	7/1/2019 1:37:19 PM	45905
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/1/2019 1:37:19 PM	45905
Surr: DNOP	64.9	70-130	S	%Rec	1	7/1/2019 1:37:19 PM	45905
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/30/2019 6:20:17 AM	45880
Surr: BFB	87.6	73.8-119		%Rec	1	6/30/2019 6:20:17 AM	45880
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.025		mg/Kg	1	6/30/2019 6:20:17 AM	45880
Toluene	ND	0.050		mg/Kg	1	6/30/2019 6:20:17 AM	45880
Ethylbenzene	ND	0.050		mg/Kg	1	6/30/2019 6:20:17 AM	45880
Xylenes, Total	ND	0.099		mg/Kg	1	6/30/2019 6:20:17 AM	45880
Surr: 4-Bromofluorobenzene	94.0	80-120		%Rec	1	6/30/2019 6:20:17 AM	45880

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP355

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:15:00 PM

 Lab ID:
 1906E98-014
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	smb
Chloride	880	60	mg/Kg	20	7/1/2019 11:21:07 PM	45938
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	TOM
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	7/1/2019 2:01:39 PM	45905
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	7/1/2019 2:01:39 PM	45905
Surr: DNOP	70.9	70-130	%Rec	1	7/1/2019 2:01:39 PM	45905
EPA METHOD 8015D: GASOLINE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	6/30/2019 6:43:36 AM	45880
Surr: BFB	85.9	73.8-119	%Rec	1	6/30/2019 6:43:36 AM	45880
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.024	mg/Kg	1	6/30/2019 6:43:36 AM	45880
Toluene	ND	0.049	mg/Kg	1	6/30/2019 6:43:36 AM	45880
Ethylbenzene	ND	0.049	mg/Kg	1	6/30/2019 6:43:36 AM	45880
Xylenes, Total	ND	0.097	mg/Kg	1	6/30/2019 6:43:36 AM	45880
Surr: 4-Bromofluorobenzene	92.2	80-120	%Rec	1	6/30/2019 6:43:36 AM	45880

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP356

Project: LVP SWD 1
 Collection Date: 6/26/2019 3:15:00 PM

 Lab ID: 1906E98-015
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	150	60		mg/Kg	20	7/1/2019 11:33:32 PM	45938
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst	TOM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	7/1/2019 2:26:00 PM	45905
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/1/2019 2:26:00 PM	45905
Surr: DNOP	60.7	70-130	S	%Rec	1	7/1/2019 2:26:00 PM	45905
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/30/2019 7:06:59 AM	45880
Surr: BFB	88.6	73.8-119		%Rec	1	6/30/2019 7:06:59 AM	45880
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.024		mg/Kg	1	6/30/2019 7:06:59 AM	45880
Toluene	ND	0.048		mg/Kg	1	6/30/2019 7:06:59 AM	45880
Ethylbenzene	ND	0.048		mg/Kg	1	6/30/2019 7:06:59 AM	45880
Xylenes, Total	ND	0.097		mg/Kg	1	6/30/2019 7:06:59 AM	45880
Surr: 4-Bromofluorobenzene	94.9	80-120		%Rec	1	6/30/2019 7:06:59 AM	45880

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP357

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:15:00 PM

 Lab ID:
 1906E98-016
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	smb
Chloride	200	60	mg/Kg	20	7/1/2019 11:45:57 PM	45938
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	том
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	7/1/2019 2:50:20 PM	45905
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	7/1/2019 2:50:20 PM	45905
Surr: DNOP	71.7	70-130	%Rec	1	7/1/2019 2:50:20 PM	45905
EPA METHOD 8015D: GASOLINE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	6/30/2019 7:30:21 AM	45880
Surr: BFB	86.5	73.8-119	%Rec	1	6/30/2019 7:30:21 AM	45880
EPA METHOD 8021B: VOLATILES					Analyst	RAA
Benzene	ND	0.024	mg/Kg	1	6/30/2019 7:30:21 AM	45880
Toluene	ND	0.049	mg/Kg	1	6/30/2019 7:30:21 AM	45880
Ethylbenzene	ND	0.049	mg/Kg	1	6/30/2019 7:30:21 AM	45880
Xylenes, Total	ND	0.098	mg/Kg	1	6/30/2019 7:30:21 AM	45880
Surr: 4-Bromofluorobenzene	93.6	80-120	%Rec	1	6/30/2019 7:30:21 AM	45880

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP358

Project: LVP SWD 1
 Collection Date: 6/26/2019 3:15:00 PM

 Lab ID: 1906E98-017
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	210	60		mg/Kg	20	7/2/2019 12:47:59 AM	45938
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	том
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	7/1/2019 3:14:41 PM	45905
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	7/1/2019 3:14:41 PM	45905
Surr: DNOP	63.6	70-130	S	%Rec	1	7/1/2019 3:14:41 PM	45905
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/30/2019 7:53:50 AM	45880
Surr: BFB	87.0	73.8-119		%Rec	1	6/30/2019 7:53:50 AM	45880
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.024		mg/Kg	1	6/30/2019 7:53:50 AM	45880
Toluene	ND	0.049		mg/Kg	1	6/30/2019 7:53:50 AM	45880
Ethylbenzene	ND	0.049		mg/Kg	1	6/30/2019 7:53:50 AM	45880
Xylenes, Total	ND	0.097		mg/Kg	1	6/30/2019 7:53:50 AM	45880
Surr: 4-Bromofluorobenzene	94.3	80-120		%Rec	1	6/30/2019 7:53:50 AM	45880

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP359

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:15:00 PM

 Lab ID:
 1906E98-018
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	smb
Chloride	260	60		mg/Kg	20	7/2/2019 1:00:24 AM	45938
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	TOM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/1/2019 3:38:57 PM	45905
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/1/2019 3:38:57 PM	45905
Surr: DNOP	63.7	70-130	S	%Rec	1	7/1/2019 3:38:57 PM	45905
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/30/2019 8:17:12 AM	45880
Surr: BFB	86.5	73.8-119		%Rec	1	6/30/2019 8:17:12 AM	45880
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.025		mg/Kg	1	6/30/2019 8:17:12 AM	45880
Toluene	ND	0.049		mg/Kg	1	6/30/2019 8:17:12 AM	45880
Ethylbenzene	ND	0.049		mg/Kg	1	6/30/2019 8:17:12 AM	45880
Xylenes, Total	ND	0.098		mg/Kg	1	6/30/2019 8:17:12 AM	45880
Surr: 4-Bromofluorobenzene	94.2	80-120		%Rec	1	6/30/2019 8:17:12 AM	45880

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP360

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:15:00 PM

 Lab ID:
 1906E98-019
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	220	60		mg/Kg	20	7/2/2019 1:12:48 AM	45938
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	TOM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/1/2019 4:03:08 PM	45905
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/1/2019 4:03:08 PM	45905
Surr: DNOP	69.4	70-130	S	%Rec	1	7/1/2019 4:03:08 PM	45905
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/30/2019 8:40:44 AM	45880
Surr: BFB	85.8	73.8-119		%Rec	1	6/30/2019 8:40:44 AM	45880
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.025		mg/Kg	1	6/30/2019 8:40:44 AM	45880
Toluene	ND	0.050		mg/Kg	1	6/30/2019 8:40:44 AM	45880
Ethylbenzene	ND	0.050		mg/Kg	1	6/30/2019 8:40:44 AM	45880
Xylenes, Total	ND	0.099		mg/Kg	1	6/30/2019 8:40:44 AM	45880
Surr: 4-Bromofluorobenzene	93.0	80-120		%Rec	1	6/30/2019 8:40:44 AM	45880

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP361

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:15:00 PM

 Lab ID:
 1906E98-020
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	120	60		mg/Kg	20	7/2/2019 1:25:13 AM	45938
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst	TOM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/1/2019 4:27:13 PM	45905
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/1/2019 4:27:13 PM	45905
Surr: DNOP	52.8	70-130	S	%Rec	1	7/1/2019 4:27:13 PM	45905
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/30/2019 9:04:04 AM	45880
Surr: BFB	86.8	73.8-119		%Rec	1	6/30/2019 9:04:04 AM	45880
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.024		mg/Kg	1	6/30/2019 9:04:04 AM	45880
Toluene	ND	0.048		mg/Kg	1	6/30/2019 9:04:04 AM	45880
Ethylbenzene	ND	0.048		mg/Kg	1	6/30/2019 9:04:04 AM	45880
Xylenes, Total	ND	0.096		mg/Kg	1	6/30/2019 9:04:04 AM	45880
Surr: 4-Bromofluorobenzene	94.0	80-120		%Rec	1	6/30/2019 9:04:04 AM	45880

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP362

Project: LVP SWD 1
 Collection Date: 6/26/2019 3:15:00 PM

 Lab ID: 1906E98-021
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	180	60		mg/Kg	20	7/2/2019 1:37:37 AM	45938
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	: TOM
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	7/1/2019 4:51:13 PM	45905
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/1/2019 4:51:13 PM	45905
Surr: DNOP	59.3	70-130	S	%Rec	1	7/1/2019 4:51:13 PM	45905
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/30/2019 9:27:29 AM	45880
Surr: BFB	85.7	73.8-119		%Rec	1	6/30/2019 9:27:29 AM	45880
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.024		mg/Kg	1	6/30/2019 9:27:29 AM	45880
Toluene	ND	0.049		mg/Kg	1	6/30/2019 9:27:29 AM	45880
Ethylbenzene	ND	0.049		mg/Kg	1	6/30/2019 9:27:29 AM	45880
Xylenes, Total	ND	0.098		mg/Kg	1	6/30/2019 9:27:29 AM	45880
Surr: 4-Bromofluorobenzene	92.0	80-120		%Rec	1	6/30/2019 9:27:29 AM	45880

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP363

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:15:00 PM

 Lab ID:
 1906E98-022
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	smb
Chloride	99	60		mg/Kg	20	7/2/2019 1:50:01 AM	45938
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS					Analyst	TOM
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	7/1/2019 5:15:18 PM	45905
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/1/2019 5:15:18 PM	45905
Surr: DNOP	68.0	70-130	S	%Rec	1	7/1/2019 5:15:18 PM	45905
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/30/2019 9:50:53 AM	45880
Surr: BFB	84.6	73.8-119		%Rec	1	6/30/2019 9:50:53 AM	45880
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.025		mg/Kg	1	6/30/2019 9:50:53 AM	45880
Toluene	ND	0.049		mg/Kg	1	6/30/2019 9:50:53 AM	45880
Ethylbenzene	ND	0.049		mg/Kg	1	6/30/2019 9:50:53 AM	45880
Xylenes, Total	ND	0.099		mg/Kg	1	6/30/2019 9:50:53 AM	45880
Surr: 4-Bromofluorobenzene	91.5	80-120		%Rec	1	6/30/2019 9:50:53 AM	45880

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP364

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:15:00 PM

 Lab ID:
 1906E98-023
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	smb
Chloride	180	60	mg/Kg	20	7/2/2019 2:02:26 AM	45938
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	TOM
Diesel Range Organics (DRO)	ND	8.7	mg/Kg	1	7/1/2019 5:39:36 PM	45905
Motor Oil Range Organics (MRO)	ND	43	mg/Kg	1	7/1/2019 5:39:36 PM	45905
Surr: DNOP	71.2	70-130	%Rec	1	7/1/2019 5:39:36 PM	45905
EPA METHOD 8015D: GASOLINE RANGE					Analyst:	RAA
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	6/30/2019 12:34:42 PM	45881
Surr: BFB	94.8	73.8-119	%Rec	1	6/30/2019 12:34:42 PM	45881
EPA METHOD 8021B: VOLATILES					Analyst	RAA
Benzene	ND	0.025	mg/Kg	1	6/30/2019 12:34:42 PM	45881
Toluene	ND	0.050	mg/Kg	1	6/30/2019 12:34:42 PM	45881
Ethylbenzene	ND	0.050	mg/Kg	1	6/30/2019 12:34:42 PM	45881
Xylenes, Total	ND	0.10	mg/Kg	1	6/30/2019 12:34:42 PM	45881
Surr: 4-Bromofluorobenzene	103	80-120	%Rec	1	6/30/2019 12:34:42 PM	45881

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP365

Project: LVP SWD 1
 Collection Date: 6/26/2019 3:15:00 PM

 Lab ID: 1906E98-024
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	190	60		mg/Kg	20	7/2/2019 2:14:51 AM	45938
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst	TOM
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	7/1/2019 6:04:03 PM	45905
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	7/1/2019 6:04:03 PM	45905
Surr: DNOP	57.3	70-130	S	%Rec	1	7/1/2019 6:04:03 PM	45905
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/30/2019 1:45:07 PM	45881
Surr: BFB	88.6	73.8-119		%Rec	1	6/30/2019 1:45:07 PM	45881
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.025		mg/Kg	1	6/30/2019 1:45:07 PM	45881
Toluene	ND	0.050		mg/Kg	1	6/30/2019 1:45:07 PM	45881
Ethylbenzene	ND	0.050		mg/Kg	1	6/30/2019 1:45:07 PM	45881
Xylenes, Total	ND	0.10		mg/Kg	1	6/30/2019 1:45:07 PM	45881
Surr: 4-Bromofluorobenzene	94.7	80-120		%Rec	1	6/30/2019 1:45:07 PM	45881

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP366

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:20:00 PM

 Lab ID:
 1906E98-025
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	smb
Chloride	140	60	mg/Kg	20	7/2/2019 2:52:04 AM	45938
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	TOM
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	7/1/2019 6:28:36 PM	45905
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	7/1/2019 6:28:36 PM	45905
Surr: DNOP	70.8	70-130	%Rec	1	7/1/2019 6:28:36 PM	45905
EPA METHOD 8015D: GASOLINE RANGE					Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	6/30/2019 2:55:43 PM	45881
Surr: BFB	89.9	73.8-119	%Rec	1	6/30/2019 2:55:43 PM	45881
EPA METHOD 8021B: VOLATILES					Analyst	: RAA
Benzene	ND	0.025	mg/Kg	1	6/30/2019 2:55:43 PM	45881
Toluene	ND	0.049	mg/Kg	1	6/30/2019 2:55:43 PM	45881
Ethylbenzene	ND	0.049	mg/Kg	1	6/30/2019 2:55:43 PM	45881
Xylenes, Total	ND	0.099	mg/Kg	1	6/30/2019 2:55:43 PM	45881
Surr: 4-Bromofluorobenzene	96.2	80-120	%Rec	1	6/30/2019 2:55:43 PM	45881

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP367

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:20:00 PM

 Lab ID:
 1906E98-026
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	160	60		mg/Kg	20	7/1/2019 10:52:14 PM	45943
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	TOM
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	7/1/2019 6:53:10 PM	45905
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	7/1/2019 6:53:10 PM	45905
Surr: DNOP	61.4	70-130	S	%Rec	1	7/1/2019 6:53:10 PM	45905
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/30/2019 3:19:17 PM	45881
Surr: BFB	87.0	73.8-119		%Rec	1	6/30/2019 3:19:17 PM	45881
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.025		mg/Kg	1	6/30/2019 3:19:17 PM	45881
Toluene	ND	0.050		mg/Kg	1	6/30/2019 3:19:17 PM	45881
Ethylbenzene	ND	0.050		mg/Kg	1	6/30/2019 3:19:17 PM	45881
Xylenes, Total	ND	0.10		mg/Kg	1	6/30/2019 3:19:17 PM	45881
Surr: 4-Bromofluorobenzene	93.1	80-120		%Rec	1	6/30/2019 3:19:17 PM	45881

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP368

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:20:00 PM

 Lab ID:
 1906E98-027
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	180	60		mg/Kg	20	7/1/2019 11:29:28 PM	45943
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	TOM
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	7/1/2019 7:17:41 PM	45905
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/1/2019 7:17:41 PM	45905
Surr: DNOP	65.7	70-130	S	%Rec	1	7/1/2019 7:17:41 PM	45905
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/30/2019 3:42:54 PM	45881
Surr: BFB	87.1	73.8-119		%Rec	1	6/30/2019 3:42:54 PM	45881
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.025		mg/Kg	1	6/30/2019 3:42:54 PM	45881
Toluene	ND	0.050		mg/Kg	1	6/30/2019 3:42:54 PM	45881
Ethylbenzene	ND	0.050		mg/Kg	1	6/30/2019 3:42:54 PM	45881
Xylenes, Total	ND	0.10		mg/Kg	1	6/30/2019 3:42:54 PM	45881
Surr: 4-Bromofluorobenzene	92.7	80-120		%Rec	1	6/30/2019 3:42:54 PM	45881

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP369

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:20:00 PM

 Lab ID:
 1906E98-028
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	170	60		mg/Kg	20	7/1/2019 11:41:52 PM	45943
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst	JME
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/29/2019 10:51:13 PM	45906
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/29/2019 10:51:13 PM	45906
Surr: DNOP	37.5	70-130	S	%Rec	1	6/29/2019 10:51:13 PM	45906
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/30/2019 4:06:27 PM	45881
Surr: BFB	89.6	73.8-119		%Rec	1	6/30/2019 4:06:27 PM	45881
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.025		mg/Kg	1	6/30/2019 4:06:27 PM	45881
Toluene	ND	0.050		mg/Kg	1	6/30/2019 4:06:27 PM	45881
Ethylbenzene	ND	0.050		mg/Kg	1	6/30/2019 4:06:27 PM	45881
Xylenes, Total	ND	0.10		mg/Kg	1	6/30/2019 4:06:27 PM	45881
Surr: 4-Bromofluorobenzene	94.8	80-120		%Rec	1	6/30/2019 4:06:27 PM	45881

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP370

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:20:00 PM

 Lab ID:
 1906E98-029
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	200	60		mg/Kg	20	7/1/2019 11:54:17 PM	45943
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	: JME
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	6/29/2019 11:15:48 PM	45906
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	6/29/2019 11:15:48 PM	45906
Surr: DNOP	30.6	70-130	S	%Rec	1	6/29/2019 11:15:48 PM	45906
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/30/2019 4:30:06 PM	45881
Surr: BFB	89.5	73.8-119		%Rec	1	6/30/2019 4:30:06 PM	45881
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.025		mg/Kg	1	6/30/2019 4:30:06 PM	45881
Toluene	ND	0.049		mg/Kg	1	6/30/2019 4:30:06 PM	45881
Ethylbenzene	ND	0.049		mg/Kg	1	6/30/2019 4:30:06 PM	45881
Xylenes, Total	ND	0.098		mg/Kg	1	6/30/2019 4:30:06 PM	45881
Surr: 4-Bromofluorobenzene	95.1	80-120		%Rec	1	6/30/2019 4:30:06 PM	45881

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP371

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:20:00 PM

 Lab ID:
 1906E98-030
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	240	60		mg/Kg	20	7/2/2019 12:06:42 AM	45943
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	JME
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/29/2019 11:40:21 PM	45906
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/29/2019 11:40:21 PM	45906
Surr: DNOP	44.6	70-130	S	%Rec	1	6/29/2019 11:40:21 PM	45906
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/30/2019 4:53:47 PM	45881
Surr: BFB	89.8	73.8-119		%Rec	1	6/30/2019 4:53:47 PM	45881
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.025		mg/Kg	1	6/30/2019 4:53:47 PM	45881
Toluene	ND	0.049		mg/Kg	1	6/30/2019 4:53:47 PM	45881
Ethylbenzene	ND	0.049		mg/Kg	1	6/30/2019 4:53:47 PM	45881
Xylenes, Total	ND	0.098		mg/Kg	1	6/30/2019 4:53:47 PM	45881
Surr: 4-Bromofluorobenzene	94.7	80-120		%Rec	1	6/30/2019 4:53:47 PM	45881

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP372

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:20:00 PM

 Lab ID:
 1906E98-031
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	230	60		mg/Kg	20	7/2/2019 12:19:07 AM	45943
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	: JME
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/30/2019 12:04:55 AM	45906
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/30/2019 12:04:55 AM	45906
Surr: DNOP	37.3	70-130	S	%Rec	1	6/30/2019 12:04:55 AM	45906
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/30/2019 5:17:24 PM	45881
Surr: BFB	90.5	73.8-119		%Rec	1	6/30/2019 5:17:24 PM	45881
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.025		mg/Kg	1	6/30/2019 5:17:24 PM	45881
Toluene	ND	0.049		mg/Kg	1	6/30/2019 5:17:24 PM	45881
Ethylbenzene	ND	0.049		mg/Kg	1	6/30/2019 5:17:24 PM	45881
Xylenes, Total	ND	0.098		mg/Kg	1	6/30/2019 5:17:24 PM	45881
Surr: 4-Bromofluorobenzene	96.5	80-120		%Rec	1	6/30/2019 5:17:24 PM	45881

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP373

Project: LVP SWD 1
 Collection Date: 6/26/2019 3:20:00 PM

 Lab ID: 1906E98-032
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	170	60		mg/Kg	20	7/2/2019 12:31:31 AM	45943
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst	: JME
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	6/30/2019 12:29:33 AM	45906
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/30/2019 12:29:33 AM	45906
Surr: DNOP	31.6	70-130	S	%Rec	1	6/30/2019 12:29:33 AM	45906
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/30/2019 5:41:00 PM	45881
Surr: BFB	89.6	73.8-119		%Rec	1	6/30/2019 5:41:00 PM	45881
EPA METHOD 8021B: VOLATILES						Analyst	: RAA
Benzene	ND	0.025		mg/Kg	1	6/30/2019 5:41:00 PM	45881
Toluene	ND	0.050		mg/Kg	1	6/30/2019 5:41:00 PM	45881
Ethylbenzene	ND	0.050		mg/Kg	1	6/30/2019 5:41:00 PM	45881
Xylenes, Total	ND	0.099		mg/Kg	1	6/30/2019 5:41:00 PM	45881
Surr: 4-Bromofluorobenzene	95.0	80-120		%Rec	1	6/30/2019 5:41:00 PM	45881

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP374

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:20:00 PM

 Lab ID:
 1906E98-033
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	200	60		mg/Kg	20	7/2/2019 12:43:55 AM	45943
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst	JME
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/30/2019 12:53:58 AM	45906
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/30/2019 12:53:58 AM	45906
Surr: DNOP	39.8	70-130	S	%Rec	1	6/30/2019 12:53:58 AM	45906
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/30/2019 7:38:34 PM	45881
Surr: BFB	85.7	73.8-119		%Rec	1	6/30/2019 7:38:34 PM	45881
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.025		mg/Kg	1	6/30/2019 7:38:34 PM	45881
Toluene	ND	0.050		mg/Kg	1	6/30/2019 7:38:34 PM	45881
Ethylbenzene	ND	0.050		mg/Kg	1	6/30/2019 7:38:34 PM	45881
Xylenes, Total	ND	0.10		mg/Kg	1	6/30/2019 7:38:34 PM	45881
Surr: 4-Bromofluorobenzene	90.8	80-120		%Rec	1	6/30/2019 7:38:34 PM	45881

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP375

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:20:00 PM

 Lab ID:
 1906E98-034
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	210	60		mg/Kg	20	7/2/2019 1:21:09 AM	45943
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	JME
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/30/2019 1:18:38 AM	45906
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/30/2019 1:18:38 AM	45906
Surr: DNOP	37.4	70-130	S	%Rec	1	6/30/2019 1:18:38 AM	45906
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/30/2019 8:02:01 PM	45881
Surr: BFB	84.6	73.8-119		%Rec	1	6/30/2019 8:02:01 PM	45881
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.025		mg/Kg	1	6/30/2019 8:02:01 PM	45881
Toluene	ND	0.050		mg/Kg	1	6/30/2019 8:02:01 PM	45881
Ethylbenzene	ND	0.050		mg/Kg	1	6/30/2019 8:02:01 PM	45881
Xylenes, Total	ND	0.10		mg/Kg	1	6/30/2019 8:02:01 PM	45881
Surr: 4-Bromofluorobenzene	89.5	80-120		%Rec	1	6/30/2019 8:02:01 PM	45881

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP376

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:20:00 PM

 Lab ID:
 1906E98-035
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	300	60		mg/Kg	20	7/2/2019 1:33:33 AM	45943
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst	: JME
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/30/2019 1:43:18 AM	45906
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/30/2019 1:43:18 AM	45906
Surr: DNOP	34.9	70-130	S	%Rec	1	6/30/2019 1:43:18 AM	45906
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/30/2019 8:25:23 PM	45881
Surr: BFB	86.7	73.8-119		%Rec	1	6/30/2019 8:25:23 PM	45881
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.025		mg/Kg	1	6/30/2019 8:25:23 PM	45881
Toluene	ND	0.050		mg/Kg	1	6/30/2019 8:25:23 PM	45881
Ethylbenzene	ND	0.050		mg/Kg	1	6/30/2019 8:25:23 PM	45881
Xylenes, Total	ND	0.10		mg/Kg	1	6/30/2019 8:25:23 PM	45881
Surr: 4-Bromofluorobenzene	92.1	80-120		%Rec	1	6/30/2019 8:25:23 PM	45881

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP377

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:20:00 PM

 Lab ID:
 1906E98-036
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	150	60		mg/Kg	20	7/2/2019 1:45:58 AM	45943
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst	: JME
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/30/2019 2:07:58 AM	45906
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/30/2019 2:07:58 AM	45906
Surr: DNOP	29.8	70-130	S	%Rec	1	6/30/2019 2:07:58 AM	45906
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/30/2019 8:48:45 PM	45881
Surr: BFB	85.6	73.8-119		%Rec	1	6/30/2019 8:48:45 PM	45881
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.024		mg/Kg	1	6/30/2019 8:48:45 PM	45881
Toluene	ND	0.049		mg/Kg	1	6/30/2019 8:48:45 PM	45881
Ethylbenzene	ND	0.049		mg/Kg	1	6/30/2019 8:48:45 PM	45881
Xylenes, Total	ND	0.098		mg/Kg	1	6/30/2019 8:48:45 PM	45881
Surr: 4-Bromofluorobenzene	90.6	80-120		%Rec	1	6/30/2019 8:48:45 PM	45881

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP378

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:30:00 PM

 Lab ID:
 1906E98-037
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	370	60		mg/Kg	20	7/2/2019 1:58:23 AM	45943
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst	: JME
Diesel Range Organics (DRO)	ND	8.7		mg/Kg	1	6/30/2019 2:32:28 AM	45906
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	6/30/2019 2:32:28 AM	45906
Surr: DNOP	38.6	70-130	S	%Rec	1	6/30/2019 2:32:28 AM	45906
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/30/2019 9:12:25 PM	45881
Surr: BFB	87.5	73.8-119		%Rec	1	6/30/2019 9:12:25 PM	45881
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.025		mg/Kg	1	6/30/2019 9:12:25 PM	45881
Toluene	ND	0.050		mg/Kg	1	6/30/2019 9:12:25 PM	45881
Ethylbenzene	ND	0.050		mg/Kg	1	6/30/2019 9:12:25 PM	45881
Xylenes, Total	ND	0.10		mg/Kg	1	6/30/2019 9:12:25 PM	45881
Surr: 4-Bromofluorobenzene	92.8	80-120		%Rec	1	6/30/2019 9:12:25 PM	45881

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP379

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:30:00 PM

 Lab ID:
 1906E98-038
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	280	60		mg/Kg	20	7/2/2019 2:10:47 AM	45943
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst	: JME
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/30/2019 2:57:03 AM	45906
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/30/2019 2:57:03 AM	45906
Surr: DNOP	38.5	70-130	S	%Rec	1	6/30/2019 2:57:03 AM	45906
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/30/2019 9:35:57 PM	45881
Surr: BFB	94.1	73.8-119		%Rec	1	6/30/2019 9:35:57 PM	45881
EPA METHOD 8021B: VOLATILES						Analyst	: RAA
Benzene	ND	0.025		mg/Kg	1	6/30/2019 9:35:57 PM	45881
Toluene	ND	0.049		mg/Kg	1	6/30/2019 9:35:57 PM	45881
Ethylbenzene	ND	0.049		mg/Kg	1	6/30/2019 9:35:57 PM	45881
Xylenes, Total	ND	0.099		mg/Kg	1	6/30/2019 9:35:57 PM	45881
Surr: 4-Bromofluorobenzene	99.6	80-120		%Rec	1	6/30/2019 9:35:57 PM	45881

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP380

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:30:00 PM

 Lab ID:
 1906E98-039
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	290	60		mg/Kg	20	7/2/2019 2:23:11 AM	45943
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	JME
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	6/30/2019 3:21:36 AM	45906
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/30/2019 3:21:36 AM	45906
Surr: DNOP	23.3	70-130	S	%Rec	1	6/30/2019 3:21:36 AM	45906
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/30/2019 9:59:29 PM	45881
Surr: BFB	89.1	73.8-119		%Rec	1	6/30/2019 9:59:29 PM	45881
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.025		mg/Kg	1	6/30/2019 9:59:29 PM	45881
Toluene	ND	0.049		mg/Kg	1	6/30/2019 9:59:29 PM	45881
Ethylbenzene	ND	0.049		mg/Kg	1	6/30/2019 9:59:29 PM	45881
Xylenes, Total	ND	0.099		mg/Kg	1	6/30/2019 9:59:29 PM	45881
Surr: 4-Bromofluorobenzene	94.5	80-120		%Rec	1	6/30/2019 9:59:29 PM	45881

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP381

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:30:00 PM

 Lab ID:
 1906E98-040
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	smb
Chloride	240	60		mg/Kg	20	7/5/2019 7:58:59 PM	46027
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst:	JME
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	6/30/2019 3:46:16 AM	45906
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/30/2019 3:46:16 AM	45906
Surr: DNOP	36.6	70-130	S	%Rec	1	6/30/2019 3:46:16 AM	45906
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/30/2019 10:23:03 PM	45881
Surr: BFB	91.4	73.8-119		%Rec	1	6/30/2019 10:23:03 PM	45881
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.025		mg/Kg	1	6/30/2019 10:23:03 PM	45881
Toluene	ND	0.050		mg/Kg	1	6/30/2019 10:23:03 PM	45881
Ethylbenzene	ND	0.050		mg/Kg	1	6/30/2019 10:23:03 PM	45881
Xylenes, Total	ND	0.099		mg/Kg	1	6/30/2019 10:23:03 PM	45881
Surr: 4-Bromofluorobenzene	96.7	80-120		%Rec	1	6/30/2019 10:23:03 PM	45881

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP382

Project: LVP SWD 1
 Collection Date: 6/26/2019 3:30:00 PM

 Lab ID: 1906E98-041
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	270	60		mg/Kg	20	7/5/2019 8:36:12 PM	46027
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS					Analyst	: JME
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	6/30/2019 4:10:50 AM	45906
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	6/30/2019 4:10:50 AM	45906
Surr: DNOP	29.9	70-130	S	%Rec	1	6/30/2019 4:10:50 AM	45906
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/30/2019 10:46:31 PM	45881
Surr: BFB	88.6	73.8-119		%Rec	1	6/30/2019 10:46:31 PM	45881
EPA METHOD 8021B: VOLATILES						Analyst	RAA
Benzene	ND	0.024		mg/Kg	1	6/30/2019 10:46:31 PM	45881
Toluene	ND	0.049		mg/Kg	1	6/30/2019 10:46:31 PM	45881
Ethylbenzene	ND	0.049		mg/Kg	1	6/30/2019 10:46:31 PM	45881
Xylenes, Total	ND	0.098		mg/Kg	1	6/30/2019 10:46:31 PM	45881
Surr: 4-Bromofluorobenzene	94.0	80-120		%Rec	1	6/30/2019 10:46:31 PM	45881

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP383

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:30:00 PM

 Lab ID:
 1906E98-042
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	smb
Chloride	310	60		mg/Kg	20	7/5/2019 9:13:25 PM	46027
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst:	JME
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/30/2019 4:35:29 AM	45906
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/30/2019 4:35:29 AM	45906
Surr: DNOP	44.3	70-130	S	%Rec	1	6/30/2019 4:35:29 AM	45906
EPA METHOD 8015D: GASOLINE RANGE						Analyst	RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/30/2019 11:09:59 PM	45881
Surr: BFB	90.5	73.8-119		%Rec	1	6/30/2019 11:09:59 PM	45881
EPA METHOD 8021B: VOLATILES						Analyst:	RAA
Benzene	ND	0.025		mg/Kg	1	6/30/2019 11:09:59 PM	45881
Toluene	ND	0.049		mg/Kg	1	6/30/2019 11:09:59 PM	45881
Ethylbenzene	ND	0.049		mg/Kg	1	6/30/2019 11:09:59 PM	45881
Xylenes, Total	ND	0.098		mg/Kg	1	6/30/2019 11:09:59 PM	45881
Surr: 4-Bromofluorobenzene	95.4	80-120		%Rec	1	6/30/2019 11:09:59 PM	45881

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP384

Project: LVP SWD 1
 Collection Date: 6/26/2019 3:30:00 PM

 Lab ID: 1906E98-043
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	290	60		mg/Kg	20	7/5/2019 9:25:49 PM	46027
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS					Analyst	: JME
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	6/30/2019 5:00:08 AM	45906
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/30/2019 5:00:08 AM	45906
Surr: DNOP	34.3	70-130	S	%Rec	1	6/30/2019 5:00:08 AM	45906
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/1/2019 10:27:58 AM	45901
Surr: BFB	86.5	73.8-119		%Rec	1	7/1/2019 10:27:58 AM	45901
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.025		mg/Kg	1	7/1/2019 10:27:58 AM	45901
Toluene	ND	0.050		mg/Kg	1	7/1/2019 10:27:58 AM	45901
Ethylbenzene	ND	0.050		mg/Kg	1	7/1/2019 10:27:58 AM	45901
Xylenes, Total	ND	0.099		mg/Kg	1	7/1/2019 10:27:58 AM	45901
Surr: 4-Bromofluorobenzene	92.1	80-120		%Rec	1	7/1/2019 10:27:58 AM	45901

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP385

Project: LVP SWD 1
 Collection Date: 6/26/2019 3:30:00 PM

 Lab ID: 1906E98-044
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: smb
Chloride	270	60		mg/Kg	20	7/5/2019 9:38:14 PM	46027
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	: JME
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/30/2019 5:49:23 AM	45906
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/30/2019 5:49:23 AM	45906
Surr: DNOP	29.0	70-130	S	%Rec	1	6/30/2019 5:49:23 AM	45906
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/1/2019 11:38:38 AM	45901
Surr: BFB	86.3	73.8-119		%Rec	1	7/1/2019 11:38:38 AM	45901
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.025		mg/Kg	1	7/1/2019 11:38:38 AM	45901
Toluene	ND	0.050		mg/Kg	1	7/1/2019 11:38:38 AM	45901
Ethylbenzene	ND	0.050		mg/Kg	1	7/1/2019 11:38:38 AM	45901
Xylenes, Total	ND	0.10		mg/Kg	1	7/1/2019 11:38:38 AM	45901
Surr: 4-Bromofluorobenzene	91.5	80-120		%Rec	1	7/1/2019 11:38:38 AM	45901

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP386

Project: LVP SWD 1
 Collection Date: 6/26/2019 3:30:00 PM

 Lab ID: 1906E98-045
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	260	60		mg/Kg	20	7/5/2019 9:50:38 PM	46027
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	: JME
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	6/30/2019 6:14:05 AM	45906
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	6/30/2019 6:14:05 AM	45906
Surr: DNOP	32.4	70-130	S	%Rec	1	6/30/2019 6:14:05 AM	45906
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/1/2019 12:49:18 PM	45901
Surr: BFB	88.8	73.8-119		%Rec	1	7/1/2019 12:49:18 PM	45901
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.025		mg/Kg	1	7/1/2019 12:49:18 PM	45901
Toluene	ND	0.050		mg/Kg	1	7/1/2019 12:49:18 PM	45901
Ethylbenzene	ND	0.050		mg/Kg	1	7/1/2019 12:49:18 PM	45901
Xylenes, Total	ND	0.10		mg/Kg	1	7/1/2019 12:49:18 PM	45901
Surr: 4-Bromofluorobenzene	93.9	80-120		%Rec	1	7/1/2019 12:49:18 PM	45901

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP387

Project: LVP SWD 1
 Collection Date: 6/26/2019 3:30:00 PM

 Lab ID: 1906E98-046
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	310	60		mg/Kg	20	7/5/2019 10:03:03 PM	46027
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS					Analyst	JME
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/29/2019 12:09:30 PM	45908
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/29/2019 12:09:30 PM	45908
Surr: DNOP	61.6	70-130	S	%Rec	1	6/29/2019 12:09:30 PM	45908
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/1/2019 1:12:53 PM	45901
Surr: BFB	87.2	73.8-119		%Rec	1	7/1/2019 1:12:53 PM	45901
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.024		mg/Kg	1	7/1/2019 1:12:53 PM	45901
Toluene	ND	0.049		mg/Kg	1	7/1/2019 1:12:53 PM	45901
Ethylbenzene	ND	0.049		mg/Kg	1	7/1/2019 1:12:53 PM	45901
Xylenes, Total	ND	0.098		mg/Kg	1	7/1/2019 1:12:53 PM	45901
Surr: 4-Bromofluorobenzene	92.2	80-120		%Rec	1	7/1/2019 1:12:53 PM	45901

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP388

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:30:00 PM

 Lab ID:
 1906E98-047
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	260	60		mg/Kg	20	7/5/2019 10:15:27 PM	46027
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst	: JME
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	6/29/2019 1:23:48 PM	45908
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/29/2019 1:23:48 PM	45908
Surr: DNOP	47.0	70-130	S	%Rec	1	6/29/2019 1:23:48 PM	45908
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/1/2019 1:36:29 PM	45901
Surr: BFB	88.6	73.8-119		%Rec	1	7/1/2019 1:36:29 PM	45901
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.025		mg/Kg	1	7/1/2019 1:36:29 PM	45901
Toluene	ND	0.049		mg/Kg	1	7/1/2019 1:36:29 PM	45901
Ethylbenzene	ND	0.049		mg/Kg	1	7/1/2019 1:36:29 PM	45901
Xylenes, Total	ND	0.098		mg/Kg	1	7/1/2019 1:36:29 PM	45901
Surr: 4-Bromofluorobenzene	93.0	80-120		%Rec	1	7/1/2019 1:36:29 PM	45901

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP389

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:30:00 PM

 Lab ID:
 1906E98-048
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	530	60		mg/Kg	20	7/5/2019 10:27:51 PM	46027
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS					Analyst	JME
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/29/2019 1:48:24 PM	45908
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/29/2019 1:48:24 PM	45908
Surr: DNOP	48.6	70-130	S	%Rec	1	6/29/2019 1:48:24 PM	45908
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/1/2019 2:00:06 PM	45901
Surr: BFB	89.0	73.8-119		%Rec	1	7/1/2019 2:00:06 PM	45901
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.024		mg/Kg	1	7/1/2019 2:00:06 PM	45901
Toluene	ND	0.049		mg/Kg	1	7/1/2019 2:00:06 PM	45901
Ethylbenzene	ND	0.049		mg/Kg	1	7/1/2019 2:00:06 PM	45901
Xylenes, Total	ND	0.098		mg/Kg	1	7/1/2019 2:00:06 PM	45901
Surr: 4-Bromofluorobenzene	93.8	80-120		%Rec	1	7/1/2019 2:00:06 PM	45901

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP390

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:35:00 PM

 Lab ID:
 1906E98-049
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	330	60		mg/Kg	20	7/5/2019 11:05:05 PM	46027
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS					Analyst	JME
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/29/2019 2:13:03 PM	45908
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	6/29/2019 2:13:03 PM	45908
Surr: DNOP	52.1	70-130	S	%Rec	1	6/29/2019 2:13:03 PM	45908
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/1/2019 2:23:45 PM	45901
Surr: BFB	87.6	73.8-119		%Rec	1	7/1/2019 2:23:45 PM	45901
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.025		mg/Kg	1	7/1/2019 2:23:45 PM	45901
Toluene	ND	0.050		mg/Kg	1	7/1/2019 2:23:45 PM	45901
Ethylbenzene	ND	0.050		mg/Kg	1	7/1/2019 2:23:45 PM	45901
Xylenes, Total	ND	0.10		mg/Kg	1	7/1/2019 2:23:45 PM	45901
Surr: 4-Bromofluorobenzene	92.4	80-120		%Rec	1	7/1/2019 2:23:45 PM	45901

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP391

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:35:00 PM

 Lab ID:
 1906E98-050
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	250	60		mg/Kg	20	7/5/2019 11:17:30 PM	46027
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	: JME
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/29/2019 2:37:51 PM	45908
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/29/2019 2:37:51 PM	45908
Surr: DNOP	51.3	70-130	S	%Rec	1	6/29/2019 2:37:51 PM	45908
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/1/2019 2:47:22 PM	45901
Surr: BFB	89.3	73.8-119		%Rec	1	7/1/2019 2:47:22 PM	45901
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.025		mg/Kg	1	7/1/2019 2:47:22 PM	45901
Toluene	ND	0.049		mg/Kg	1	7/1/2019 2:47:22 PM	45901
Ethylbenzene	ND	0.049		mg/Kg	1	7/1/2019 2:47:22 PM	45901
Xylenes, Total	ND	0.099		mg/Kg	1	7/1/2019 2:47:22 PM	45901
Surr: 4-Bromofluorobenzene	93.8	80-120		%Rec	1	7/1/2019 2:47:22 PM	45901

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP392

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:35:00 PM

 Lab ID:
 1906E98-051
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	300	60		mg/Kg	20	7/5/2019 11:54:43 PM	46027
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	: JME
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/29/2019 3:02:38 PM	45908
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/29/2019 3:02:38 PM	45908
Surr: DNOP	55.8	70-130	S	%Rec	1	6/29/2019 3:02:38 PM	45908
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/1/2019 3:10:58 PM	45901
Surr: BFB	89.8	73.8-119		%Rec	1	7/1/2019 3:10:58 PM	45901
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.025		mg/Kg	1	7/1/2019 3:10:58 PM	45901
Toluene	ND	0.050		mg/Kg	1	7/1/2019 3:10:58 PM	45901
Ethylbenzene	ND	0.050		mg/Kg	1	7/1/2019 3:10:58 PM	45901
Xylenes, Total	ND	0.10		mg/Kg	1	7/1/2019 3:10:58 PM	45901
Surr: 4-Bromofluorobenzene	95.2	80-120		%Rec	1	7/1/2019 3:10:58 PM	45901

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP393

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:35:00 PM

 Lab ID:
 1906E98-052
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	310	60		mg/Kg	20	7/6/2019 12:07:08 AM	46027
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	JME
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/29/2019 3:27:36 PM	45908
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/29/2019 3:27:36 PM	45908
Surr: DNOP	56.8	70-130	S	%Rec	1	6/29/2019 3:27:36 PM	45908
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/1/2019 3:34:37 PM	45901
Surr: BFB	88.6	73.8-119		%Rec	1	7/1/2019 3:34:37 PM	45901
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.025		mg/Kg	1	7/1/2019 3:34:37 PM	45901
Toluene	ND	0.049		mg/Kg	1	7/1/2019 3:34:37 PM	45901
Ethylbenzene	ND	0.049		mg/Kg	1	7/1/2019 3:34:37 PM	45901
Xylenes, Total	ND	0.098		mg/Kg	1	7/1/2019 3:34:37 PM	45901
Surr: 4-Bromofluorobenzene	93.7	80-120		%Rec	1	7/1/2019 3:34:37 PM	45901

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP394

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:35:00 PM

 Lab ID:
 1906E98-053
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	230	60		mg/Kg	20	7/6/2019 12:19:32 AM	46027
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS					Analyst	JME
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/29/2019 3:52:14 PM	45908
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/29/2019 3:52:14 PM	45908
Surr: DNOP	46.0	70-130	S	%Rec	1	6/29/2019 3:52:14 PM	45908
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/1/2019 4:45:10 PM	45901
Surr: BFB	85.2	73.8-119		%Rec	1	7/1/2019 4:45:10 PM	45901
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.025		mg/Kg	1	7/1/2019 4:45:10 PM	45901
Toluene	ND	0.049		mg/Kg	1	7/1/2019 4:45:10 PM	45901
Ethylbenzene	ND	0.049		mg/Kg	1	7/1/2019 4:45:10 PM	45901
Xylenes, Total	ND	0.098		mg/Kg	1	7/1/2019 4:45:10 PM	45901
Surr: 4-Bromofluorobenzene	90.0	80-120		%Rec	1	7/1/2019 4:45:10 PM	45901

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP395

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:35:00 PM

 Lab ID:
 1906E98-054
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	220	60		mg/Kg	20	7/6/2019 12:31:56 AM	46027
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	JME
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/29/2019 4:17:03 PM	45908
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	6/29/2019 4:17:03 PM	45908
Surr: DNOP	60.8	70-130	S	%Rec	1	6/29/2019 4:17:03 PM	45908
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/1/2019 5:08:33 PM	45901
Surr: BFB	84.2	73.8-119		%Rec	1	7/1/2019 5:08:33 PM	45901
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.024		mg/Kg	1	7/1/2019 5:08:33 PM	45901
Toluene	ND	0.049		mg/Kg	1	7/1/2019 5:08:33 PM	45901
Ethylbenzene	ND	0.049		mg/Kg	1	7/1/2019 5:08:33 PM	45901
Xylenes, Total	ND	0.098		mg/Kg	1	7/1/2019 5:08:33 PM	45901
Surr: 4-Bromofluorobenzene	89.9	80-120		%Rec	1	7/1/2019 5:08:33 PM	45901

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP396

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:35:00 PM

 Lab ID:
 1906E98-055
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	290	60		mg/Kg	20	7/8/2019 12:59:38 PM	46043
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	JME
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/29/2019 4:41:32 PM	45908
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/29/2019 4:41:32 PM	45908
Surr: DNOP	48.6	70-130	S	%Rec	1	6/29/2019 4:41:32 PM	45908
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/1/2019 5:32:00 PM	45901
Surr: BFB	84.0	73.8-119		%Rec	1	7/1/2019 5:32:00 PM	45901
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.024		mg/Kg	1	7/1/2019 5:32:00 PM	45901
Toluene	ND	0.049		mg/Kg	1	7/1/2019 5:32:00 PM	45901
Ethylbenzene	ND	0.049		mg/Kg	1	7/1/2019 5:32:00 PM	45901
Xylenes, Total	ND	0.098		mg/Kg	1	7/1/2019 5:32:00 PM	45901
Surr: 4-Bromofluorobenzene	89.5	80-120		%Rec	1	7/1/2019 5:32:00 PM	45901

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP397

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:35:00 PM

 Lab ID:
 1906E98-056
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	270	60		mg/Kg	20	7/8/2019 1:12:03 PM	46043
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	JME
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/29/2019 5:06:23 PM	45908
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/29/2019 5:06:23 PM	45908
Surr: DNOP	45.1	70-130	S	%Rec	1	6/29/2019 5:06:23 PM	45908
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/1/2019 5:55:28 PM	45901
Surr: BFB	84.1	73.8-119		%Rec	1	7/1/2019 5:55:28 PM	45901
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.024		mg/Kg	1	7/1/2019 5:55:28 PM	45901
Toluene	ND	0.049		mg/Kg	1	7/1/2019 5:55:28 PM	45901
Ethylbenzene	ND	0.049		mg/Kg	1	7/1/2019 5:55:28 PM	45901
Xylenes, Total	ND	0.097		mg/Kg	1	7/1/2019 5:55:28 PM	45901
Surr: 4-Bromofluorobenzene	89.8	80-120		%Rec	1	7/1/2019 5:55:28 PM	45901

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP398

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:35:00 PM

 Lab ID:
 1906E98-057
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	280	60		mg/Kg	20	7/8/2019 1:24:27 PM	46043
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	JME
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/29/2019 5:31:10 PM	45908
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/29/2019 5:31:10 PM	45908
Surr: DNOP	36.8	70-130	S	%Rec	1	6/29/2019 5:31:10 PM	45908
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/1/2019 6:18:49 PM	45901
Surr: BFB	85.3	73.8-119		%Rec	1	7/1/2019 6:18:49 PM	45901
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.024		mg/Kg	1	7/1/2019 6:18:49 PM	45901
Toluene	ND	0.048		mg/Kg	1	7/1/2019 6:18:49 PM	45901
Ethylbenzene	ND	0.048		mg/Kg	1	7/1/2019 6:18:49 PM	45901
Xylenes, Total	ND	0.096		mg/Kg	1	7/1/2019 6:18:49 PM	45901
Surr: 4-Bromofluorobenzene	90.3	80-120		%Rec	1	7/1/2019 6:18:49 PM	45901

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP399

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:35:00 PM

 Lab ID:
 1906E98-058
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: smb
Chloride	230	60		mg/Kg	20	7/8/2019 1:36:51 PM	46043
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	: JME
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/29/2019 5:55:52 PM	45908
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/29/2019 5:55:52 PM	45908
Surr: DNOP	27.3	70-130	S	%Rec	1	6/29/2019 5:55:52 PM	45908
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/1/2019 6:42:12 PM	45901
Surr: BFB	84.6	73.8-119		%Rec	1	7/1/2019 6:42:12 PM	45901
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.025		mg/Kg	1	7/1/2019 6:42:12 PM	45901
Toluene	ND	0.049		mg/Kg	1	7/1/2019 6:42:12 PM	45901
Ethylbenzene	ND	0.049		mg/Kg	1	7/1/2019 6:42:12 PM	45901
Xylenes, Total	ND	0.098		mg/Kg	1	7/1/2019 6:42:12 PM	45901
Surr: 4-Bromofluorobenzene	89.6	80-120		%Rec	1	7/1/2019 6:42:12 PM	45901

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP400

 Project:
 LVP SWD 1
 Collection Date: 6/26/2019 3:35:00 PM

 Lab ID:
 1906E98-059
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	310	60		mg/Kg	20	7/8/2019 1:49:15 PM	46043
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	: JME
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/29/2019 6:20:26 PM	45908
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/29/2019 6:20:26 PM	45908
Surr: DNOP	26.1	70-130	S	%Rec	1	6/29/2019 6:20:26 PM	45908
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/1/2019 7:05:35 PM	45901
Surr: BFB	82.8	73.8-119		%Rec	1	7/1/2019 7:05:35 PM	45901
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.024		mg/Kg	1	7/1/2019 7:05:35 PM	45901
Toluene	ND	0.049		mg/Kg	1	7/1/2019 7:05:35 PM	45901
Ethylbenzene	ND	0.049		mg/Kg	1	7/1/2019 7:05:35 PM	45901
Xylenes, Total	ND	0.097		mg/Kg	1	7/1/2019 7:05:35 PM	45901
Surr: 4-Bromofluorobenzene	87.9	80-120		%Rec	1	7/1/2019 7:05:35 PM	45901

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/10/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP401

Project: LVP SWD 1
 Collection Date: 6/26/2019 3:35:00 PM

 Lab ID: 1906E98-060
 Matrix: SOIL
 Received Date: 6/27/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	410	60		mg/Kg	20	7/8/2019 2:01:39 PM	46043
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	JME
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	6/29/2019 7:09:33 PM	45908
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/29/2019 7:09:33 PM	45908
Surr: DNOP	26.4	70-130	S	%Rec	1	6/29/2019 7:09:33 PM	45908
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/1/2019 7:28:57 PM	45901
Surr: BFB	85.8	73.8-119		%Rec	1	7/1/2019 7:28:57 PM	45901
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.025		mg/Kg	1	7/1/2019 7:28:57 PM	45901
Toluene	ND	0.049		mg/Kg	1	7/1/2019 7:28:57 PM	45901
Ethylbenzene	ND	0.049		mg/Kg	1	7/1/2019 7:28:57 PM	45901
Xylenes, Total	ND	0.099		mg/Kg	1	7/1/2019 7:28:57 PM	45901
Surr: 4-Bromofluorobenzene	91.4	80-120		%Rec	1	7/1/2019 7:28:57 PM	45901

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

Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1906E98**

10-Jul-19

Client:	WPX Energy
Project:	LVP SWD 1

Sample ID: MB-45930	SampType: mblk	TestCode: EPA Method	300.0: Anions	
Client ID: PBS	Batch ID: 45930	RunNo: 61068		
Prep Date: 7/1/2019	Analysis Date: 7/1/2019	SeqNo: 2068937	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride	ND 1.5			
Sample ID: LCS-45930	SampType: Ics	TestCode: EPA Method	300.0: Anions	
Client ID: LCSS	Batch ID: 45930	RunNo: 61068		
Prep Date: 7/1/2019	Analysis Date: 7/1/2019	SeqNo: 2068938	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride	14 1.5 15.00	0 92.5 90	110	
Sample ID: MB-45943	SampType: mblk	TestCode: EPA Method	300.0: Anions	
Client ID: PBS	Batch ID: 45943	RunNo: 61068		
Prep Date: 7/1/2019	Analysis Date: 7/1/2019	SeqNo: 2068978	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride	ND 1.5			

Sample ID: LCS-45943	SampT	ype: Ics	;	Tes	tCode: El	PA Method	300.0: Anion	S		
Client ID: LCSS	Batch	ID: 45 9	943	F	RunNo: 6	1068				
Prep Date: 7/1/2019	Analysis Da	ate: 7/	1/2019	S	SeqNo: 2	068979	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.1	90	110			

Sample ID: MB-45938	SampTy	/pe: ME	BLK	Tes	tCode: El	PA Method	300.0: Anion	s		
Client ID: PBS	Batch	ID: 45 9	938	F	RunNo: 6	1084				
Prep Date: 7/1/2019	Analysis Da	ate: 7/	1/2019	8	SeqNo: 2	069059	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-45938	SampType: LCS	TestCode: EPA Method	300.0: Anions	
Client ID: LCSS	Batch ID: 45938	RunNo: 61084		
Prep Date: 7/1/2019	Analysis Date: 7/1/2019	SeqNo: 2069060	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride	14 1.5 15.00	0 95.6 90	110	

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
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- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
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- J Analyte detected below quantitation limits
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Hall Environmental Analysis Laboratory, Inc.

WO#: **1906E98**

10-Jul-19

Client: WPX Energy
Project: LVP SWD 1

Sample ID: MB-46027 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 46027 RunNo: 61175

Prep Date: 7/5/2019 Analysis Date: 7/5/2019 SeqNo: 2074389 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride ND 1.5

Sample ID: LCS-46027 SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 46027 RunNo: 61175

Prep Date: **7/5/2019** Analysis Date: **7/5/2019** SeqNo: **2074390** Units: **mg/Kg**

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride 14 1.5 15.00 0 95.6 90 110

Sample ID: MB-46043 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 46043 RunNo: 61221

Prep Date: 7/8/2019 Analysis Date: 7/8/2019 SeqNo: 2075393 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride ND 1.5

Sample ID: LCS-46043 SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 46043 RunNo: 61221

Prep Date: 7/8/2019 Analysis Date: 7/8/2019 SeqNo: 2075394 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride 14 1.5 15.00 0 93.3 90 110

Qualifiers:

- Value exceeds Maximum Contaminant Level
- D Sample Diluted Due to Matrix
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- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
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- B Analyte detected in the associated Method Blank
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- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1906E98**

10-Jul-19

Client:	WPX Energy
Project:	LVP SWD 1

Sample ID: MB-45906	SampType: MB	BLK	Tes	tCode: EPA N	Method	8015M/D: Die	sel Range	e Organics	
Client ID: PBS	Batch ID: 459	906	F	RunNo: 6105 0	0				
Prep Date: 6/28/2019	Analysis Date: 6/2	29/2019	S	SeqNo: 2067 2	248	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC Lo	owLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND 10								
Motor Oil Range Organics (MRO)	ND 50	40.00		04.0	70	400			
Surr: DNOP	8.5	10.00		84.8	70	130			
Sample ID: MB-45908	SampType: MB	BLK	TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: PBS	Batch ID: 459	908	RunNo: 61050						
Prep Date: 6/28/2019	Analysis Date: 6/2	29/2019	S	SeqNo: 2067 2	249	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC Lo	owLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND 10								
Motor Oil Range Organics (MRO)	ND 50	40.00							
Surr: DNOP	9.6	10.00		95.9	70	130			
Sample ID: LCS-45906	SampType: LC	s	Tes	tCode: EPA N	Method	8015M/D: Die	sel Range	e Organics	
Client ID: LCSS	Batch ID: 459	906	F	RunNo: 6105 0	0				
Prep Date: 6/28/2019	Analysis Date: 6/2	29/2019	S	SeqNo: 2067 2	251	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC Lo	owLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46 10	50.00	0	91.3	63.9	124			
Surr: DNOP	4.1	5.000		82.7	70	130			
Sample ID: LCS-45908	SampType: LC	S	Tes	tCode: EPA N	Method	8015M/D: Die	sel Range	e Organics	
Client ID: LCSS	Batch ID: 459	908	F	RunNo: 6105 0	0				
Prep Date: 6/28/2019	Analysis Date: 6/2	29/2019	S	SeqNo: 2067 2	252	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC Lo	owLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46 10	50.00	0	91.0	63.9	124			
Surr: DNOP	4.3	5.000		85.5	70	130			
Sample ID: 1906E98-046AMS	SampType: MS	5	Tes	tCode: EPA N	Method	8015M/D: Die	sel Range	e Organics	
Client ID: SP387	Batch ID: 459	908	F	RunNo: 6105 0	0				
Prep Date: 6/28/2019	Analysis Date: 6/2	29/2019	S	SeqNo: 2067 3	315	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC Lo	owLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40 9.9	49.46	0	80.2	57	142			
Surr: DNOP	2.2	4.946		43.7	70	130			S

Qualifiers:

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- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1906E98**

10-Jul-19

Client: WPX Energy Project: LVP SWD 1

EVI 5W									
Sample ID: 1906E98-046AMS	D SampType: I	MSD	Tes	tCode: EF	PA Method	8015M/D: Die	sel Range	e Organics	
Client ID: SP387	Batch ID: 4	45908	F	RunNo: 6 1	1050				
Prep Date: 6/28/2019	Analysis Date:	6/29/2019	9	SeqNo: 20	067318	Units: mg/K	g		
Analyte	Result PQI	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40 1	0 49.85	0	80.7	57	142	1.42	20	
Surr: DNOP	1.9	4.985		38.2	70	130	0	0	S
Sample ID: MB-45903	SampType: I	MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: PBS	Batch ID: 4	45903	F	RunNo: 61	1002				
Prep Date: 6/28/2019	Analysis Date:	6/29/2019	9	SeqNo: 20	067342	Units: mg/K	g		
Analyte	Result PQI	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)		0							
Motor Oil Range Organics (MRO)		10 00		400		400			
Surr: DNOP	13	10.00		129	70	130			
Sample ID: LCS-45903	SampType: I	_CS	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: LCSS	Batch ID: 4	45903	F	RunNo: 61	1002				
Prep Date: 6/28/2019	Analysis Date:	6/29/2019	8	SeqNo: 20	067343	Units: mg/K	g		
Analyte	Result PQI	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49 1	0 50.00	0	98.7	63.9	124			
Surr: DNOP	5.0	5.000		99.9	70	130			
Sample ID: MB-45905	SampType: I	MBLK	Tes	tCode: EF	PA Method	8015M/D: Die	sel Range	e Organics	
Client ID: PBS	Batch ID: 4	45905	F	RunNo: 61	1066				
Prep Date: 6/28/2019	Analysis Date:	7/1/2019	\$	SeqNo: 20	068034	Units: mg/K	g		
Analyte	Result PQI	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND 1	0							
Motor Oil Range Organics (MRO)		0							
Surr: DNOP	12	10.00		121	70	130			
Sample ID: LCS-45905	SampType: I		Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: LCSS	Batch ID: 4	45905	F	RunNo: 6 1	1066				
Prep Date: 6/28/2019	Analysis Date:	7/1/2019	5	SeqNo: 20	068035	Units: mg/K	g		
Analyte	Result PQI	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)		0 50.00	0	110	63.9	124			
Surr: DNOP	5.4	5.000		107	70	130			

Qualifiers:

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- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1906E98**

10-Jul-19

Client: WPX Energy Project: LVP SWD 1

Sample ID: 1906E98-008AMS SampType: MS TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: **SP349** Batch ID: **45905** RunNo: **61066**

Prep Date: 6/28/2019 Analysis Date: 7/1/2019 SeqNo: 2068037 Units: mg/Kg

PQL SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Qual Analyte Result LowLimit Diesel Range Organics (DRO) 0 33 9.7 48.31 69.1 57 142 Surr: DNOP 2.9 4.831 60.8 70 130 S

Sample ID: 1906E98-008AMSD SampType: MSD TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: **SP349** Batch ID: **45905** RunNo: **61066**

Prep Date: 6/28/2019 Analysis Date: 7/1/2019 SeqNo: 2068038 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Diesel Range Organics (DRO) 27 20 RS 9.5 47.44 0 56.3 57 142 22.2 Surr: DNOP 2.3 4.744 49.0 70 130 0 0 S

Qualifiers:

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- J Analyte detected below quantitation limits
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Hall Environmental Analysis Laboratory, Inc.

WO#: **1906E98**

10-Jul-19

Client:	WPX Energy
Project:	LVP SWD 1

EVI SW	<i>D</i> 1									
Sample ID: LCS-45877	SampT	ype: LC	s	Test	tCode: EF	PA Method	8015D: Gaso	line Rang	е	
Client ID: LCSS	Batch	ID: 458	377	R	RunNo: 6 1	1018				
Prep Date: 6/27/2019	Analysis D	ate: 6/2	28/2019	S	SeqNo: 20	066634	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	100	80.1	123			
Surr: BFB	1100		1000		115	73.8	119			
Sample ID: MB-45877	SampT	уре: МВ	LK	Test	TestCode: EPA Method 8015D: Gasoline Range					
Client ID: PBS	Batch	ID: 45 8	377	RunNo: 61018						
Prep Date: 6/27/2019	Analysis D	ate: 6/2	28/2019	S	SeqNo: 20	066636	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		101	73.8	119			
Sample ID: 1906E98-003AMS	SampT	уре: МЅ	1	TestCode: EPA Method 8015D: Gasoline Range						
Client ID: SP344	Batch	ID: 458	380	R	RunNo: 61043					
Prep Date: 6/27/2019	Analysis D	ate: 6/2	29/2019	S	SeqNo: 20	067037	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	24.98	0	90.8	69.1	142			
Surr: BFB	1000		999.0		104	73.8	119			
Sample ID: 1906E98-003AMS	D SampT	ype: MS	D	Test	tCode: EF	PA Method	8015D: Gaso	line Rang	е	
Client ID: SP344	Batch	ID: 458	380	R	RunNo: 61	1043				
Prep Date: 6/27/2019	Analysis D	ate: 6/2	29/2019	S	SeqNo: 20	067038	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	24.80	0	103	69.1	142	11.7	20	
Surr: BFB	1200		992.1		116	73.8	119	0	0	
Sample ID: 1906E98-023AMS	SampT	ype: MS	;	Test	tCode: EF	PA Method	8015D: Gaso	line Rang	e	
Client ID: SP364	Batch	ID: 458	381	R	RunNo: 61	1043				
Prep Date: 6/27/2019	Analysis D	ate: 6/ 3	30/2019	S	SeqNo: 20	067059	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	19	5.0	24.85	0	77.8	69.1	142		<u></u>	
Surr: BFB	980		994.0		98.4	73.8	119			
Sample ID: 1906E98-023AMS	D SampT	Type: MSD TestCode: EPA Method 8015D: Gasoline Range								
Client ID: SP364	Batch	ID: 458	381	RunNo: 61043			,			
Prep Date: 6/27/2019	Analysis D	ate: 6/ 3	30/2019	S	SeqNo: 20	067060	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
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- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
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- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1906E98**

10-Jul-19

Client:	WPX Energy
Project:	LVP SWD 1
Sample ID: 190	6E98-023AMSD S

Sample ID: 1906E98-023AM	SD SampT	SD	TestCode: EPA Method 8015D: Gasoline Range							
Client ID: SP364	Batch	n ID: 45 8	381	F	RunNo: 6	1043				
Prep Date: 6/27/2019	Analysis D	ate: 6/ 3	30/2019	9	SeqNo: 2	067060	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	18	5.0	24.98	0	73.7	69.1	142	4.94	20	
Surr: BFB	980		999.0		98.3	73.8	119	0	0	
Sample ID: LCS-45880	SampType: LCS TestCode: EPA Method 8015D: Gasoline Range							·		

•	•							Ū			
Client ID: LCSS	Batch	n ID: 45	880	F	RunNo: 61043						
Prep Date: 6/27/2019	Analysis D	ate: 6/	29/2019	S	SeqNo: 20	067070	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	23	5.0	25.00	0	90.4	80.1	123				
Surr RER	1100		1000		100	73.8	110				

Sample ID: LCS-45881	SampType: LCS				TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch	Batch ID: 45881 RunNo: 61043										
Prep Date: 6/27/2019	Analysis D	ate: 6/	30/2019	S	SeqNo: 2	067071	Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Gasoline Range Organics (GRO)	21	5.0	25.00	0	84.1	80.1	123					
Surr: BFB	940		1000		94.2	73.8	119					

Sample ID: MB-45880 SampType: MBLK				TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS	Batch	n ID: 45 8	880	F	RunNo: 6	1043				
Prep Date: 6/27/2019	Analysis D	ate: 6/	29/2019	S	SeqNo: 2	067072	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	960		1000		96.2	73.8	119			

Sample ID: MB-45881	SampT	ype: ME	BLK	Tes	TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS	Batch	ID: 45 8	381	R	RunNo: 6	1043					
Prep Date: 6/27/2019	Analysis D	ate: 6/ 3	30/2019	S	SeqNo: 20	067073	Units: mg/K	g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	ND	5.0									
Surr: BFB	950		1000		94.5	73.8	119				

Sample ID: MB-45901	SampType: MBLK	TestCode: EPA Method	8015D: Gasoline Range
Client ID: PBS	Batch ID: 45901	RunNo: 61077	
Prep Date: 6/28/2019	Analysis Date: 7/1/2019	SeqNo: 2068461	Units: mg/Kg
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 67 of 73

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906E98

10-Jul-19

Client: WPX Energy **Project:** LVP SWD 1

Sample ID: MB-45901 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 45901 RunNo: 61077

Prep Date: 6/28/2019 Analysis Date: 7/1/2019 SeqNo: 2068461 Units: mq/Kq

SPK value SPK Ref Val %REC %RPD **RPDLimit** Analyte Result PQL LowLimit HighLimit Qual

Gasoline Range Organics (GRO) ND 5.0

Surr: BFB 880 1000 88.5 73.8 119

Sample ID: LCS-45901 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 45901 RunNo: 61077

Prep Date: 6/28/2019 Analysis Date: 7/1/2019 SeqNo: 2068462 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 5.0 25.00 O 85.9 80.1 123

Surr: BFB 980 98.2 1000 73.8 119

Sample ID: 1906E98-043AMS SampType: MS TestCode: EPA Method 8015D: Gasoline Range

Client ID: **SP384** Batch ID: 45901 RunNo: 61077

Prep Date: 6/28/2019 Analysis Date: 7/1/2019 SeqNo: 2068464 Units: mg/Kg

Result SPK value SPK Ref Val %REC %RPD **RPDLimit** Analyte PQL LowLimit HighLimit Qual Gasoline Range Organics (GRO) 22 4.9 24.46 0 90.6 69.1 142 Surr: BFB 980 978.5 100 73.8 119

Sample ID: 1906E98-043AMSD SampType: MSD TestCode: EPA Method 8015D: Gasoline Range

Client ID: SP384 Batch ID: 45901 RunNo: 61077

Prep Date: 6/28/2019 Analysis Date: 7/1/2019 SeqNo: 2068465 Units: mg/Kg SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Result PQL LowLimit Qual Gasoline Range Organics (GRO) 21 4.8 24.04 87.6 69.1 142 5.16 20 Surr: BFB 950 961.5 99.0 73.8 119 0 0

Qualifiers:

Value exceeds Maximum Contaminant Level

D Sample Diluted Due to Matrix

Holding times for preparation or analysis exceeded Н

Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix

Analyte detected in the associated Method Blank

Value above quantitation range

Analyte detected below quantitation limits

Sample pH Not In Range

RL Reporting Limit Page 68 of 73

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906E98

10-Jul-19

Client: WPX Energy **Project:** LVP SWD 1

Sample ID: MB-45877 SampType: MBLK TestCode: EPA Method 8021B: Volatiles

Client ID: PBS Batch ID: 45877 RunNo: 61018

Units: %Rec Prep Date: 6/27/2019 Analysis Date: 6/28/2019 SeqNo: 2066653

SPK value SPK Ref Val %RPD **RPDLimit** Analyte Result %REC LowLimit HighLimit Qual

Surr: 4-Bromofluorobenzene 0.94 1.000 93.6 80 120

Sample ID: 1906E98-004AMS SampType: MS TestCode: EPA Method 8021B: Volatiles

Client ID: SP345 Batch ID: 45880 RunNo: 61043

Prep Date: 6/27/2019 Analysis Date: 6/30/2019 SeqNo: 2067076 Units: mg/Kg %RPD **RPDLimit** Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit Qual Benzene 0.95 0.025 0.9881 0 96.6 63.9 127 Toluene 1.0 0.049 0.9881 0.01089 103 69.9 131 107 132 Ethylbenzene 1 1 0.049 0.9881 0 71 Xylenes, Total 3.2 0.099 2.964 0 107 71.8 131 0.9881 106 120 Surr: 4-Bromofluorobenzene 1 1 80

Sample ID: 1906E98-004AMSD TestCode: EPA Method 8021B: Volatiles SampType: MSD

Client ID: SP345 Batch ID: 45880 RunNo: 61043

Prep Date: 6/27/2019 Analysis Date: 6/30/2019 SeqNo: 2067077 Units: mg/Kg

%RPD **RPDLimit** Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit Qual Analyte 0.99 0.025 0.9911 0 100 63.9 127 3.95 20 Renzene Toluene 1.1 0.050 0.9911 0.01089 105 69.9 131 2.78 20 0.050 0 109 71 2.35 20 Ethylbenzene 1 1 0.9911 132 Xylenes, Total 3.2 0.099 2.973 0 109 71.8 131 2.18 20 0 Surr: 4-Bromofluorobenzene 0.9911 106 80 120 n 1.1

Sample ID: 1906E98-024AMS SampType: MS TestCode: EPA Method 8021B: Volatiles

Client ID: SP365 Batch ID: 45881 RunNo: 61043

Prep Date: 6/27/2019	Analysis D	Analysis Date: 6/30/2019			SeqNo: 2067098 Units: mg/K					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.025	0.9843	0	100	63.9	127			
Toluene	1.0	0.049	0.9843	0.01060	104	69.9	131			
Ethylbenzene	1.1	0.049	0.9843	0	108	71	132			
Xylenes, Total	3.2	0.098	2.953	0	107	71.8	131			
Surr: 4-Bromofluorobenzene	0.97		0.9843		98.5	80	120			

Sample ID: 1906E98-024AMSD SampType: MSD TestCode: EPA Method 8021B: Volatiles

Client ID: **SP365** Batch ID: 45881 RunNo: 61043

Prep Date: 6/27/2019 Analysis Date: 6/30/2019 SeqNo: 2067099 Units: mg/Kg

PQL SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Analyte Result LowLimit Qual

Qualifiers:

Value exceeds Maximum Contaminant Level

D Sample Diluted Due to Matrix

Holding times for preparation or analysis exceeded Н

Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix

Analyte detected in the associated Method Blank

Value above quantitation range Ε

Analyte detected below quantitation limits

Sample pH Not In Range

RL Reporting Limit Page 69 of 73

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906E98**

10-Jul-19

Client: WPX Energy Project: LVP SWD 1

Sample ID: 1906E98-024AMSD SampType: MSD				TestCode: EPA Method 8021B: Volatiles						
Client ID: SP365	Batch	n ID: 45 8	381	F	RunNo: 6	1043				
Prep Date: 6/27/2019	Analysis D	oate: 6/ 3	30/2019	8	SeqNo: 2	067099	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.025	0.9960	0	98.2	63.9	127	0.897	20	
Toluene	1.0	0.050	0.9960	0.01060	102	69.9	131	0.698	20	
Ethylbenzene	1.0	0.050	0.9960	0	105	71	132	1.61	20	
Xylenes, Total	3.1	0.10	2.988	0	104	71.8	131	1.90	20	
Surr: 4-Bromofluorobenzene	0.98		0.9960		98.8	80	120	0	0	

Sample ID: LCS-45880	SampT	ype: LC	s	TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSS	Batch	n ID: 45 8	380	F	RunNo: 6	1043				
Prep Date: 6/27/2019	Analysis D	oate: 6/ 2	29/2019	S	SeqNo: 2	067108	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.025	1.000	0	98.3	80	120			
Toluene	1.0	0.050	1.000	0	103	80	120			
Ethylbenzene	1.0	0.050	1.000	0	105	80	120			
Xylenes, Total	3.1	0.10	3.000	0	104	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Sample ID: LCS-45881	SampT	Type: LC	S	Tes						
Client ID: LCSS	Batcl	h ID: 45 8	381	F	RunNo: 6	1043				
Prep Date: 6/27/2019	Analysis D	Date: 6/ 3	30/2019	S	SeqNo: 2	067109	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.025	1.000	0	98.3	80	120			
Toluene	1.0	0.050	1.000	0	102	80	120			
Ethylbenzene	1.0	0.050	1.000	0	103	80	120			
Xylenes, Total	3.1	0.10	3.000	0	102	80	120			
Surr: 4-Bromofluorobenzene	0.97		1.000		96.6	80	120			

Sample ID: MB-45880	SampT	ype: ME	BLK	TestCode: EPA Method 8021B: Volatiles						
Client ID: PBS	Batch	n ID: 45 8	880	F	RunNo: 6	1043				
Prep Date: 6/27/2019	Analysis D	ate: 6/	29/2019	S	SeqNo: 2	067110	Units: mg/K	(g		
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			

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1906E98**

10-Jul-19

Client: WPX Energy Project: LVP SWD 1

Sample ID: MB-45881	SampT	SampType: MBLK			tCode: El	iles				
Client ID: PBS	Batch	n ID: 45 8	881	R	RunNo: 6	1043				
Prep Date: 6/27/2019	Analysis D	ate: 6/ 3	30/2019	S	SeqNo: 20	067111	Units: mg/K	g		
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: MB-45901	SampT	ype: ME	BLK	TestCode: EPA Method 8021B: Volatiles						
Client ID: PBS	Batcl	n ID: 45 9	901	F	RunNo: 6	1077				
Prep Date: 6/28/2019	Analysis D	oate: 7/	1/2019	S	SeqNo: 2	068490	Units: mg/K	g		
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	0.93		1.000		93.4	80	120			

Sample ID: LCS-45901	SampT	ype: LC	s	Tes	TestCode: EPA Method 8021B: Volatiles					
Client ID: LCSS	Batcl	n ID: 45 9	901	F	RunNo: 6	1077				
Prep Date: 6/28/2019	Analysis D	Date: 7/	1/2019	S	SeqNo: 2	068491	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.025	1.000	0	97.9	80	120			
Toluene	1.0	0.050	1.000	0	102	80	120			
Ethylbenzene	1.0	0.050	1.000	0	103	80	120			
Xylenes, Total	3.1	0.10	3.000	0	103	80	120			
Surr: 4-Bromofluorobenzene	0.98		1.000		98.3	80	120			

Sample ID: 1906E98-044AMS	SampT	уре: МЅ	;	TestCode: EPA Method 8021B: Volatiles						
Client ID: SP385	Batcl	n ID: 45 9	901	F	RunNo: 6	1077				
Prep Date: 6/28/2019	Analysis D	Date: 7/	1/2019	9	SeqNo: 2	068494	Units: mg/K	ζg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.85	0.024	0.9709	0	87.9	63.9	127			
Toluene	0.91	0.049	0.9709	0.01046	93.1	69.9	131			
Ethylbenzene	0.92	0.049	0.9709	0	94.6	71	132			
Xylenes, Total	2.8	0.097	2.913	0	94.6	71.8	131			
Surr: 4-Bromofluorobenzene	0.93		0.9709		95.4	80	120			

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1906E98**

10-Jul-19

Client: WPX Energy Project: LVP SWD 1

Sample ID: 1906E98-044AM	SD	TestCode: EPA Method 8021B: Volatiles								
Client ID: SP385	Batch	n ID: 45 9	901	F	RunNo: 6	1077				
Prep Date: 6/28/2019	Analysis D	ate: 7/	1/2019	5	SeqNo: 2	068495	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	0.9930	0	95.4	63.9	127	10.4	20	
Toluene	1.0	0.050	0.9930	0.01046	99.2	69.9	131	8.57	20	
Ethylbenzene	1.0	0.050	0.9930	0	102	71	132	10.1	20	
Xylenes, Total	3.0	0.099	2.979	0	102	71.8	131	9.73	20	
Surr: 4-Bromofluorobenzene	0.96		0.9930		96.7	80	120	0	0	

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1906E98**

10-Jul-19

Client: WPX Energy Project: LVP SWD 1

Sample ID: Ics-45877	•	SampType: LCS			tCode: El	iles				
Client ID: LCSS Prep Date: 6/27/2019	Batch ID: 45877 Analysis Date: 6/29/2019			RunNo: 61046 SeqNo: 2067150			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.025	1.000	0	89.2	70	130			
Toluene	0.96	0.050	1.000	0	96.1	70	130			
Surr: Dibromofluoromethane	0.43		0.5000		86.7	70	130			
Surr: 1,2-Dichloroethane-d4	0.44		0.5000		87.7	70	130			
Surr: Toluene-d8	0.48		0.5000		96.7	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		99.6	70	130			

Sample ID: mb-45877	Samp	Гуре: МЕ	BLK	Tes	tCode: El	PA Method	8260B: Volat	tiles		
Client ID: PBS	Batc	h ID: 45 8	877	F	RunNo: 6	1046				
Prep Date: 6/27/2019	Analysis [Analysis Date: 6/29/2019			SeqNo: 2	067151	(g			
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: Dibromofluoromethane	0.45		0.5000		89.3	70	130			
Surr: 1,2-Dichloroethane-d4	0.44		0.5000		87.3	70	130			
Surr: Toluene-d8	0.49		0.5000		98.4	70	130			
Surr: 4-Bromofluorobenzene	0.49		0.5000		97.8	70	130			

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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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 CARLSB Work Order Number: 1906E98 RcptNo: 1 Received By: **Thom Maybee** 6/27/2019 9:00:00 AM unas Completed By: Erin Melendrez 6/27/2019 10:07:03 AM 6/27/19 Reviewed By: Chain of Custody Not Present Yes No 🗸 1. Is Chain of Custody complete? 2. How was the sample delivered? Courier Log In 3. Was an attempt made to cool the samples? No 🗌 NA Yes 🗸 No 🗌 4. Were all samples received at a temperature of >0° C to 6.0°C NA \square Yes 🗸 No 🗌 Sample(s) in proper container(s)? Yes 🗸 Yes 🗸 6. Sufficient sample volume for indicated test(s)? 7. Are samples (except VOA and ONG) properly preserved? Yes 8. Was preservative added to bottles? No NA 🗌 Yes 9. VOA vials have zero headspace? No No VOA Vials Yes 10. Were any sample containers received broken? Yes No **V** # of preserved bottles checked 11. Does paperwork match bottle labels? for pH: Yes 🗸 No (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? 12. Are matrices correctly identified on Chain of Custody? Yes 🗸 No Yes 🗸 13. Is it clear what analyses were requested? No Checked by: 14. Were all holding times able to be met? Yes 🗸 No (If no, notify customer for authorization.) Special Handling (if applicable) 15. 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: 16. Additional remarks: COC missing collection times for first 12 samples. 17. Cooler Information Cooler No Temp °C Condition Seal Intact Seal No Seal Date Signed By 1 3.1 Good Yes 2 5.7 Good Yes 3 1.3 Good Yes



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 CARLSB Work Order Number: 1906E98 RcptNo: 1

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
4	0.2	Good	Yes			
5	0.1	Good	Yes			

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

October 21, 2019

Kris Rowe WPX Energy 5315 Buena Vista Drive Carlsbad, NM 88220 TEL: (505) 386-9693

FAX:

RE: LVP SWD 1 OrderNo.: 1906G07

Dear Kris Rowe:

Hall Environmental Analysis Laboratory received 63 sample(s) on 6/28/2019 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 #NM0901

Sincerely,

Andy Freeman

Laboratory Manager

Indes

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP 402

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:40:00 AM

 Lab ID:
 1906G07-001
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	MRA
Chloride	180	60	mg/Kg	20	7/2/2019 11:54:31 AM	45959
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst:	BRM
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	7/3/2019 12:27:39 PM	45941
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	7/3/2019 12:27:39 PM	45941
Surr: DNOP	81.7	70-130	%Rec	1	7/3/2019 12:27:39 PM	45941
EPA METHOD 8015D: GASOLINE RANGE					Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/2/2019 10:00:00 AM	45937
Surr: BFB	101	73.8-119	%Rec	1	7/2/2019 10:00:00 AM	45937
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.025	mg/Kg	1	7/2/2019 10:00:00 AM	45937
Toluene	ND	0.049	mg/Kg	1	7/2/2019 10:00:00 AM	45937
Ethylbenzene	ND	0.049	mg/Kg	1	7/2/2019 10:00:00 AM	45937
Xylenes, Total	ND	0.098	mg/Kg	1	7/2/2019 10:00:00 AM	45937
Surr: 4-Bromofluorobenzene	93.6	80-120	%Rec	1	7/2/2019 10:00:00 AM	45937

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 1 of 52

Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP403

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:40:00 AM

 Lab ID:
 1906G07-002
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	310	60	mg/Kg	20	7/2/2019 12:06:55 PM	45959
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	BRM
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	7/3/2019 12:52:20 PM	45941
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	7/3/2019 12:52:20 PM	45941
Surr: DNOP	76.0	70-130	%Rec	1	7/3/2019 12:52:20 PM	45941
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	7/2/2019 11:08:03 AM	45937
Surr: BFB	104	73.8-119	%Rec	1	7/2/2019 11:08:03 AM	45937
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.024	mg/Kg	1	7/2/2019 11:08:03 AM	45937
Toluene	ND	0.048	mg/Kg	1	7/2/2019 11:08:03 AM	45937
Ethylbenzene	ND	0.048	mg/Kg	1	7/2/2019 11:08:03 AM	45937
Xylenes, Total	ND	0.097	mg/Kg	1	7/2/2019 11:08:03 AM	45937
Surr: 4-Bromofluorobenzene	95.8	80-120	%Rec	1	7/2/2019 11:08:03 AM	45937

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 2 of 52

Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP404

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:40:00 AM

 Lab ID:
 1906G07-003
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	MRA
Chloride	340	60		mg/Kg	20	7/2/2019 1:08:59 PM	45959
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS					Analyst:	BRM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/3/2019 1:16:58 PM	45941
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/3/2019 1:16:58 PM	45941
Surr: DNOP	39.5	70-130	S	%Rec	1	7/3/2019 1:16:58 PM	45941
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/2/2019 11:30:46 AM	45937
Surr: BFB	104	73.8-119		%Rec	1	7/2/2019 11:30:46 AM	45937
EPA METHOD 8021B: VOLATILES						Analyst:	NSB
Benzene	ND	0.024		mg/Kg	1	7/2/2019 11:30:46 AM	45937
Toluene	ND	0.048		mg/Kg	1	7/2/2019 11:30:46 AM	45937
Ethylbenzene	ND	0.048		mg/Kg	1	7/2/2019 11:30:46 AM	45937
Xylenes, Total	ND	0.096		mg/Kg	1	7/2/2019 11:30:46 AM	45937
Surr: 4-Bromofluorobenzene	94.6	80-120		%Rec	1	7/2/2019 11:30:46 AM	45937

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 3 of 52

Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP406

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:40:00 AM

 Lab ID:
 1906G07-005
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	MRA
Chloride	260	60		mg/Kg	20	7/2/2019 1:21:23 PM	45959
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst:	BRM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/3/2019 1:41:47 PM	45941
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	7/3/2019 1:41:47 PM	45941
Surr: DNOP	49.9	70-130	S	%Rec	1	7/3/2019 1:41:47 PM	45941
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/2/2019 11:53:27 AM	45937
Surr: BFB	103	73.8-119		%Rec	1	7/2/2019 11:53:27 AM	45937
EPA METHOD 8021B: VOLATILES						Analyst:	NSB
Benzene	ND	0.024		mg/Kg	1	7/2/2019 11:53:27 AM	45937
Toluene	ND	0.049		mg/Kg	1	7/2/2019 11:53:27 AM	45937
Ethylbenzene	ND	0.049		mg/Kg	1	7/2/2019 11:53:27 AM	45937
Xylenes, Total	ND	0.097		mg/Kg	1	7/2/2019 11:53:27 AM	45937
Surr: 4-Bromofluorobenzene	93.2	80-120		%Rec	1	7/2/2019 11:53:27 AM	45937

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP407

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:40:00 AM

 Lab ID:
 1906G07-006
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	MRA
Chloride	280	60		mg/Kg	20	7/2/2019 1:33:48 PM	45959
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS					Analyst:	BRM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/3/2019 2:06:32 PM	45941
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/3/2019 2:06:32 PM	45941
Surr: DNOP	61.8	70-130	S	%Rec	1	7/3/2019 2:06:32 PM	45941
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/2/2019 12:16:10 PM	45937
Surr: BFB	102	73.8-119		%Rec	1	7/2/2019 12:16:10 PM	45937
EPA METHOD 8021B: VOLATILES						Analyst:	NSB
Benzene	ND	0.025		mg/Kg	1	7/2/2019 12:16:10 PM	45937
Toluene	ND	0.049		mg/Kg	1	7/2/2019 12:16:10 PM	45937
Ethylbenzene	ND	0.049		mg/Kg	1	7/2/2019 12:16:10 PM	45937
Xylenes, Total	ND	0.098		mg/Kg	1	7/2/2019 12:16:10 PM	45937
Surr: 4-Bromofluorobenzene	93.3	80-120		%Rec	1	7/2/2019 12:16:10 PM	45937

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP408

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:40:00 AM

 Lab ID:
 1906G07-007
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	MRA
Chloride	280	60		mg/Kg	20	7/2/2019 1:46:12 PM	45959
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst:	BRM
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	7/3/2019 2:31:24 PM	45941
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	7/3/2019 2:31:24 PM	45941
Surr: DNOP	43.4	70-130	S	%Rec	1	7/3/2019 2:31:24 PM	45941
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/2/2019 12:38:54 PM	45937
Surr: BFB	104	73.8-119		%Rec	1	7/2/2019 12:38:54 PM	45937
EPA METHOD 8021B: VOLATILES						Analyst:	NSB
Benzene	ND	0.024		mg/Kg	1	7/2/2019 12:38:54 PM	45937
Toluene	ND	0.048		mg/Kg	1	7/2/2019 12:38:54 PM	45937
Ethylbenzene	ND	0.048		mg/Kg	1	7/2/2019 12:38:54 PM	45937
Xylenes, Total	ND	0.096		mg/Kg	1	7/2/2019 12:38:54 PM	45937
Surr: 4-Bromofluorobenzene	95.3	80-120		%Rec	1	7/2/2019 12:38:54 PM	45937

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP410

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:40:00 AM

 Lab ID:
 1906G07-009
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	210	60		mg/Kg	20	7/2/2019 1:58:36 PM	45959
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	BRM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/3/2019 2:56:25 PM	45941
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	7/3/2019 2:56:25 PM	45941
Surr: DNOP	45.6	70-130	S	%Rec	1	7/3/2019 2:56:25 PM	45941
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/2/2019 1:01:40 PM	45937
Surr: BFB	102	73.8-119		%Rec	1	7/2/2019 1:01:40 PM	45937
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.025		mg/Kg	1	7/2/2019 1:01:40 PM	45937
Toluene	ND	0.050		mg/Kg	1	7/2/2019 1:01:40 PM	45937
Ethylbenzene	ND	0.050		mg/Kg	1	7/2/2019 1:01:40 PM	45937
Xylenes, Total	ND	0.099		mg/Kg	1	7/2/2019 1:01:40 PM	45937
Surr: 4-Bromofluorobenzene	92.6	80-120		%Rec	1	7/2/2019 1:01:40 PM	45937

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP412

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:40:00 AM

 Lab ID:
 1906G07-011
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	MRA
Chloride	240	60		mg/Kg	20	7/2/2019 2:11:00 PM	45959
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst:	BRM
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	7/3/2019 4:01:34 PM	45941
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	7/3/2019 4:01:34 PM	45941
Surr: DNOP	58.0	70-130	S	%Rec	1	7/3/2019 4:01:34 PM	45941
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/2/2019 1:24:25 PM	45937
Surr: BFB	102	73.8-119		%Rec	1	7/2/2019 1:24:25 PM	45937
EPA METHOD 8021B: VOLATILES						Analyst:	NSB
Benzene	ND	0.024		mg/Kg	1	7/2/2019 1:24:25 PM	45937
Toluene	ND	0.048		mg/Kg	1	7/2/2019 1:24:25 PM	45937
Ethylbenzene	ND	0.048		mg/Kg	1	7/2/2019 1:24:25 PM	45937
Xylenes, Total	ND	0.097		mg/Kg	1	7/2/2019 1:24:25 PM	45937
Surr: 4-Bromofluorobenzene	92.5	80-120		%Rec	1	7/2/2019 1:24:25 PM	45937

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP413

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:40:00 AM

 Lab ID:
 1906G07-012
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: MRA
Chloride	140	60		mg/Kg	20	7/2/2019 2:23:24 PM	45959
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	BRM
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	7/3/2019 4:26:19 PM	45941
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/3/2019 4:26:19 PM	45941
Surr: DNOP	46.6	70-130	S	%Rec	1	7/3/2019 4:26:19 PM	45941
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/2/2019 1:47:12 PM	45937
Surr: BFB	102	73.8-119		%Rec	1	7/2/2019 1:47:12 PM	45937
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.024		mg/Kg	1	7/2/2019 1:47:12 PM	45937
Toluene	ND	0.048		mg/Kg	1	7/2/2019 1:47:12 PM	45937
Ethylbenzene	ND	0.048		mg/Kg	1	7/2/2019 1:47:12 PM	45937
Xylenes, Total	ND	0.097		mg/Kg	1	7/2/2019 1:47:12 PM	45937
Surr: 4-Bromofluorobenzene	92.9	80-120		%Rec	1	7/2/2019 1:47:12 PM	45937

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP414

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:40:00 AM

 Lab ID:
 1906G07-013
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: MRA
Chloride	150	60		mg/Kg	20	7/2/2019 2:35:48 PM	45959
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	: BRM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/3/2019 4:50:51 PM	45941
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/3/2019 4:50:51 PM	45941
Surr: DNOP	44.4	70-130	S	%Rec	1	7/3/2019 4:50:51 PM	45941
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/2/2019 4:03:53 PM	45937
Surr: BFB	104	73.8-119		%Rec	1	7/2/2019 4:03:53 PM	45937
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.024		mg/Kg	1	7/2/2019 4:03:53 PM	45937
Toluene	ND	0.049		mg/Kg	1	7/2/2019 4:03:53 PM	45937
Ethylbenzene	ND	0.049		mg/Kg	1	7/2/2019 4:03:53 PM	45937
Xylenes, Total	ND	0.098		mg/Kg	1	7/2/2019 4:03:53 PM	45937
Surr: 4-Bromofluorobenzene	94.8	80-120		%Rec	1	7/2/2019 4:03:53 PM	45937

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP415

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:40:00 AM

 Lab ID:
 1906G07-014
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: MRA
Chloride	150	60		mg/Kg	20	7/2/2019 6:06:45 PM	45974
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	: TOM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/3/2019 9:10:11 AM	45958
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/3/2019 9:10:11 AM	45958
Surr: DNOP	69.8	70-130	S	%Rec	1	7/3/2019 9:10:11 AM	45958
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/2/2019 5:12:09 PM	45949
Surr: BFB	101	73.8-119		%Rec	1	7/2/2019 5:12:09 PM	45949
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.025		mg/Kg	1	7/2/2019 5:12:09 PM	45949
Toluene	ND	0.050		mg/Kg	1	7/2/2019 5:12:09 PM	45949
Ethylbenzene	ND	0.050		mg/Kg	1	7/2/2019 5:12:09 PM	45949
Xylenes, Total	ND	0.099		mg/Kg	1	7/2/2019 5:12:09 PM	45949
Surr: 4-Bromofluorobenzene	93.2	80-120		%Rec	1	7/2/2019 5:12:09 PM	45949

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP417

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:40:00 AM

 Lab ID:
 1906G07-016
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	200	60	mg/Kg	20	7/2/2019 6:19:09 PM	45974
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: TOM
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	7/3/2019 10:22:39 AM	45958
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	7/3/2019 10:22:39 AM	45958
Surr: DNOP	81.7	70-130	%Rec	1	7/3/2019 10:22:39 AM	45958
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/2/2019 6:20:26 PM	45949
Surr: BFB	104	73.8-119	%Rec	1	7/2/2019 6:20:26 PM	45949
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	7/2/2019 6:20:26 PM	45949
Toluene	ND	0.049	mg/Kg	1	7/2/2019 6:20:26 PM	45949
Ethylbenzene	ND	0.049	mg/Kg	1	7/2/2019 6:20:26 PM	45949
Xylenes, Total	ND	0.098	mg/Kg	1	7/2/2019 6:20:26 PM	45949
Surr: 4-Bromofluorobenzene	94.9	80-120	%Rec	1	7/2/2019 6:20:26 PM	45949

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP418

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:40:00 AM

 Lab ID:
 1906G07-017
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	260	60	mg/Kg	20	7/2/2019 6:31:33 PM	45974
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: TOM
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	7/3/2019 10:46:52 AM	45958
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	7/3/2019 10:46:52 AM	45958
Surr: DNOP	74.8	70-130	%Rec	1	7/3/2019 10:46:52 AM	45958
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	7/2/2019 7:28:36 PM	45949
Surr: BFB	101	73.8-119	%Rec	1	7/2/2019 7:28:36 PM	45949
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	7/2/2019 7:28:36 PM	45949
Toluene	ND	0.048	mg/Kg	1	7/2/2019 7:28:36 PM	45949
Ethylbenzene	ND	0.048	mg/Kg	1	7/2/2019 7:28:36 PM	45949
Xylenes, Total	ND	0.096	mg/Kg	1	7/2/2019 7:28:36 PM	45949
Surr: 4-Bromofluorobenzene	91.7	80-120	%Rec	1	7/2/2019 7:28:36 PM	45949

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP419

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:40:00 AM

 Lab ID:
 1906G07-018
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	280	60	mg/Kg	20	7/2/2019 6:43:58 PM	45974
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: TOM
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	7/3/2019 11:11:06 AM	45958
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	7/3/2019 11:11:06 AM	45958
Surr: DNOP	79.9	70-130	%Rec	1	7/3/2019 11:11:06 AM	45958
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	7/2/2019 7:51:17 PM	45949
Surr: BFB	97.6	73.8-119	%Rec	1	7/2/2019 7:51:17 PM	45949
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.025	mg/Kg	1	7/2/2019 7:51:17 PM	45949
Toluene	ND	0.050	mg/Kg	1	7/2/2019 7:51:17 PM	45949
Ethylbenzene	ND	0.050	mg/Kg	1	7/2/2019 7:51:17 PM	45949
Xylenes, Total	ND	0.10	mg/Kg	1	7/2/2019 7:51:17 PM	45949
Surr: 4-Bromofluorobenzene	86.4	80-120	%Rec	1	7/2/2019 7:51:17 PM	45949

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP420

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:40:00 AM

 Lab ID:
 1906G07-019
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	MRA
Chloride	310	60	mg/Kg	20	7/2/2019 6:56:22 PM	45974
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst:	ТОМ
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	7/3/2019 11:35:22 AM	45958
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	7/3/2019 11:35:22 AM	45958
Surr: DNOP	79.8	70-130	%Rec	1	7/3/2019 11:35:22 AM	45958
EPA METHOD 8015D: GASOLINE RANGE					Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/2/2019 8:14:00 PM	45949
Surr: BFB	103	73.8-119	%Rec	1	7/2/2019 8:14:00 PM	45949
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.025	mg/Kg	1	7/2/2019 8:14:00 PM	45949
Toluene	ND	0.049	mg/Kg	1	7/2/2019 8:14:00 PM	45949
Ethylbenzene	ND	0.049	mg/Kg	1	7/2/2019 8:14:00 PM	45949
Xylenes, Total	ND	0.098	mg/Kg	1	7/2/2019 8:14:00 PM	45949
Surr: 4-Bromofluorobenzene	94.4	80-120	%Rec	1	7/2/2019 8:14:00 PM	45949

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP423

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:40:00 AM

 Lab ID:
 1906G07-022
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	340	60	mg/Kg	20	7/2/2019 7:08:47 PM	45974
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	TOM
Diesel Range Organics (DRO)	ND	9.0	mg/Kg	1	7/3/2019 11:59:38 AM	45958
Motor Oil Range Organics (MRO)	ND	45	mg/Kg	1	7/3/2019 11:59:38 AM	45958
Surr: DNOP	75.3	70-130	%Rec	1	7/3/2019 11:59:38 AM	45958
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/2/2019 8:36:38 PM	45949
Surr: BFB	100	73.8-119	%Rec	1	7/2/2019 8:36:38 PM	45949
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.025	mg/Kg	1	7/2/2019 8:36:38 PM	45949
Toluene	ND	0.049	mg/Kg	1	7/2/2019 8:36:38 PM	45949
Ethylbenzene	ND	0.049	mg/Kg	1	7/2/2019 8:36:38 PM	45949
Xylenes, Total	ND	0.099	mg/Kg	1	7/2/2019 8:36:38 PM	45949
Surr: 4-Bromofluorobenzene	91.7	80-120	%Rec	1	7/2/2019 8:36:38 PM	45949

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP424

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:40:00 AM

 Lab ID:
 1906G07-023
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	150	60	mg/Kg	20	7/2/2019 8:10:48 PM	45974
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	TOM
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	7/3/2019 12:29:11 PM	45958
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	7/3/2019 12:29:11 PM	45958
Surr: DNOP	83.2	70-130	%Rec	1	7/3/2019 12:29:11 PM	45958
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/2/2019 8:59:15 PM	45949
Surr: BFB	101	73.8-119	%Rec	1	7/2/2019 8:59:15 PM	45949
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.025	mg/Kg	1	7/2/2019 8:59:15 PM	45949
Toluene	ND	0.049	mg/Kg	1	7/2/2019 8:59:15 PM	45949
Ethylbenzene	ND	0.049	mg/Kg	1	7/2/2019 8:59:15 PM	45949
Xylenes, Total	ND	0.099	mg/Kg	1	7/2/2019 8:59:15 PM	45949
Surr: 4-Bromofluorobenzene	92.2	80-120	%Rec	1	7/2/2019 8:59:15 PM	45949

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP425

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:40:00 AM

 Lab ID:
 1906G07-024
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	160	60	mg/Kg	20	7/2/2019 8:23:13 PM	45974
EPA METHOD 8015M/D: DIESEL RANGE ORG				Analyst	TOM	
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	7/3/2019 12:53:27 PM	45958
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	7/3/2019 12:53:27 PM	45958
Surr: DNOP	76.9	70-130	%Rec	1	7/3/2019 12:53:27 PM	45958
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	7/2/2019 9:22:01 PM	45949
Surr: BFB	102	73.8-119	%Rec	1	7/2/2019 9:22:01 PM	45949
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.025	mg/Kg	1	7/2/2019 9:22:01 PM	45949
Toluene	ND	0.050	mg/Kg	1	7/2/2019 9:22:01 PM	45949
Ethylbenzene	ND	0.050	mg/Kg	1	7/2/2019 9:22:01 PM	45949
Xylenes, Total	ND	0.099	mg/Kg	1	7/2/2019 9:22:01 PM	45949
Surr: 4-Bromofluorobenzene	93.0	80-120	%Rec	1	7/2/2019 9:22:01 PM	45949

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP426

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:45:00 AM

 Lab ID:
 1906G07-025
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	MRA
Chloride	270	60	mg/Kg	20	7/2/2019 8:35:37 PM	45974
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst:	TOM
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	7/3/2019 3:23:45 PM	45958
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	7/3/2019 3:23:45 PM	45958
Surr: DNOP	79.2	70-130	%Rec	1	7/3/2019 3:23:45 PM	45958
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/2/2019 10:30:11 PM	45949
Surr: BFB	111	73.8-119	%Rec	1	7/2/2019 10:30:11 PM	45949
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.025	mg/Kg	1	7/2/2019 10:30:11 PM	45949
Toluene	ND	0.049	mg/Kg	1	7/2/2019 10:30:11 PM	45949
Ethylbenzene	ND	0.049	mg/Kg	1	7/2/2019 10:30:11 PM	45949
Xylenes, Total	ND	0.099	mg/Kg	1	7/2/2019 10:30:11 PM	45949
Surr: 4-Bromofluorobenzene	100	80-120	%Rec	1	7/2/2019 10:30:11 PM	45949

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP427

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:45:00 AM

 Lab ID:
 1906G07-026
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	MRA
Chloride	290	60	mg/Kg	20	7/2/2019 8:48:02 PM	45974
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst:	TOM
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	7/3/2019 3:48:13 PM	45958
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	7/3/2019 3:48:13 PM	45958
Surr: DNOP	76.2	70-130	%Rec	1	7/3/2019 3:48:13 PM	45958
EPA METHOD 8015D: GASOLINE RANGE					Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/2/2019 10:52:57 PM	45949
Surr: BFB	108	73.8-119	%Rec	1	7/2/2019 10:52:57 PM	45949
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.024	mg/Kg	1	7/2/2019 10:52:57 PM	45949
Toluene	ND	0.049	mg/Kg	1	7/2/2019 10:52:57 PM	45949
Ethylbenzene	ND	0.049	mg/Kg	1	7/2/2019 10:52:57 PM	45949
Xylenes, Total	ND	0.098	mg/Kg	1	7/2/2019 10:52:57 PM	45949
Surr: 4-Bromofluorobenzene	96.9	80-120	%Rec	1	7/2/2019 10:52:57 PM	45949

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP428

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:45:00 AM

 Lab ID:
 1906G07-027
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	290	60	mg/Kg	20	7/2/2019 9:00:27 PM	45974
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analyst	TOM
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	7/3/2019 4:12:41 PM	45958
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	7/3/2019 4:12:41 PM	45958
Surr: DNOP	79.4	70-130	%Rec	1	7/3/2019 4:12:41 PM	45958
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	7/2/2019 11:15:46 PM	45949
Surr: BFB	108	73.8-119	%Rec	1	7/2/2019 11:15:46 PM	45949
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.024	mg/Kg	1	7/2/2019 11:15:46 PM	45949
Toluene	ND	0.048	mg/Kg	1	7/2/2019 11:15:46 PM	45949
Ethylbenzene	ND	0.048	mg/Kg	1	7/2/2019 11:15:46 PM	45949
Xylenes, Total	ND	0.096	mg/Kg	1	7/2/2019 11:15:46 PM	45949
Surr: 4-Bromofluorobenzene	97.7	80-120	%Rec	1	7/2/2019 11:15:46 PM	45949

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP430

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:45:00 AM

 Lab ID:
 1906G07-029
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	350	60	mg/Kg	20	7/2/2019 9:12:51 PM	45974
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	TOM
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	7/3/2019 4:37:12 PM	45958
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	7/3/2019 4:37:12 PM	45958
Surr: DNOP	83.3	70-130	%Rec	1	7/3/2019 4:37:12 PM	45958
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/2/2019 11:38:34 PM	45949
Surr: BFB	104	73.8-119	%Rec	1	7/2/2019 11:38:34 PM	45949
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.024	mg/Kg	1	7/2/2019 11:38:34 PM	45949
Toluene	ND	0.049	mg/Kg	1	7/2/2019 11:38:34 PM	45949
Ethylbenzene	ND	0.049	mg/Kg	1	7/2/2019 11:38:34 PM	45949
Xylenes, Total	ND	0.098	mg/Kg	1	7/2/2019 11:38:34 PM	45949
Surr: 4-Bromofluorobenzene	94.1	80-120	%Rec	1	7/2/2019 11:38:34 PM	45949

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP432

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:45:00 AM

 Lab ID:
 1906G07-031
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	180	60	mg/Kg	20	7/2/2019 9:25:15 PM	45974
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	TOM
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	7/3/2019 5:01:44 PM	45958
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	7/3/2019 5:01:44 PM	45958
Surr: DNOP	84.0	70-130	%Rec	1	7/3/2019 5:01:44 PM	45958
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/3/2019 12:01:32 AM	45949
Surr: BFB	107	73.8-119	%Rec	1	7/3/2019 12:01:32 AM	45949
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.025	mg/Kg	1	7/3/2019 12:01:32 AM	45949
Toluene	ND	0.049	mg/Kg	1	7/3/2019 12:01:32 AM	45949
Ethylbenzene	ND	0.049	mg/Kg	1	7/3/2019 12:01:32 AM	45949
Xylenes, Total	ND	0.099	mg/Kg	1	7/3/2019 12:01:32 AM	45949
Surr: 4-Bromofluorobenzene	96.9	80-120	%Rec	1	7/3/2019 12:01:32 AM	45949

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP435

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:45:00 AM

 Lab ID:
 1906G07-034
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	250	60		mg/Kg	20	7/2/2019 9:37:41 PM	45974
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	TOM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/3/2019 5:26:30 PM	45958
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/3/2019 5:26:30 PM	45958
Surr: DNOP	63.8	70-130	S	%Rec	1	7/3/2019 5:26:30 PM	45958
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/3/2019 12:24:31 AM	45949
Surr: BFB	103	73.8-119		%Rec	1	7/3/2019 12:24:31 AM	45949
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.024		mg/Kg	1	7/3/2019 12:24:31 AM	45949
Toluene	ND	0.048		mg/Kg	1	7/3/2019 12:24:31 AM	45949
Ethylbenzene	ND	0.048		mg/Kg	1	7/3/2019 12:24:31 AM	45949
Xylenes, Total	ND	0.096		mg/Kg	1	7/3/2019 12:24:31 AM	45949
Surr: 4-Bromofluorobenzene	94.0	80-120		%Rec	1	7/3/2019 12:24:31 AM	45949

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP437

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:45:00 AM

 Lab ID:
 1906G07-036
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	170	60	mg/Kg	20	7/2/2019 9:50:04 PM	45974
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst	TOM
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	7/3/2019 5:51:25 PM	45958
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	7/3/2019 5:51:25 PM	45958
Surr: DNOP	71.4	70-130	%Rec	1	7/3/2019 5:51:25 PM	45958
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	7/3/2019 12:47:25 AM	45949
Surr: BFB	105	73.8-119	%Rec	1	7/3/2019 12:47:25 AM	45949
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.024	mg/Kg	1	7/3/2019 12:47:25 AM	45949
Toluene	ND	0.048	mg/Kg	1	7/3/2019 12:47:25 AM	45949
Ethylbenzene	ND	0.048	mg/Kg	1	7/3/2019 12:47:25 AM	45949
Xylenes, Total	ND	0.097	mg/Kg	1	7/3/2019 12:47:25 AM	45949
Surr: 4-Bromofluorobenzene	94.8	80-120	%Rec	1	7/3/2019 12:47:25 AM	45949

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP438

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:45:00 AM

 Lab ID:
 1906G07-037
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	360	60	mg/Kg	20	7/2/2019 10:02:29 PM	45974
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	: TOM
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	7/3/2019 6:16:16 PM	45958
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	7/3/2019 6:16:16 PM	45958
Surr: DNOP	77.9	70-130	%Rec	1	7/3/2019 6:16:16 PM	45958
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/3/2019 1:10:13 AM	45949
Surr: BFB	104	73.8-119	%Rec	1	7/3/2019 1:10:13 AM	45949
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	7/3/2019 1:10:13 AM	45949
Toluene	ND	0.049	mg/Kg	1	7/3/2019 1:10:13 AM	45949
Ethylbenzene	ND	0.049	mg/Kg	1	7/3/2019 1:10:13 AM	45949
Xylenes, Total	ND	0.097	mg/Kg	1	7/3/2019 1:10:13 AM	45949
Surr: 4-Bromofluorobenzene	93.0	80-120	%Rec	1	7/3/2019 1:10:13 AM	45949

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP440

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:45:00 AM

 Lab ID:
 1906G07-039
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	210	60	mg/Kg	20	7/2/2019 11:04:33 PM	45974
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analyst	TOM
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	7/3/2019 6:41:04 PM	45958
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	7/3/2019 6:41:04 PM	45958
Surr: DNOP	76.1	70-130	%Rec	1	7/3/2019 6:41:04 PM	45958
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	7/3/2019 1:33:03 AM	45949
Surr: BFB	107	73.8-119	%Rec	1	7/3/2019 1:33:03 AM	45949
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.024	mg/Kg	1	7/3/2019 1:33:03 AM	45949
Toluene	ND	0.048	mg/Kg	1	7/3/2019 1:33:03 AM	45949
Ethylbenzene	ND	0.048	mg/Kg	1	7/3/2019 1:33:03 AM	45949
Xylenes, Total	ND	0.096	mg/Kg	1	7/3/2019 1:33:03 AM	45949
Surr: 4-Bromofluorobenzene	95.7	80-120	%Rec	1	7/3/2019 1:33:03 AM	45949

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP441

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:45:00 AM

 Lab ID:
 1906G07-040
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	MRA
Chloride	270	60	mg/Kg	20	7/2/2019 11:16:58 PM	45974
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS				Analyst:	ТОМ
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	7/3/2019 7:05:47 PM	45958
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	7/3/2019 7:05:47 PM	45958
Surr: DNOP	79.8	70-130	%Rec	1	7/3/2019 7:05:47 PM	45958
EPA METHOD 8015D: GASOLINE RANGE					Analyst:	NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	7/3/2019 1:55:54 AM	45949
Surr: BFB	106	73.8-119	%Rec	1	7/3/2019 1:55:54 AM	45949
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.025	mg/Kg	1	7/3/2019 1:55:54 AM	45949
Toluene	ND	0.050	mg/Kg	1	7/3/2019 1:55:54 AM	45949
Ethylbenzene	ND	0.050	mg/Kg	1	7/3/2019 1:55:54 AM	45949
Xylenes, Total	ND	0.10	mg/Kg	1	7/3/2019 1:55:54 AM	45949
Surr: 4-Bromofluorobenzene	94.1	80-120	%Rec	1	7/3/2019 1:55:54 AM	45949

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP442

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:45:00 AM

 Lab ID:
 1906G07-041
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	260	60	mg/Kg	20	7/2/2019 11:29:22 PM	45974
EPA METHOD 8015M/D: DIESEL RANGE ORGA	ANICS				Analyst	TOM
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	7/3/2019 7:30:29 PM	45958
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	7/3/2019 7:30:29 PM	45958
Surr: DNOP	81.3	70-130	%Rec	1	7/3/2019 7:30:29 PM	45958
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/3/2019 2:41:34 AM	45949
Surr: BFB	107	73.8-119	%Rec	1	7/3/2019 2:41:34 AM	45949
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.025	mg/Kg	1	7/3/2019 2:41:34 AM	45949
Toluene	ND	0.049	mg/Kg	1	7/3/2019 2:41:34 AM	45949
Ethylbenzene	ND	0.049	mg/Kg	1	7/3/2019 2:41:34 AM	45949
Xylenes, Total	ND	0.098	mg/Kg	1	7/3/2019 2:41:34 AM	45949
Surr: 4-Bromofluorobenzene	96.7	80-120	%Rec	1	7/3/2019 2:41:34 AM	45949

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP444

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:45:00 AM

 Lab ID:
 1906G07-043
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	200	60	mg/Kg	20	7/2/2019 11:41:47 PM	45974
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	TOM
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	7/3/2019 7:55:10 PM	45958
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	7/3/2019 7:55:10 PM	45958
Surr: DNOP	72.4	70-130	%Rec	1	7/3/2019 7:55:10 PM	45958
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/3/2019 3:04:24 AM	45949
Surr: BFB	105	73.8-119	%Rec	1	7/3/2019 3:04:24 AM	45949
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.024	mg/Kg	1	7/3/2019 3:04:24 AM	45949
Toluene	ND	0.049	mg/Kg	1	7/3/2019 3:04:24 AM	45949
Ethylbenzene	ND	0.049	mg/Kg	1	7/3/2019 3:04:24 AM	45949
Xylenes, Total	ND	0.097	mg/Kg	1	7/3/2019 3:04:24 AM	45949
Surr: 4-Bromofluorobenzene	94.8	80-120	%Rec	1	7/3/2019 3:04:24 AM	45949

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP445

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:45:00 AM

 Lab ID:
 1906G07-044
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	320	60		mg/Kg	20	7/3/2019 2:14:55 PM	45997
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	BRM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	7/4/2019 5:04:39 AM	45967
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/4/2019 5:04:39 AM	45967
Surr: DNOP	56.5	70-130	S	%Rec	1	7/4/2019 5:04:39 AM	45967
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/3/2019 9:35:52 AM	45955
Surr: BFB	105	73.8-119		%Rec	1	7/3/2019 9:35:52 AM	45955
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.024		mg/Kg	1	7/3/2019 9:35:52 AM	45955
Toluene	ND	0.049		mg/Kg	1	7/3/2019 9:35:52 AM	45955
Ethylbenzene	ND	0.049		mg/Kg	1	7/3/2019 9:35:52 AM	45955
Xylenes, Total	ND	0.098		mg/Kg	1	7/3/2019 9:35:52 AM	45955
Surr: 4-Bromofluorobenzene	96.0	80-120		%Rec	1	7/3/2019 9:35:52 AM	45955

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP446

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:45:00 AM

 Lab ID:
 1906G07-045
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	260	60		mg/Kg	20	7/3/2019 2:27:19 PM	45997
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	BRM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/4/2019 6:10:46 AM	45967
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/4/2019 6:10:46 AM	45967
Surr: DNOP	47.0	70-130	S	%Rec	1	7/4/2019 6:10:46 AM	45967
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/3/2019 10:43:43 AM	45955
Surr: BFB	101	73.8-119		%Rec	1	7/3/2019 10:43:43 AM	45955
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.025		mg/Kg	1	7/3/2019 10:43:43 AM	45955
Toluene	ND	0.050		mg/Kg	1	7/3/2019 10:43:43 AM	45955
Ethylbenzene	ND	0.050		mg/Kg	1	7/3/2019 10:43:43 AM	45955
Xylenes, Total	ND	0.099		mg/Kg	1	7/3/2019 10:43:43 AM	45955
Surr: 4-Bromofluorobenzene	93.4	80-120		%Rec	1	7/3/2019 10:43:43 AM	45955

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP447

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:45:00 AM

 Lab ID:
 1906G07-046
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	270	60		mg/Kg	20	7/3/2019 7:25:08 PM	46014
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	BRM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/4/2019 6:32:48 AM	45967
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/4/2019 6:32:48 AM	45967
Surr: DNOP	47.2	70-130	S	%Rec	1	7/4/2019 6:32:48 AM	45967
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/3/2019 11:51:41 AM	45955
Surr: BFB	103	73.8-119		%Rec	1	7/3/2019 11:51:41 AM	45955
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.025		mg/Kg	1	7/3/2019 11:51:41 AM	45955
Toluene	ND	0.050		mg/Kg	1	7/3/2019 11:51:41 AM	45955
Ethylbenzene	ND	0.050		mg/Kg	1	7/3/2019 11:51:41 AM	45955
Xylenes, Total	ND	0.10		mg/Kg	1	7/3/2019 11:51:41 AM	45955
Surr: 4-Bromofluorobenzene	93.8	80-120		%Rec	1	7/3/2019 11:51:41 AM	45955

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP450

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:45:00 AM

 Lab ID:
 1906G07-049
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	240	60		mg/Kg	20	7/3/2019 8:02:21 PM	46014
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	BRM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/4/2019 6:55:05 AM	45967
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/4/2019 6:55:05 AM	45967
Surr: DNOP	55.8	70-130	S	%Rec	1	7/4/2019 6:55:05 AM	45967
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/3/2019 12:14:20 PM	45955
Surr: BFB	102	73.8-119		%Rec	1	7/3/2019 12:14:20 PM	45955
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.024		mg/Kg	1	7/3/2019 12:14:20 PM	45955
Toluene	ND	0.049		mg/Kg	1	7/3/2019 12:14:20 PM	45955
Ethylbenzene	ND	0.049		mg/Kg	1	7/3/2019 12:14:20 PM	45955
Xylenes, Total	ND	0.097		mg/Kg	1	7/3/2019 12:14:20 PM	45955
Surr: 4-Bromofluorobenzene	91.9	80-120		%Rec	1	7/3/2019 12:14:20 PM	45955

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP451

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:45:00 AM

 Lab ID:
 1906G07-050
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	260	60		mg/Kg	20	7/3/2019 8:39:34 PM	46014
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst	BRM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/4/2019 7:17:11 AM	45967
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/4/2019 7:17:11 AM	45967
Surr: DNOP	42.5	70-130	S	%Rec	1	7/4/2019 7:17:11 AM	45967
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/3/2019 12:37:02 PM	45955
Surr: BFB	98.5	73.8-119		%Rec	1	7/3/2019 12:37:02 PM	45955
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.024		mg/Kg	1	7/3/2019 12:37:02 PM	45955
Toluene	ND	0.049		mg/Kg	1	7/3/2019 12:37:02 PM	45955
Ethylbenzene	ND	0.049		mg/Kg	1	7/3/2019 12:37:02 PM	45955
Xylenes, Total	ND	0.097		mg/Kg	1	7/3/2019 12:37:02 PM	45955
Surr: 4-Bromofluorobenzene	87.9	80-120		%Rec	1	7/3/2019 12:37:02 PM	45955

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP452

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:45:00 AM

 Lab ID:
 1906G07-051
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	MRA
Chloride	230	60		mg/Kg	20	7/3/2019 8:51:59 PM	46014
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS					Analyst:	BRM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/4/2019 7:39:21 AM	45967
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/4/2019 7:39:21 AM	45967
Surr: DNOP	44.0	70-130	S	%Rec	1	7/4/2019 7:39:21 AM	45967
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/3/2019 12:59:45 PM	45955
Surr: BFB	101	73.8-119		%Rec	1	7/3/2019 12:59:45 PM	45955
EPA METHOD 8021B: VOLATILES						Analyst:	NSB
Benzene	ND	0.025		mg/Kg	1	7/3/2019 12:59:45 PM	45955
Toluene	ND	0.050		mg/Kg	1	7/3/2019 12:59:45 PM	45955
Ethylbenzene	ND	0.050		mg/Kg	1	7/3/2019 12:59:45 PM	45955
Xylenes, Total	ND	0.099		mg/Kg	1	7/3/2019 12:59:45 PM	45955
Surr: 4-Bromofluorobenzene	91.9	80-120		%Rec	1	7/3/2019 12:59:45 PM	45955

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP453

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:45:00 AM

 Lab ID:
 1906G07-052
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	330	60		mg/Kg	20	7/3/2019 9:04:24 PM	46014
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	BRM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/4/2019 8:23:38 AM	45967
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/4/2019 8:23:38 AM	45967
Surr: DNOP	40.7	70-130	S	%Rec	1	7/4/2019 8:23:38 AM	45967
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/3/2019 1:22:26 PM	45955
Surr: BFB	104	73.8-119		%Rec	1	7/3/2019 1:22:26 PM	45955
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.024		mg/Kg	1	7/3/2019 1:22:26 PM	45955
Toluene	ND	0.049		mg/Kg	1	7/3/2019 1:22:26 PM	45955
Ethylbenzene	ND	0.049		mg/Kg	1	7/3/2019 1:22:26 PM	45955
Xylenes, Total	ND	0.098		mg/Kg	1	7/3/2019 1:22:26 PM	45955
Surr: 4-Bromofluorobenzene	94.6	80-120		%Rec	1	7/3/2019 1:22:26 PM	45955

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP454

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:45:00 AM

 Lab ID:
 1906G07-053
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	smb
Chloride	260	60		mg/Kg	20	7/5/2019 2:36:24 PM	46021
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst:	BRM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/4/2019 8:45:48 AM	45967
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/4/2019 8:45:48 AM	45967
Surr: DNOP	47.7	70-130	S	%Rec	1	7/4/2019 8:45:48 AM	45967
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/3/2019 1:45:10 PM	45955
Surr: BFB	104	73.8-119		%Rec	1	7/3/2019 1:45:10 PM	45955
EPA METHOD 8021B: VOLATILES						Analyst:	NSB
Benzene	ND	0.024		mg/Kg	1	7/3/2019 1:45:10 PM	45955
Toluene	ND	0.048		mg/Kg	1	7/3/2019 1:45:10 PM	45955
Ethylbenzene	ND	0.048		mg/Kg	1	7/3/2019 1:45:10 PM	45955
Xylenes, Total	ND	0.097		mg/Kg	1	7/3/2019 1:45:10 PM	45955
Surr: 4-Bromofluorobenzene	95.2	80-120		%Rec	1	7/3/2019 1:45:10 PM	45955

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SP455

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:45:00 AM

 Lab ID:
 1906G07-054
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: smb
Chloride	200	60		mg/Kg	20	7/5/2019 2:48:48 PM	46021
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	BRM
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	7/4/2019 9:08:05 AM	45967
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/4/2019 9:08:05 AM	45967
Surr: DNOP	46.2	70-130	S	%Rec	1	7/4/2019 9:08:05 AM	45967
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/3/2019 2:07:52 PM	45955
Surr: BFB	104	73.8-119		%Rec	1	7/3/2019 2:07:52 PM	45955
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.025		mg/Kg	1	7/3/2019 2:07:52 PM	45955
Toluene	ND	0.050		mg/Kg	1	7/3/2019 2:07:52 PM	45955
Ethylbenzene	ND	0.050		mg/Kg	1	7/3/2019 2:07:52 PM	45955
Xylenes, Total	ND	0.10		mg/Kg	1	7/3/2019 2:07:52 PM	45955
Surr: 4-Bromofluorobenzene	94.2	80-120		%Rec	1	7/3/2019 2:07:52 PM	45955

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SW34

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:45:00 AM

 Lab ID:
 1906G07-058
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: smb
Chloride	220	60		mg/Kg	20	7/5/2019 3:01:12 PM	46021
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst	BRM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	7/4/2019 9:30:14 AM	45967
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/4/2019 9:30:14 AM	45967
Surr: DNOP	39.3	70-130	S	%Rec	1	7/4/2019 9:30:14 AM	45967
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/3/2019 2:30:38 PM	45955
Surr: BFB	103	73.8-119		%Rec	1	7/3/2019 2:30:38 PM	45955
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.024		mg/Kg	1	7/3/2019 2:30:38 PM	45955
Toluene	ND	0.049		mg/Kg	1	7/3/2019 2:30:38 PM	45955
Ethylbenzene	ND	0.049		mg/Kg	1	7/3/2019 2:30:38 PM	45955
Xylenes, Total	ND	0.097		mg/Kg	1	7/3/2019 2:30:38 PM	45955
Surr: 4-Bromofluorobenzene	92.8	80-120		%Rec	1	7/3/2019 2:30:38 PM	45955

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SW37

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:45:00 AM

 Lab ID:
 1906G07-061
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: smb
Chloride	230	60		mg/Kg	20	7/5/2019 3:38:25 PM	46021
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS					Analyst	BRM
Diesel Range Organics (DRO)	ND	8.4		mg/Kg	1	7/4/2019 9:52:18 AM	45967
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	7/4/2019 9:52:18 AM	45967
Surr: DNOP	33.0	70-130	S	%Rec	1	7/4/2019 9:52:18 AM	45967
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/3/2019 4:47:26 PM	45955
Surr: BFB	102	73.8-119		%Rec	1	7/3/2019 4:47:26 PM	45955
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.024		mg/Kg	1	7/3/2019 4:47:26 PM	45955
Toluene	ND	0.048		mg/Kg	1	7/3/2019 4:47:26 PM	45955
Ethylbenzene	ND	0.048		mg/Kg	1	7/3/2019 4:47:26 PM	45955
Xylenes, Total	ND	0.097		mg/Kg	1	7/3/2019 4:47:26 PM	45955
Surr: 4-Bromofluorobenzene	91.9	80-120		%Rec	1	7/3/2019 4:47:26 PM	45955

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SW38

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:45:00 AM

 Lab ID:
 1906G07-062
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	210	60		mg/Kg	20	7/5/2019 3:50:50 PM	46021
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	BRM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/4/2019 10:14:20 AM	45967
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/4/2019 10:14:20 AM	45967
Surr: DNOP	36.2	70-130	S	%Rec	1	7/4/2019 10:14:20 AM	45967
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/3/2019 5:10:12 PM	45955
Surr: BFB	102	73.8-119		%Rec	1	7/3/2019 5:10:12 PM	45955
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.025		mg/Kg	1	7/3/2019 5:10:12 PM	45955
Toluene	ND	0.049		mg/Kg	1	7/3/2019 5:10:12 PM	45955
Ethylbenzene	ND	0.049		mg/Kg	1	7/3/2019 5:10:12 PM	45955
Xylenes, Total	ND	0.098		mg/Kg	1	7/3/2019 5:10:12 PM	45955
Surr: 4-Bromofluorobenzene	91.7	80-120		%Rec	1	7/3/2019 5:10:12 PM	45955

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 10/21/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy Client Sample ID: SW39

 Project:
 LVP SWD 1
 Collection Date: 6/27/2019 11:45:00 AM

 Lab ID:
 1906G07-063
 Matrix:
 Received Date: 6/28/2019 10:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	smb
Chloride	710	60		mg/Kg	20	7/5/2019 4:03:14 PM	46021
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	BRM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/4/2019 10:36:23 AM	45967
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	7/4/2019 10:36:23 AM	45967
Surr: DNOP	37.8	70-130	S	%Rec	1	7/4/2019 10:36:23 AM	45967
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/3/2019 5:33:00 PM	45955
Surr: BFB	103	73.8-119		%Rec	1	7/3/2019 5:33:00 PM	45955
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.024		mg/Kg	1	7/3/2019 5:33:00 PM	45955
Toluene	ND	0.048		mg/Kg	1	7/3/2019 5:33:00 PM	45955
Ethylbenzene	ND	0.048		mg/Kg	1	7/3/2019 5:33:00 PM	45955
Xylenes, Total	ND	0.097		mg/Kg	1	7/3/2019 5:33:00 PM	45955
Surr: 4-Bromofluorobenzene	91.0	80-120		%Rec	1	7/3/2019 5:33:00 PM	45955

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: 1906G07

21-Oct-19

Client:	WPX Energy
Project:	LVP SWD 1

Project: LV	VP SWD 1
Sample ID: MB-45959	SampType: MBLK TestCode: EPA Method 300.0: Anions
Client ID: PBS	Batch ID: 45959 RunNo: 61093
Prep Date: 7/2/2019	Analysis Date: 7/2/2019 SeqNo: 2071403 Units: mg/Kg
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride	ND 1.5
Sample ID: LCS-45959	SampType: LCS TestCode: EPA Method 300.0: Anions
Client ID: LCSS	Batch ID: 45959 RunNo: 61093
Prep Date: 7/2/2019	Analysis Date: 7/2/2019 SeqNo: 2071404 Units: mg/Kg
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride	14 1.5 15.00 0 94.8 90 110
Sample ID: MB-45974	SampType: MBLK TestCode: EPA Method 300.0: Anions
Client ID: PBS	Batch ID: 45974 RunNo: 61093
Prep Date: 7/2/2019	Analysis Date: 7/2/2019 SeqNo: 2071437 Units: mg/Kg
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride	ND 1.5
Sample ID: LCS-45974	SampType: LCS TestCode: EPA Method 300.0: Anions
Client ID: LCSS	Batch ID: 45974 RunNo: 61093
Prep Date: 7/2/2019	Analysis Date: 7/2/2019 SeqNo: 2071438 Units: mg/Kg
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride	14 1.5 15.00 0 93.7 90 110
Sample ID: MB-45997	SampType: MBLK TestCode: EPA Method 300.0: Anions
Client ID: PBS	Batch ID: 45997 RunNo: 61134
Prep Date: 7/3/2019	Analysis Date: 7/3/2019 SeqNo: 2072914 Units: mg/Kg
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride	ND 1.5
Sample ID: LCS-45997	7 SampType: LCS TestCode: EPA Method 300.0: Anions

Qualifiers:

Analyte

Chloride

Client ID: LCSS

Prep Date: 7/3/2019

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix

Analyte detected in the associated Method Blank

RunNo: 61134

SeqNo: 2072915

Units: mg/Kg

110

HighLimit

%RPD

- Value above quantitation range
- Analyte detected below quantitation limits
- Sample pH Not In Range
- RL Reporting Limit

PQL SPK value SPK Ref Val %REC LowLimit

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RPDLimit

Qual

Batch ID: 45997

Analysis Date: 7/3/2019

1.5

15.00

Result

14

Hall Environmental Analysis Laboratory, Inc.

1906G07 21-Oct-19

WO#:

Client: WPX Energy
Project: LVP SWD 1

Sample ID: MB-46014 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 46014 RunNo: 61134

Prep Date: 7/3/2019 Analysis Date: 7/3/2019 SeqNo: 2072944 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride ND 1.5

Sample ID: LCS-46014 SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: **LCSS** Batch ID: **46014** RunNo: **61134**

Prep Date: **7/3/2019** Analysis Date: **7/3/2019** SeqNo: **2072945** Units: **mg/Kg**

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride 14 1.5 15.00 0 94.1 90 110

Sample ID: MB-46021 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 46021 RunNo: 61175

Prep Date: 7/5/2019 Analysis Date: 7/5/2019 SeqNo: 2074356 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride ND 1.5

Sample ID: LCS-46021 SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 46021 RunNo: 61175

Prep Date: 7/5/2019 Analysis Date: 7/5/2019 SeqNo: 2074357 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride 14 1.5 15.00 0 94.4 90 110

Qualifiers:

* Value exceeds Maximum Contaminant Level

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1906G07**

21-Oct-19

Client: WPX Energy Project: LVP SWD 1

Evi Sw	D 1									
Sample ID: MB-45958	SampTy	/pe: M l	BLK	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	Organics	
Client ID: PBS	Batch	ID: 45	958	F	RunNo: 6 1	1135				
Prep Date: 7/2/2019	Analysis Da	ate: 7/	/3/2019	9	SeqNo: 20	71702	Units: mg/K	g		
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	40.00							
Surr: DNOP	8.2		10.00		82.5	70	130			
Sample ID: LCS-45958	SampTy	ype: LC	s	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: LCSS	Batch	ID: 45	958	F	RunNo: 6 1	1135				
Prep Date: 7/2/2019	Analysis Da	ate: 7/	/3/2019	9	SeqNo: 20	071703	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	90.4	63.9	124			
Surr: DNOP	4.3		5.000		86.0	70	130			
Sample ID: 1906G07-014AMS	SampTy	/pe: M \$	S	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	Organics	
Client ID: SP415	Batch	ID: 45	958	F	RunNo: 6 1	1135				
Prep Date: 7/2/2019	Analysis Da	ate: 7/	/3/2019	5	SeqNo: 20	071704	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	39	9.4	46.90	0	83.4	57	142			
Surr: DNOP	3.5		4.690		75.5	70	130			
Sample ID: 1906G07-014AMS	D SampTy	/pe: M \$	SD	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: SP415	Batch	ID: 45	958	F	RunNo: 6 1	1135				
Prep Date: 7/2/2019	Analysis Da	ate: 7/	/3/2019	5	SeqNo: 20	71705	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	10	50.51	0	87.1	57	142	11.8	20	
Surr: DNOP	4.0		5.051		79.6	70	130	0	0	
Sample ID: LCS-45941	SampTy	/pe: LC	ss	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: LCSS	Batch	ID: 45	941	F	RunNo: 6 1	1083				
Prep Date: 7/1/2019	Analysis Da	ate: 7/	/3/2019	S	SeqNo: 20	71884	Units: mg/K	g		
Analyta	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Analyte	rtcount	. «-	01 11 14.40	0	701 12 0			701 11 2	Tti Bellinit	Qual
Diesel Range Organics (DRO)	52	10	50.00	0	103	63.9	124	70. 1. 2	Tti Bellint	Quui

Qualifiers:

Surr: DNOP

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

B Analyte detected in the associated Method Blank

98.2

70

130

- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

5.000

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4.9

Hall Environmental Analysis Laboratory, Inc.

1906G07 21-Oct-19

WO#:

Client:	WPX Energy
Project:	I WD SWD 1

Project: LVP SW	VD 1								
Sample ID: MB-45941	SampType: M I	BLK	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID: PBS	Batch ID: 45	941	F	RunNo: 6	1083				
Prep Date: 7/1/2019	Analysis Date: 7	/3/2019	5	SeqNo: 20	071885	Units: mg/k	(g		
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	9.2	10.00		91.9	70	130			
Sample ID: MB-45967	SampType: MI	BLK	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID: PBS	Batch ID: 45	967	F	RunNo: 6	1135				
Prep Date: 7/2/2019	Analysis Date: 7	/3/2019	9	SeqNo: 20	072211	Units: mg/k	(g		
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		89.2	70	130			
Sample ID: LCS-45967	SampType: LC	s	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID: LCSS	Batch ID: 45	967	F	RunNo: 6	1135				
Prep Date: 7/2/2019	Analysis Date: 7	/3/2019	8	SeqNo: 20	072213	Units: mg/k	(g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44 10	50.00	0	87.0	63.9	124			
Surr: DNOP	4.3	5.000		85.2	70	130			
Sample ID: 1906G07-044AM	S SampType: MS	S	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID: SP445	Batch ID: 45	967	F	RunNo: 6	1129				
Prep Date: 7/2/2019	Analysis Date: 7	/4/2019	5	SeqNo: 20	073147	Units: mg/k	ζg		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44 10	50.40	3.403	81.4	57	142			
Surr: DNOP	2.2	5.040		43.4	70	130			S
Sample ID: 1906G07-044AM	SD SampType: M	SD	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID: SP445	Batch ID: 45	967	F	RunNo: 6	1129				
Prep Date: 7/2/2019	Analysis Date: 7	/4/2019	8	SeqNo: 20	073148	Units: mg/K	(g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43 9.3	46.34	3.403	85.4	57	142	3.30	20	
Surr: DNOP	1.6	4.634		34.4	70	130	0	0	S

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1906G07**

21-Oct-19

Client: WPX Energy Project: LVP SWD 1

Sample ID: MB-45937 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: PBS Batch ID: 45937 RunNo: 61098 Prep Date: 7/1/2019 Analysis Date: 7/2/2019 SeqNo: 2070739 Units: mg/Kg SPK value SPK Ref Val %REC %RPD **RPDLimit** Analyte Result PQL LowLimit HighLimit Qual

Gasoline Range Organics (GRO) ND 5.0

Surr: BFB 1000 1000 100 73.8 119

Sample ID: LCS-45937 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 45937 RunNo: 61098

Prep Date: 7/1/2019 Analysis Date: 7/2/2019 SeqNo: 2070740 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 O 99.6 80.1 123 Surr: BFB 1200 1000 115 73.8 119

Sample ID: MB-45949 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: PBS Batch ID: 45949 RunNo: 61098 Prep Date: 7/1/2019 Analysis Date: 7/2/2019 SeqNo: 2070752 Units: mg/Kg SPK value SPK Ref Val %REC LowLimit %RPD **RPDLimit** Analyte Result PQL HighLimit Qual Gasoline Range Organics (GRO) ND 5.0

Surr: BFB 1000 1000 104 73.8 119

SampType: LCS

Client ID: LCSS Batch ID: 45949 RunNo: 61098 Prep Date: 7/1/2019 Analysis Date: 7/2/2019 SeqNo: 2070753 Units: mg/Kg SPK value SPK Ref Val %REC %RPD **RPDLimit** Result PQL LowLimit HighLimit Qual

TestCode: EPA Method 8015D: Gasoline Range

 Gasoline Range Organics (GRO)
 26
 5.0
 25.00
 0
 102
 80.1
 123

 Surr: BFB
 1200
 1000
 119
 73.8
 119

Sample ID: 1906G07-014AMS SampType: MS TestCode: EPA Method 8015D: Gasoline Range Client ID: SP415 Batch ID: 45949 RunNo: 61098 Units: mg/Kg Prep Date: 7/1/2019 Analysis Date: 7/2/2019 SegNo: 2070758 Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 28 5.0 0 112 69.1 24.95 142 Surr: BFB 1200 998.0 120 73.8 119 S

Sample ID: 1906G07-014AMSD SampType: MSD TestCode: EPA Method 8015D: Gasoline Range

Client ID: **SP415** Batch ID: **45949** RunNo: **61098**

Prep Date: 7/1/2019 Analysis Date: 7/2/2019 SeqNo: 2070759 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit

Sample ID: LCS-45949

S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

1200

1906G07

WO#:

21-Oct-19

Client: WPX Energy **Project:** LVP SWD 1

Sample ID: 1906G07-014AMS	SampType: MSD TestCode: EPA Method 8015D: Gasoline Range									
Client ID: SP415	Batch	ID: 45	949	F	RunNo: 6	1098				
Prep Date: 7/1/2019	Analysis D	ate: 7/	2/2019	5	SeqNo: 2	070759	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	4.9	24.49	0	110	69.1	142	4.07	20	
Surr: BFB	1200		979.4		120	73.8	119	0	0	S
Sample ID: MB-45955	SampT	уре: МЕ	BLK	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	е	
Client ID: PBS	Batch	ID: 45	955	F	RunNo: 6	1137				
Prep Date: 7/2/2019	Analysis D	ate: 7/	3/2019	9	SeqNo: 2	072109	Units: mg/k	ζg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		103	73.8	119			
Sample ID: LCS-45955	SampT	ype: LC	:s	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID: LCSS	Batch	ID: 45	955	F	RunNo: 6	1137				
Prep Date: 7/2/2019	Analysis D	ate: 7/	3/2019	5	SeqNo: 2	072110	Units: mg/k	ζg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	96.6	80.1	123			

Sample ID: 1906G07-044AMS	SampT	ype: M \$	3	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	е	
Client ID: SP445	Batch	ID: 45	955	F	RunNo: 6	1137				
Prep Date: 7/2/2019	Analysis D	ate: 7/	3/2019	S	SeqNo: 20	072112	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	4.8	24.13	0	108	69.1	142			
Surr: BFB	1100		965.3		115	73.8	119			

117

73.8

119

1000

Sample ID: 1906G07-044AM	SD Sampi	ype: M \$	SD	les	tCode: El	A Method	8015D: Gaso	line Range	е	
Client ID: SP445	Batch	ID: 45	955	F	RunNo: 6	1137				
Prep Date: 7/2/2019	Analysis D	ate: 7/	3/2019	S	SeqNo: 20	072113	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	24.83	0	106	69.1	142	0.591	20	
Surr: BFB	1200		993.0		117	73.8	119	0	0	

Qualifiers:

Surr: BFB

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix

- Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits
- Sample pH Not In Range
- Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1906G07**

21-Oct-19

Client: WPX Energy Project: LVP SWD 1

Sample ID: MB-45937	Sampl	SampType: MBLK			tCode: El	iles				
Client ID: PBS	Batc	h ID: 45 9	937	F	RunNo: 6	1098				
Prep Date: 7/1/2019	Analysis D	Date: 7/	2/2019	8	SeqNo: 2	070785	Units: mg/K	g		
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	0.91		1.000		91.2	80	120			

Sample ID: LCS-45937	SampT	ype: LC	TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch	n ID: 45 9	937	F	RunNo: 6	1098				
Prep Date: 7/1/2019	Analysis D	oate: 7/ 2	2/2019	S	SeqNo: 2	070789	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	102	80	120			
Toluene	0.98	0.050	1.000	0	97.8	80	120			
Ethylbenzene	0.96	0.050	1.000	0	96.3	80	120			
Xylenes, Total	2.8	0.10	3.000	0	93.4	80	120			
Surr: 4-Bromofluorobenzene	0.97		1.000		97.2	80	120			

Sample ID: 1906G07-001AMS	SampT	уре: МS	3	TestCode: EPA Method 8021B: Volatiles						
Client ID: SP 402	Batch	n ID: 45 9	937	F	RunNo: 6	1098				
Prep Date: 7/1/2019	Analysis D	oate: 7/	2/2019	S	SeqNo: 2070798 Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.024	0.9794	0	109	63.9	127			
Toluene	1.1	0.049	0.9794	0	109	69.9	131			
Ethylbenzene	1.1	0.049	0.9794	0	111	71	132			
Xylenes, Total	3.2	0.098	2.938	0	108	71.8	131			
Surr: 4-Bromofluorobenzene	1.0		0.9794		103	80	120			

Sample ID: 1906G07-001AN	ISD SampT	ype: MS	SD	TestCode: EPA Method 8021B: Volatiles						
Client ID: SP 402	Batch	1D: 45 9	937	F	RunNo: 6	1098				
Prep Date: 7/1/2019	Analysis D	ate: 7/2	2/2019	S	SeqNo: 2	070802	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	0.9881	0	112	63.9	127	3.26	20	
Toluene	1.1	0.049	0.9881	0	113	69.9	131	4.17	20	
Ethylbenzene	1.1	0.049	0.9881	0	114	71	132	3.36	20	
Xylenes, Total	3.3	0.099	2.964	0	111	71.8	131	4.03	20	
Surr: 4-Bromofluorobenzene	1.0		0.9881		101	80	120	0	0	

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1906G07**

21-Oct-19

Client: WPX Energy Project: LVP SWD 1

Sample ID: MB-45949	Samp	Гуре: МЕ	BLK	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: PBS	Batc	h ID: 45 9	949	F	RunNo: 6	1098				
Prep Date: 7/1/2019	Analysis [Date: 7/	2/2019	5	SeqNo: 2	070813	Units: mg/K	g		
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	0.95		1 000		94.6	80	120			

Sample ID: LCS-45949	SampT	ype: LC	S	TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSS	Batch	n ID: 45 9	949	F	RunNo: 6	1098				
Prep Date: 7/1/2019	Analysis D	ate: 7/ 2	2/2019	S	SeqNo: 2	070818	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.025	1.000	0	97.6	80	120			
Toluene	0.97	0.050	1.000	0	97.0	80	120			
Ethylbenzene	0.95	0.050	1.000	0	94.6	80	120			
Xylenes, Total	2.7	0.10	3.000	0	91.5	80	120			
Surr: 4-Bromofluorobenzene	0.99		1.000		99.3	80	120			

Sample ID: 1906G07-016AMS	SampT	уре: М	3	Tes	tCode: EI	PA Method	8021B: Volat	iles		
Client ID: SP417	Batch	n ID: 45 9	949	F	RunNo: 6	1098				
Prep Date: 7/1/2019	Analysis D	ate: 7/	2/2019	S	SeqNo: 2	070829	Units: mg/K	ίg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.024	0.9690	0	103	63.9	127			
Toluene	1.0	0.048	0.9690	0	106	69.9	131			
Ethylbenzene	1.0	0.048	0.9690	0	105	71	132			
Xylenes, Total	2.9	0.097	2.907	0	101	71.8	131			
Surr: 4-Bromofluorobenzene	0.97		0.9690		101	80	120			

Sample ID: 1906G07-016AMS	SD SampT	ype: MS	SD	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: SP417	Batch	n ID: 45 9	949	F	RunNo: 6	1098				
Prep Date: 7/1/2019	Analysis D	ate: 7/2	2/2019	S	SeqNo: 2	070830	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	0.9970	0	108	63.9	127	6.88	20	
Toluene	1.1	0.050	0.9970	0	108	69.9	131	4.99	20	
Ethylbenzene	1.1	0.050	0.9970	0	108	71	132	5.64	20	
Xylenes, Total	3.2	0.10	2.991	0	106	71.8	131	7.29	20	
Surr: 4-Bromofluorobenzene	1.0		0.9970		102	80	120	0	0	

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: 1906G07

21-Oct-19

Client: WPX Energy **Project:** LVP SWD 1

Sample ID: MB-45955	SampT	уре: МЕ	BLK	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: PBS	Batcl	n ID: 45 9	955	R	RunNo: 6	1137				
Prep Date: 7/2/2019	Analysis D	oate: 7/ 3	3/2019	S	SeqNo: 2	072155	Units: mg/K	g		
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	0.94		1.000		94.0	80	120			

Sample ID: LCS-45955	SampT	Type: LC	S	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: LCSS	Batcl	h ID: 45 9	955	F	RunNo: 6	1137				
Prep Date: 7/2/2019	Analysis D	Date: 7/ 3	3/2019	9	SeqNo: 2	072156	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	95.2	80	120			
Toluene	0.93	0.050	1.000	0	92.8	80	120			
Ethylbenzene	0.92	0.050	1.000	0	92.4	80	120			
Xylenes, Total	2.7	0.10	3.000	0	90.2	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

Sample ID: 1906G07-045AMS	SampT	ype: MS	3	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: SP446	Batch	n ID: 45 9	955	F	RunNo: 6	1137				
Prep Date: 7/2/2019	Analysis D	ate: 7/3	3/2019	S	SeqNo: 20	072159	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.024	0.9542	0	113	63.9	127			
Toluene	1.1	0.048	0.9542	0	114	69.9	131			
Ethylbenzene	1.1	0.048	0.9542	0	113	71	132			
Xylenes, Total	3.2	0.095	2.863	0	111	71.8	131			
Surr: 4-Bromofluorobenzene	0.97		0.9542		101	80	120			

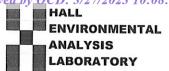
Sample ID: 1906G07-045AM	I SD SampT	ype: MS	SD	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID: SP446	Batch	1D: 45 9	955	F	RunNo: 6	1137				
Prep Date: 7/2/2019	Analysis D	ate: 7/3	3/2019	8	SeqNo: 2	072160	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.025	0.9960	0	117	63.9	127	8.25	20	
Toluene	1.2	0.050	0.9960	0	116	69.9	131	6.16	20	
Ethylbenzene	1.2	0.050	0.9960	0	116	71	132	7.50	20	
Xylenes, Total	3.4	0.10	2.988	0	113	71.8	131	6.21	20	
Surr: 4-Bromofluorobenzene	1.0		0.9960		101	80	120	0	0	

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix

- Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits
- Sample pH Not In Range
- Reporting Limit

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Hall Environmental Analysis Laboratory 4901 Hawkins NE

Sample Log-In Check List

Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

C	ient Name:	WPX ENE	RGY CARLS	B Work	Order Num	nber: 190	6G07			Rcpt	No: 1
Re	ceived By:	Jevon Ca	ımpisi	6/28/20	19 10:40:0	0 AM		Jewn Ca Ngaznin	ngui		
Co	mpleted By:	Yazmine	Garduno	6/28/20	19 12:52:2	1 PM		Magnin	Coffeduri	5	
Re	viewed By:	IC		6/28	19			Ų v			
<u>Ch</u>	ain of Cus	stody									
1.	Is Chain of C	ustody comp	olete?			Yes	\checkmark	No		Not Present	
2.	How was the	sample deli	vered?			Clie	<u>nt</u>				
0.00	og In										
3.	Was an atten	npt made to	cool the sam	ples?		Yes	V	No	Ц	NA 🗆	
4. \	Nere all sam	ples received	d at a temper	ature of >0° C	to 6.0°C	Yes	V	No		NA 🗆]
5.	Sample(s) in	proper conta	ainer(s)?			Yes	✓	No			
6. \$	Sufficient sam	ple volume	for indicated	test(s)?		Yes	V	No			
7. /	Are samples (except VOA	and ONG) p	roperly preserve	ed?	Yes	V	No			
8. ١	Was preserva	tive added to	bottles?			Yes		No	✓	NA 🗆	
9. \	/OA vials hav	e zero head	space?			Yes		No		No VOA Vials	
10.	Were any sar	nple contain	ers received	broken?		Yes		No	✓	# of preserved	
										bottles checked	
	Does paperwo					Yes	✓	No		for pH:	1 12 1)
	Note discrepa			in of Custody?		Yes		No		Adjusted?	or >12 unless noted)
	s it clear what						V	No		,	-
	Vere all holdi			ı:		Yes Yes	✓	No		Checked by:	
	If no, notify co)					- 1		
Spe	cial Handl	ing (if app	olicable)								
15.	Was client no	tified of all d	iscrepancies	with this order?	?	Yes		No		NA 🗹	
	Person	Notified:	T.		Date		-		monature.		
	By Who	om:			Via:	☐ eM	ail 🗌	Phone	Fax	☐ In Person	
	Regard	ing:						VIII			
	Client Ir	nstructions:								*	
16.	Additional re	marks:									
17.	Cooler Infor	mation									
	Cooler No	1.0000000000000000000000000000000000000	Condition	Seal Intact	Seal No	Seal D	ate	Signed E	Ву		
	1	1.8	Good	Yes							
	2	1.4	Good	Yes							

R. C.	TAL	LYSIS LABORATORY	oo moo letaemorivaelled www.	87109	5 Fax 505-345-4107	Analysis Request	(tu		927C	s 3, 1/AC	310 () ()	by 83 8 Ma 70A Sem	PAHs RCRA € F, 8260 (8270 (Total C													lassulis to lori	ge 741 (d) Mary Start of Mary	
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: Mailing Address:	LVP SWD#	4901 Hawkins NE - Albuquerque, NM 87109
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If necessary, samples submitted to Hall Environmental may be su	bcontracted to other accredited laboratories. This serves as notice of this	If we have a solution of the subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

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If necessary, samples submitted to Hall Environmental may be st	subcontracted to other accredited laboratories. This serves as notice of this	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.



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

July 11, 2019

Kris Rowe WPX Energy 5315 Buena Vista Drive Carlsbad, NM 88220 TEL: (505) 386-9693

FAX:

RE: LVP SWD 1 OrderNo.: 1907199

Dear Kris Rowe:

Hall Environmental Analysis Laboratory received 20 sample(s) on 7/3/2019 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 #NM0901

Sincerely,

Andy Freeman

Laboratory Manager

andy

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 7/11/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP405
Project: LVP SWD 1
Collection Date: 7/2/2019

Lab ID: 1907199-001 **Matrix:** SOIL **Received Date:** 7/3/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	MRA
Chloride	280	60	mg/Kg	20	7/9/2019 6:34:24 PM	46086
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst:	BRM
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	7/9/2019 5:40:41 PM	46056
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	7/9/2019 5:40:41 PM	46056
Surr: DNOP	74.2	70-130	%Rec	1	7/9/2019 5:40:41 PM	46056
EPA METHOD 8015D: GASOLINE RANGE					Analyst:	NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	7/7/2019 10:37:22 AM	46032
Surr: BFB	91.6	73.8-119	%Rec	1	7/7/2019 10:37:22 AM	46032
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.025	mg/Kg	1	7/7/2019 10:37:22 AM	46032
Toluene	ND	0.050	mg/Kg	1	7/7/2019 10:37:22 AM	46032
Ethylbenzene	ND	0.050	mg/Kg	1	7/7/2019 10:37:22 AM	46032
Xylenes, Total	ND	0.099	mg/Kg	1	7/7/2019 10:37:22 AM	46032
Surr: 4-Bromofluorobenzene	95.6	80-120	%Rec	1	7/7/2019 10:37:22 AM	46032

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 1 of 24

Date Reported: 7/11/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD 1

Collection Date: 7/2/2019

Lab ID: 1907199-002 **Matrix:** SOIL **Received Date:** 7/3/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	MRA
Chloride	190	60	mg/Kg	20	7/9/2019 6:46:49 PM	46086
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	BRM
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	7/9/2019 6:55:36 PM	46056
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	7/9/2019 6:55:36 PM	46056
Surr: DNOP	103	70-130	%Rec	1	7/9/2019 6:55:36 PM	46056
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/7/2019 11:47:34 AM	46032
Surr: BFB	89.5	73.8-119	%Rec	1	7/7/2019 11:47:34 AM	46032
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.025	mg/Kg	1	7/7/2019 11:47:34 AM	46032
Toluene	ND	0.049	mg/Kg	1	7/7/2019 11:47:34 AM	46032
Ethylbenzene	ND	0.049	mg/Kg	1	7/7/2019 11:47:34 AM	46032
Xylenes, Total	ND	0.098	mg/Kg	1	7/7/2019 11:47:34 AM	46032
Surr: 4-Bromofluorobenzene	94.5	80-120	%Rec	1	7/7/2019 11:47:34 AM	46032

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 2 of 24

Date Reported: 7/11/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP411
Project: LVP SWD 1
Collection Date: 7/2/2019

Lab ID: 1907199-003 **Matrix:** SOIL **Received Date:** 7/3/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	190	60	mg/Kg	20	7/9/2019 6:59:13 PM	46086
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	BRM
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	7/9/2019 7:20:41 PM	46056
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	7/9/2019 7:20:41 PM	46056
Surr: DNOP	92.6	70-130	%Rec	1	7/9/2019 7:20:41 PM	46056
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/7/2019 12:57:49 PM	46032
Surr: BFB	92.8	73.8-119	%Rec	1	7/7/2019 12:57:49 PM	46032
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.024	mg/Kg	1	7/7/2019 12:57:49 PM	46032
Toluene	ND	0.049	mg/Kg	1	7/7/2019 12:57:49 PM	46032
Ethylbenzene	ND	0.049	mg/Kg	1	7/7/2019 12:57:49 PM	46032
Xylenes, Total	ND	0.098	mg/Kg	1	7/7/2019 12:57:49 PM	46032
Surr: 4-Bromofluorobenzene	97.5	80-120	%Rec	1	7/7/2019 12:57:49 PM	46032

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 3 of 24

Date Reported: 7/11/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP416
Project: LVP SWD 1
Collection Date: 7/2/2019

Lab ID: 1907199-004 **Matrix:** SOIL **Received Date:** 7/3/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: MRA
Chloride	190	60		mg/Kg	20	7/9/2019 7:11:38 PM	46086
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS					Analyst	BRM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/9/2019 7:45:37 PM	46056
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/9/2019 7:45:37 PM	46056
Surr: DNOP	56.5	70-130	S	%Rec	1	7/9/2019 7:45:37 PM	46056
EPA METHOD 8015D: GASOLINE RANGE						Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/7/2019 1:21:16 PM	46032
Surr: BFB	90.6	73.8-119		%Rec	1	7/7/2019 1:21:16 PM	46032
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.025		mg/Kg	1	7/7/2019 1:21:16 PM	46032
Toluene	ND	0.049		mg/Kg	1	7/7/2019 1:21:16 PM	46032
Ethylbenzene	ND	0.049		mg/Kg	1	7/7/2019 1:21:16 PM	46032
Xylenes, Total	ND	0.099		mg/Kg	1	7/7/2019 1:21:16 PM	46032
Surr: 4-Bromofluorobenzene	94.5	80-120		%Rec	1	7/7/2019 1:21:16 PM	46032

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 4 of 24

Date Reported: 7/11/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP421
Project: LVP SWD 1
Collection Date: 7/2/2019

Lab ID: 1907199-005 **Matrix:** SOIL **Received Date:** 7/3/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	170	60	mg/Kg	20	7/9/2019 7:24:02 PM	46086
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	BRM
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	7/9/2019 8:10:32 PM	46056
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	7/9/2019 8:10:32 PM	46056
Surr: DNOP	78.2	70-130	%Rec	1	7/9/2019 8:10:32 PM	46056
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/7/2019 1:44:45 PM	46032
Surr: BFB	90.7	73.8-119	%Rec	1	7/7/2019 1:44:45 PM	46032
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.025	mg/Kg	1	7/7/2019 1:44:45 PM	46032
Toluene	ND	0.049	mg/Kg	1	7/7/2019 1:44:45 PM	46032
Ethylbenzene	ND	0.049	mg/Kg	1	7/7/2019 1:44:45 PM	46032
Xylenes, Total	ND	0.098	mg/Kg	1	7/7/2019 1:44:45 PM	46032
Surr: 4-Bromofluorobenzene	95.2	80-120	%Rec	1	7/7/2019 1:44:45 PM	46032

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 5 of 24

Date Reported: 7/11/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD 1

Collection Date: 7/2/2019

Lab ID: 1907199-006 **Matrix:** SOIL **Received Date:** 7/3/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	MRA
Chloride	180	60	mg/Kg	20	7/9/2019 7:36:26 PM	46086
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst:	BRM
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	7/9/2019 8:35:21 PM	46056
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	7/9/2019 8:35:21 PM	46056
Surr: DNOP	89.8	70-130	%Rec	1	7/9/2019 8:35:21 PM	46056
EPA METHOD 8015D: GASOLINE RANGE					Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/7/2019 2:08:16 PM	46032
Surr: BFB	90.2	73.8-119	%Rec	1	7/7/2019 2:08:16 PM	46032
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.025	mg/Kg	1	7/7/2019 2:08:16 PM	46032
Toluene	ND	0.049	mg/Kg	1	7/7/2019 2:08:16 PM	46032
Ethylbenzene	ND	0.049	mg/Kg	1	7/7/2019 2:08:16 PM	46032
Xylenes, Total	ND	0.098	mg/Kg	1	7/7/2019 2:08:16 PM	46032
Surr: 4-Bromofluorobenzene	94.3	80-120	%Rec	1	7/7/2019 2:08:16 PM	46032

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/11/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD 1

Collection Date: 7/2/2019

Lab ID: 1907199-007 **Matrix:** SOIL **Received Date:** 7/3/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	190	60	mg/Kg	20	7/9/2019 7:48:50 PM	46086
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	BRM
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	7/9/2019 9:00:21 PM	46056
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	7/9/2019 9:00:21 PM	46056
Surr: DNOP	81.3	70-130	%Rec	1	7/9/2019 9:00:21 PM	46056
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	7/7/2019 2:31:43 PM	46032
Surr: BFB	100	73.8-119	%Rec	1	7/7/2019 2:31:43 PM	46032
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.025	mg/Kg	1	7/7/2019 2:31:43 PM	46032
Toluene	ND	0.050	mg/Kg	1	7/7/2019 2:31:43 PM	46032
Ethylbenzene	ND	0.050	mg/Kg	1	7/7/2019 2:31:43 PM	46032
Xylenes, Total	ND	0.099	mg/Kg	1	7/7/2019 2:31:43 PM	46032
Surr: 4-Bromofluorobenzene	106	80-120	%Rec	1	7/7/2019 2:31:43 PM	46032

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

e pH Not In Range ting Limit Page 7 of 24

Date Reported: 7/11/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP431
Project: LVP SWD 1
Collection Date: 7/2/2019

Lab ID: 1907199-008 **Matrix:** SOIL **Received Date:** 7/3/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	MRA
Chloride	210	60	mg/Kg	20	7/9/2019 2:26:14 PM	46066
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst:	BRM
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	7/9/2019 9:25:07 PM	46056
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	7/9/2019 9:25:07 PM	46056
Surr: DNOP	77.6	70-130	%Rec	1	7/9/2019 9:25:07 PM	46056
EPA METHOD 8015D: GASOLINE RANGE					Analyst:	NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	7/7/2019 2:55:10 PM	46032
Surr: BFB	93.3	73.8-119	%Rec	1	7/7/2019 2:55:10 PM	46032
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.025	mg/Kg	1	7/7/2019 2:55:10 PM	46032
Toluene	ND	0.050	mg/Kg	1	7/7/2019 2:55:10 PM	46032
Ethylbenzene	ND	0.050	mg/Kg	1	7/7/2019 2:55:10 PM	46032
Xylenes, Total	ND	0.099	mg/Kg	1	7/7/2019 2:55:10 PM	46032
Surr: 4-Bromofluorobenzene	98.5	80-120	%Rec	1	7/7/2019 2:55:10 PM	46032

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/11/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP433
Project: LVP SWD 1
Collection Date: 7/2/2019

Lab ID: 1907199-009 **Matrix:** SOIL **Received Date:** 7/3/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	210	60		mg/Kg	20	7/9/2019 2:38:38 PM	46066
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	BRM
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	7/9/2019 9:49:50 PM	46056
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/9/2019 9:49:50 PM	46056
Surr: DNOP	64.3	70-130	S	%Rec	1	7/9/2019 9:49:50 PM	46056
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/7/2019 4:05:29 PM	46032
Surr: BFB	88.1	73.8-119		%Rec	1	7/7/2019 4:05:29 PM	46032
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.025		mg/Kg	1	7/7/2019 4:05:29 PM	46032
Toluene	ND	0.049		mg/Kg	1	7/7/2019 4:05:29 PM	46032
Ethylbenzene	ND	0.049		mg/Kg	1	7/7/2019 4:05:29 PM	46032
Xylenes, Total	ND	0.099		mg/Kg	1	7/7/2019 4:05:29 PM	46032
Surr: 4-Bromofluorobenzene	91.7	80-120		%Rec	1	7/7/2019 4:05:29 PM	46032

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

e pH Not In Range Page 9 of 24

Date Reported: 7/11/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP434
Project: LVP SWD 1
Collection Date: 7/2/2019

Lab ID: 1907199-010 **Matrix:** SOIL **Received Date:** 7/3/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	170	60	mg/Kg	20	7/9/2019 2:51:03 PM	46066
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	BRM
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	7/9/2019 10:14:35 PM	46056
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	7/9/2019 10:14:35 PM	46056
Surr: DNOP	88.7	70-130	%Rec	1	7/9/2019 10:14:35 PM	46056
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	7/7/2019 4:28:54 PM	46032
Surr: BFB	99.7	73.8-119	%Rec	1	7/7/2019 4:28:54 PM	46032
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.025	mg/Kg	1	7/7/2019 4:28:54 PM	46032
Toluene	ND	0.050	mg/Kg	1	7/7/2019 4:28:54 PM	46032
Ethylbenzene	ND	0.050	mg/Kg	1	7/7/2019 4:28:54 PM	46032
Xylenes, Total	ND	0.10	mg/Kg	1	7/7/2019 4:28:54 PM	46032
Surr: 4-Bromofluorobenzene	105	80-120	%Rec	1	7/7/2019 4:28:54 PM	46032

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/11/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP436
Project: LVP SWD 1
Collection Date: 7/2/2019

Lab ID: 1907199-011 **Matrix:** SOIL **Received Date:** 7/3/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	MRA
Chloride	190	60	mg/Kg	20	7/9/2019 3:03:27 PM	46066
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst:	BRM
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	7/9/2019 10:39:36 PM	46056
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	7/9/2019 10:39:36 PM	46056
Surr: DNOP	88.8	70-130	%Rec	1	7/9/2019 10:39:36 PM	46056
EPA METHOD 8015D: GASOLINE RANGE					Analyst:	NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	7/7/2019 4:52:19 PM	46032
Surr: BFB	88.0	73.8-119	%Rec	1	7/7/2019 4:52:19 PM	46032
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.025	mg/Kg	1	7/7/2019 4:52:19 PM	46032
Toluene	ND	0.050	mg/Kg	1	7/7/2019 4:52:19 PM	46032
Ethylbenzene	ND	0.050	mg/Kg	1	7/7/2019 4:52:19 PM	46032
Xylenes, Total	ND	0.099	mg/Kg	1	7/7/2019 4:52:19 PM	46032
Surr: 4-Bromofluorobenzene	91.7	80-120	%Rec	1	7/7/2019 4:52:19 PM	46032

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/11/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD 1

Collection Date: 7/2/2019

Lab ID: 1907199-012 **Matrix:** SOIL **Received Date:** 7/3/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	MRA
Chloride	280	60		mg/Kg	20	7/9/2019 3:40:41 PM	46066
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst:	BRM
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	7/9/2019 11:04:19 PM	46056
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/9/2019 11:04:19 PM	46056
Surr: DNOP	59.1	70-130	S	%Rec	1	7/9/2019 11:04:19 PM	46056
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/7/2019 5:15:42 PM	46032
Surr: BFB	89.4	73.8-119		%Rec	1	7/7/2019 5:15:42 PM	46032
EPA METHOD 8021B: VOLATILES						Analyst:	NSB
Benzene	ND	0.025		mg/Kg	1	7/7/2019 5:15:42 PM	46032
Toluene	ND	0.049		mg/Kg	1	7/7/2019 5:15:42 PM	46032
Ethylbenzene	ND	0.049		mg/Kg	1	7/7/2019 5:15:42 PM	46032
Xylenes, Total	ND	0.099		mg/Kg	1	7/7/2019 5:15:42 PM	46032
Surr: 4-Bromofluorobenzene	92.8	80-120		%Rec	1	7/7/2019 5:15:42 PM	46032

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/11/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP443
Project: LVP SWD 1
Collection Date: 7/2/2019

Lab ID: 1907199-013 **Matrix:** SOIL **Received Date:** 7/3/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	MRA
Chloride	190	60		mg/Kg	20	7/9/2019 3:53:05 PM	46066
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS					Analyst:	BRM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/9/2019 11:29:06 PM	46056
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/9/2019 11:29:06 PM	46056
Surr: DNOP	59.6	70-130	S	%Rec	1	7/9/2019 11:29:06 PM	46056
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/7/2019 5:39:08 PM	46032
Surr: BFB	88.8	73.8-119		%Rec	1	7/7/2019 5:39:08 PM	46032
EPA METHOD 8021B: VOLATILES						Analyst:	NSB
Benzene	ND	0.025		mg/Kg	1	7/7/2019 5:39:08 PM	46032
Toluene	ND	0.049		mg/Kg	1	7/7/2019 5:39:08 PM	46032
Ethylbenzene	ND	0.049		mg/Kg	1	7/7/2019 5:39:08 PM	46032
Xylenes, Total	ND	0.099		mg/Kg	1	7/7/2019 5:39:08 PM	46032
Surr: 4-Bromofluorobenzene	93.4	80-120		%Rec	1	7/7/2019 5:39:08 PM	46032

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/11/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SP448
Project: LVP SWD 1
Collection Date: 7/2/2019

Lab ID: 1907199-014 **Matrix:** SOIL **Received Date:** 7/3/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	200	60	mg/Kg	20	7/9/2019 4:05:30 PM	46066
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	BRM
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	7/9/2019 11:53:48 PM	46056
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	7/9/2019 11:53:48 PM	46056
Surr: DNOP	70.9	70-130	%Rec	1	7/9/2019 11:53:48 PM	46056
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/7/2019 6:02:33 PM	46032
Surr: BFB	90.5	73.8-119	%Rec	1	7/7/2019 6:02:33 PM	46032
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.025	mg/Kg	1	7/7/2019 6:02:33 PM	46032
Toluene	ND	0.049	mg/Kg	1	7/7/2019 6:02:33 PM	46032
Ethylbenzene	ND	0.049	mg/Kg	1	7/7/2019 6:02:33 PM	46032
Xylenes, Total	ND	0.099	mg/Kg	1	7/7/2019 6:02:33 PM	46032
Surr: 4-Bromofluorobenzene	94.6	80-120	%Rec	1	7/7/2019 6:02:33 PM	46032

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/11/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: LVP SWD 1

Collection Date: 7/2/2019

Lab ID: 1907199-015 **Matrix:** SOIL **Received Date:** 7/3/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	MRA
Chloride	210	60	mg/Kg	20	7/9/2019 4:17:55 PM	46066
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst	BRM
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	7/10/2019 12:18:48 AM	46056
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	7/10/2019 12:18:48 AM	46056
Surr: DNOP	74.3	70-130	%Rec	1	7/10/2019 12:18:48 AM	46056
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	7/7/2019 6:25:59 PM	46032
Surr: BFB	91.7	73.8-119	%Rec	1	7/7/2019 6:25:59 PM	46032
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.025	mg/Kg	1	7/7/2019 6:25:59 PM	46032
Toluene	ND	0.050	mg/Kg	1	7/7/2019 6:25:59 PM	46032
Ethylbenzene	ND	0.050	mg/Kg	1	7/7/2019 6:25:59 PM	46032
Xylenes, Total	ND	0.099	mg/Kg	1	7/7/2019 6:25:59 PM	46032
Surr: 4-Bromofluorobenzene	95.7	80-120	%Rec	1	7/7/2019 6:25:59 PM	46032

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/11/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SW31
Project: LVP SWD 1
Collection Date: 7/2/2019

Lab ID: 1907199-016 **Matrix:** SOIL **Received Date:** 7/3/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	180	60		mg/Kg	20	7/9/2019 4:30:20 PM	46066
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	BRM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/10/2019 12:43:32 AM	46056
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/10/2019 12:43:32 AM	46056
Surr: DNOP	65.3	70-130	S	%Rec	1	7/10/2019 12:43:32 AM	46056
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/7/2019 6:49:25 PM	46032
Surr: BFB	90.2	73.8-119		%Rec	1	7/7/2019 6:49:25 PM	46032
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.025		mg/Kg	1	7/7/2019 6:49:25 PM	46032
Toluene	ND	0.049		mg/Kg	1	7/7/2019 6:49:25 PM	46032
Ethylbenzene	ND	0.049		mg/Kg	1	7/7/2019 6:49:25 PM	46032
Xylenes, Total	ND	0.099		mg/Kg	1	7/7/2019 6:49:25 PM	46032
Surr: 4-Bromofluorobenzene	94.5	80-120		%Rec	1	7/7/2019 6:49:25 PM	46032

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/11/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SW32
Project: LVP SWD 1
Collection Date: 7/2/2019

Lab ID: 1907199-017 **Matrix:** SOIL **Received Date:** 7/3/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	MRA
Chloride	120	60	mg/Kg	20	7/9/2019 4:42:44 PM	46066
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	BRM
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	7/10/2019 1:08:24 AM	46056
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	7/10/2019 1:08:24 AM	46056
Surr: DNOP	74.1	70-130	%Rec	1	7/10/2019 1:08:24 AM	46056
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	7/7/2019 7:12:49 PM	46032
Surr: BFB	89.7	73.8-119	%Rec	1	7/7/2019 7:12:49 PM	46032
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.025	mg/Kg	1	7/7/2019 7:12:49 PM	46032
Toluene	ND	0.050	mg/Kg	1	7/7/2019 7:12:49 PM	46032
Ethylbenzene	ND	0.050	mg/Kg	1	7/7/2019 7:12:49 PM	46032
Xylenes, Total	ND	0.10	mg/Kg	1	7/7/2019 7:12:49 PM	46032
Surr: 4-Bromofluorobenzene	93.9	80-120	%Rec	1	7/7/2019 7:12:49 PM	46032

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

eporting Limit Page 17 of 24

Date Reported: 7/11/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SW33
Project: LVP SWD 1
Collection Date: 7/2/2019

Lab ID: 1907199-018 **Matrix:** SOIL **Received Date:** 7/3/2019 8:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	MRA
Chloride	240	60	mg/Kg	20	7/9/2019 4:55:09 PM	46066
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	BRM
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	7/10/2019 1:33:11 AM	46056
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	7/10/2019 1:33:11 AM	46056
Surr: DNOP	70.8	70-130	%Rec	1	7/10/2019 1:33:11 AM	46056
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/7/2019 7:36:12 PM	46032
Surr: BFB	89.3	73.8-119	%Rec	1	7/7/2019 7:36:12 PM	46032
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.024	mg/Kg	1	7/7/2019 7:36:12 PM	46032
Toluene	ND	0.049	mg/Kg	1	7/7/2019 7:36:12 PM	46032
Ethylbenzene	ND	0.049	mg/Kg	1	7/7/2019 7:36:12 PM	46032
Xylenes, Total	ND	0.098	mg/Kg	1	7/7/2019 7:36:12 PM	46032
Surr: 4-Bromofluorobenzene	93.1	80-120	%Rec	1	7/7/2019 7:36:12 PM	46032

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/11/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SW35
Project: LVP SWD 1
Collection Date: 7/2/2019

Lab ID: 1907199-019 **Matrix:** SOIL **Received Date:** 7/3/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	160	60		mg/Kg	20	7/9/2019 8:01:15 PM	46086
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS					Analyst	BRM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/10/2019 1:58:10 AM	46056
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/10/2019 1:58:10 AM	46056
Surr: DNOP	62.5	70-130	S	%Rec	1	7/10/2019 1:58:10 AM	46056
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/7/2019 8:23:04 PM	46032
Surr: BFB	88.2	73.8-119		%Rec	1	7/7/2019 8:23:04 PM	46032
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.025		mg/Kg	1	7/7/2019 8:23:04 PM	46032
Toluene	ND	0.050		mg/Kg	1	7/7/2019 8:23:04 PM	46032
Ethylbenzene	ND	0.050		mg/Kg	1	7/7/2019 8:23:04 PM	46032
Xylenes, Total	ND	0.10		mg/Kg	1	7/7/2019 8:23:04 PM	46032
Surr: 4-Bromofluorobenzene	92.5	80-120		%Rec	1	7/7/2019 8:23:04 PM	46032

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Date Reported: 7/11/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy
Client Sample ID: SW36
Project: LVP SWD 1
Collection Date: 7/2/2019

Lab ID: 1907199-020 **Matrix:** SOIL **Received Date:** 7/3/2019 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	140	60		mg/Kg	20	7/9/2019 8:38:28 PM	46086
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	BRM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/10/2019 2:22:54 AM	46056
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/10/2019 2:22:54 AM	46056
Surr: DNOP	53.8	70-130	S	%Rec	1	7/10/2019 2:22:54 AM	46056
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/7/2019 8:46:34 PM	46032
Surr: BFB	87.8	73.8-119		%Rec	1	7/7/2019 8:46:34 PM	46032
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.025		mg/Kg	1	7/7/2019 8:46:34 PM	46032
Toluene	ND	0.050		mg/Kg	1	7/7/2019 8:46:34 PM	46032
Ethylbenzene	ND	0.050		mg/Kg	1	7/7/2019 8:46:34 PM	46032
Xylenes, Total	ND	0.10		mg/Kg	1	7/7/2019 8:46:34 PM	46032
Surr: 4-Bromofluorobenzene	91.6	80-120		%Rec	1	7/7/2019 8:46:34 PM	46032

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1907199**

11-Jul-19

Client: WPX Energy
Project: LVP SWD 1

Sample ID: MB-46066 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 46066 RunNo: 61239

Prep Date: 7/9/2019 Analysis Date: 7/9/2019 SeqNo: 2076918 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride ND 1.5

Sample ID: LCS-46066 SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 46066 RunNo: 61239

Prep Date: **7/9/2019** Analysis Date: **7/9/2019** SeqNo: **2076919** Units: **mg/Kg**

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride 14 1.5 15.00 0 93.7 90 110

Sample ID: MB-46086 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 46086 RunNo: 61239

Prep Date: 7/9/2019 Analysis Date: 7/9/2019 SeqNo: 2078063 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride ND 1.5

Sample ID: LCS-46086 SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 46086 RunNo: 61239

Prep Date: 7/9/2019 Analysis Date: 7/9/2019 SeqNo: 2078064 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride 14 1.5 15.00 0 94.3 90 110

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1907199** *11-Jul-19*

Client: WPX Energy Project: LVP SWD 1

Sample ID: 1907199-001AMS	SampT	SampType: MS TestCode: EPA Method 8						esel Range	e Organics		
Client ID: SP405	Batch	ID: 46	056	F	RunNo: 6	1237					
Prep Date: 7/8/2019	Analysis D	ate: 7/	9/2019	S	SeqNo: 20	077192	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	30	9.7	48.64	0	62.2	57	142				
Surr: DNOP	2.3		4.864		47.7	70	130			S	

Sample ID: 1907199-001AM	SampT	ype: MS	SD	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: SP405	Batch	ID: 46	056	F	RunNo: 6	1237				
Prep Date: 7/8/2019	Analysis D	ate: 7/	9/2019	S	SeqNo: 2	077193	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	9.8	49.07	0	97.7	57	142	45.2	20	R
Surr: DNOP	4.5		4.907		91.4	70	130	0	0	

Sample ID: LCS-46056	SampT	ype: LC	S	Tes	tCode: EI	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: LCSS	Batch	1D: 46 0	056	R	RunNo: 6	1237				
Prep Date: 7/8/2019	Analysis D	ate: 7/	9/2019	S	SeqNo: 2	077221	Units: mg/K	ίg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	100	63.9	124			
Surr: DNOP	4.6		5.000		91.5	70	130			

Sample ID: MB-46056	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID: PBS	Batch	n ID: 46	056	F	RunNo: 6	1237				
Prep Date: 7/8/2019	Analysis D	ate: 7/	9/2019	5	SeqNo: 2	077222	Units: mg/K	(g		
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	9.2		10.00		92.1	70	130			

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: 1907199

11-Jul-19

Client: WPX Energy **Project:** LVP SWD 1

Sample ID: MB-46032 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 46032 RunNo: 61189

Prep Date: 7/6/2019 Analysis Date: 7/7/2019 SeqNo: 2074004 Units: mg/Kg

SPK value SPK Ref Val %REC %RPD **RPDLimit** Analyte Result PQL LowLimit HighLimit Qual

Gasoline Range Organics (GRO) NΩ 5.0

Surr: BFB 940 1000 94.1 73.8 119

Sample ID: LCS-46032 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 46032 RunNo: 61189

Prep Date: 7/6/2019 Analysis Date: 7/7/2019 SeqNo: 2074005 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 5.0 25.00 O 89.0 80.1 123 Surr: BFB 1000 1000 102 73.8 119

Sample ID: 1907199-001AMS SampType: MS TestCode: EPA Method 8015D: Gasoline Range

Client ID: **SP405** Batch ID: 46032 RunNo: 61189

Prep Date: 7/6/2019 Analysis Date: 7/7/2019 SeqNo: 2074007 Units: mg/Kg

Result SPK value SPK Ref Val %REC %RPD **RPDLimit** Analyte PQL LowLimit HighLimit Qual Gasoline Range Organics (GRO) 25 5.0 24.90 0 100 69.1 142 Surr: BFB 1100 996.0 73.8 114 119

Sample ID: 1907199-001AMSD SampType: MSD TestCode: EPA Method 8015D: Gasoline Range

Client ID: SP405 Batch ID: 46032 RunNo: 61189

Prep Date: 7/6/2019 Analysis Date: 7/7/2019 SeqNo: 2074008 Units: mg/Kg Result SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** PQL LowLimit Qual Gasoline Range Organics (GRO) 23 4.9 24.51 95.2 69.1 142 6.66 20 Surr: BFB 1000 980.4 104 73.8 119 0 0

Qualifiers:

Value exceeds Maximum Contaminant Level

D Sample Diluted Due to Matrix

Holding times for preparation or analysis exceeded Н

Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix

Analyte detected in the associated Method Blank

Value above quantitation range

Analyte detected below quantitation limits

Sample pH Not In Range

RL Reporting Limit Page 23 of 24

Hall Environmental Analysis Laboratory, Inc.

WO#: **1907199**

11-Jul-19

Client: WPX Energy
Project: LVP SWD 1

Sample ID: MB-46032 SampType: MBLK TestCode: EPA Method 8021B: Volatiles

Client ID: PBS Batch ID: 46032 RunNo: 61189

Prep Date: 7/6/2019 Analysis Date: 7/7/2019 SeqNo: 2074034 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

 Toluene
 ND
 0.050

 Ethylbenzene
 ND
 0.050

 Xylenes, Total
 ND
 0.10

 Surr: 4-Bromofluorobenzene
 0.99
 1.000
 98.8
 80
 120

Sample ID: LCS-46032 SampType: LCS TestCode: EPA Method 8021B: Volatiles

Client ID: LCSS Batch ID: 46032 RunNo: 61189

Prep Date: 7/6/2019 Analysis Date: 7/7/2019 SeqNo: 2074035 Units: mg/Kg PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 1.000 97.5 0.98 0.025 n 80 120 Benzene Toluene 1.0 0.050 1.000 0 102 80 120 0 104 80 Ethylbenzene 0.050 1.000 120 1.0 0 104 80 120 Xylenes, Total 3.1 0.10 3.000 Surr: 4-Bromofluorobenzene 1.0 1.000 102 80 120

Sample ID: 1907199-002AMS SampType: MS TestCode: EPA Method 8021B: Volatiles

Client ID: **SP409** Batch ID: **46032** RunNo: **61189**

Prep Date: 7/6/2019	Analysis [Date: 7/	7/2019	S	SeqNo: 2	074038	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	0.9921	0	102	63.9	127			
Toluene	1.1	0.050	0.9921	0.009744	107	69.9	131			
Ethylbenzene	1.1	0.050	0.9921	0	109	71	132			
Xylenes, Total	3.2	0.099	2.976	0	109	71.8	131			
Surr: 4-Bromofluorobenzene	0.97		0.9921		97.4	80	120			

Sample ID: 1907199-002AMSD SampType: MSD TestCode: EPA Method 8021B: Volatiles

Client ID: **SP409** Batch ID: **46032** RunNo: **61189**

Prep Date: 7/6/2019	Analysis [Date: 7/	7/2019	S	SeqNo: 20	074039	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	0.9823	0	103	63.9	127	0.0771	20	
Toluene	1.1	0.049	0.9823	0.009744	109	69.9	131	0.882	20	
Ethylbenzene	1.1	0.049	0.9823	0	112	71	132	1.77	20	
Xylenes, Total	3.3	0.098	2.947	0	111	71.8	131	0.802	20	
Surr: 4-Bromofluorobenzene	0.97		0.9823		98.7	80	120	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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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 ENE	RGY CARLS	B Work	Order Nun	nber: 1907199		RcptNo	: 1
Received By:	Leah Ba	ca	7/3/201	9 8:55:00 /	AM	Last Bac	K.	
Completed By:	Isaiah O	rtiz	7/3/201	9 3:24:15 [РМ	Lad Bac	24	
Reviewed By:	As O	7105/19						
Chain of Cus	stody							
1. Is Chain of C	Custody com	plete?			Yes 🗸	No 🗌	Not Present	
2. How was the	e sample deli	vered?			Courier			
Log In								
3. Was an atter	mpt made to	cool the samp	oles?		Yes 🗸	No 🗌	NA \square	
4. Were all sam	ples receive	d at a tempera	ture of >0° C	to 6.0°C	Yes 🗸	No 🗆	NA \square	
5. Sample(s) in	proper conta	ainer(s)?			Yes 🗸	No 🗌		
6. Sufficient san	nple volume	for indicated t	est(s)?		Yes 🗸	No 🗌		
7. Are samples	(except VOA	and ONG) pr	operly preserve	ed?	Yes 🗸	No 🗌		
8. Was preserva	ative added to	o bottles?			Yes	No 🗸	NA \square	
9. VOA vials hav					Yes	No 🗌	No VOA Vials 🗸	
10. Were any sar	mple contain	ers received b	roken?		Yes	No 🗸	# of preserved)
11. Does paperwo			1		Yes 🗸	No 🗆	bottles checked for pH:	>12 unless noted)
12. Are matrices					Yes 🗸	No 🗌	Adjusted?	12 dilless floted)
13. Is it clear wha					Yes 🗸	No 🗌		
14. Were all holdi (If no, notify c	ing times abl	e to be met?			Yes 🗸	No 🗌	Checked by:	PAD 7/5/19
Special Handl								
15. Was client no	otified of all d	iscrepancies v	with this order?	•	Yes	No 🗌	NA 🗹	
Person	Notified:			Date	: [
By Who	om:			Via:	eMail	Phone Fax	☐ In Person	
Regard	177							
Client II	nstructions:							
16. Additional re								
17. Cooler Infor			1.25.27.5	1. 200.01220.04				
Cooler No	Temp °C 2.6	Condition Good	Seal Intact Yes	Seal No	Seal Date	Signed By		
2	3.9	Good	Yes					
			pr/5/5					

Received by OCD: 3/2	27/2023	10:08:09 A	M															Pa	ge 773 of
HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109	505-345-3975 Fax 505-345-4107 Analysis Request	SMISO PO ₄ , SO ₄ (freent)	or 827(s 3, NO ₂ ,	O168 v Betall ON , (AC)V) 0928 92) 0728) ×													Date Time 7/3/4 0855
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	Project #:	Project Manager:	Sampler: On Ice:	# of Coolers:	Container Type and #	402 (1)												Received by:	Received by:
Chain-of-Custody Record t: MPX ((a/kbad)) ng Address: ひんらん		□ Level 4 (Full Validation)	☐ Az Compliance ☐ Other		Sample Name	SP40S	SPYDA	57411	SPYI6	SP 421	3P422	SP 429	SP 431	5 P 433	512 434	SP436		Clus American	Time: Relinquished by: Received by: Via: Courtu
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Chain-Client:	Phone #:	email or Fax#: QA/QC Package: □ Standard	Accreditation:	□ EDD (Type)	Date Time	7/2/204						Alexander of the Control of the Cont			The state of the s		- Ozi-		

Chair	1-of-C	ustody Record	Turn-Around Time:	Time:	Tomorphism of the control of the con		;					Recei
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			Project Name:	(***	w.halle	nvironr	www.hallenvironmental.com	, mo	
Mailing Address:	SS:	on file	7	PSWT) :	4)	4901 H	4901 Hawkins NE	- 1	Albuque	erque, N	Albuquerque, NM 87109	D: 3/.
2.5			Project #:			Tel. 50	505-345-3975		Fax	Fax 505-345-4107	5-4107	27/2
Phone #:					2 th 15 th 16 th			An	alysis l	Analysis Request	it.	023
email or Fax#:		>	Project Manager:	iger:	7				† ○	(th	A Delivery	10:
QA/QC Package:	.: :			0 . 1		MR	SW		C '7(08:0
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☐ EDD (Type)	(# of Coolers:			19)		lete				
			Cooler Temp(including CF)	(including CF):		12D		9M 8				
			Container	Preservative	HEAL No.	ХЭТ 08:НЧ Ч 180	N) 80 A sHA	CRA	€, F, E	270 (S		
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		SM37			100-							
		SW33			810-							
		SW35			610-							
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Date: Time:	Polingilia	Man Aver	Boroived Par	Vis.	Date Time							Page
0		M. Sandar							ж.".			? 774 oj
If necessa	ıry, samples su	If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories.	be subcontracted to other a	ccredited laboratorie	is. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.	possibility. Any su	b-contracte	d data wil	be clearly	notated o	n the analytical report.	782



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

July 19, 2019

Deborah Watson WPX Energy 5315 Buena Vista Drive Carlsbad, NM 88220 TEL: (505) 386-9693

FAX

RE: LVPSWD 1 OrderNo.: 1907885

Dear Deborah Watson:

Hall Environmental Analysis Laboratory received 3 sample(s) on 7/18/2019 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 #NM0901

Sincerely,

Andy Freeman

Laboratory Manager

Indes

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order: 1907885

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 7/19/2019

7/18/2019 11:11:18 AM 46249

CLIENT: WPX Energy Lab Order: 1907885

Project: LVPSWD 1

Lab ID: 1907885-001 **Collection Date:** 7/17/2019 9:00:00 AM

Client Sample ID: SP344 Matrix: SOIL

Analyses Result RL Qual Units DF Date Analyzed Batch ID

 EPA METHOD 300.0: ANIONS
 Analyst: smb

 Chloride
 160
 60
 mg/Kg
 20
 7/18/2019 10:46:28 AM 46249

Lab ID: 1907885-002 **Collection Date:** 7/17/2019 9:00:00 AM

Client Sample ID: SP355 Matrix: SOIL

Analyses Result RL Qual Units DF Date Analyzed Batch ID

EPA METHOD 300.0: ANIONS

Chloride

230

60

mg/Kg

20

7/18/2019 10:58:53 AM

46249

Lab ID: 1907885-003 **Collection Date:** 7/17/2019 9:00:00 AM

Client Sample ID: SW39 Matrix: SOIL

Analyses Result RL Qual Units DF Date Analyzed Batch ID

EPA METHOD 300.0: ANIONS Analyst: smb

180

60

mq/Kq

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

Qualifiers:

Chloride

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 1 of 2

Hall Environmental Analysis Laboratory, Inc.

WO#: **1907885**

19-Jul-19

Client: WPX Energy
Project: LVPSWD 1

Sample ID: MB-46249 SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 46249 RunNo: 61478

Prep Date: 7/18/2019 Analysis Date: 7/18/2019 SeqNo: 2085062 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride ND 1.5

Sample ID: LCS-46249 SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 46249 RunNo: 61478

Prep Date: 7/18/2019 Analysis Date: 7/18/2019 SeqNo: 2085063 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Chloride 14 1.5 15.00 0 94.8 90 110

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 2 of 2



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 CARLSB	Work Order Number:	1907885		RcptNo	1
Received By: Desiree Dominguez 7/	18/2019 8:40:00 AM		103		
Completed By: Desiree Dominguez 7/	18/2019 8:50:34 AM		TDS		
Reviewed By: DAD 7/18/19					
Chain of Custody					
1. Is Chain of Custody complete?		Yes 🗸	No 🗌	Not Present	
2. How was the sample delivered?		Courier			
<u>Log In</u>					
3. Was an attempt made to cool the samples?		Yes 🗸	No 🗌	NA 🗌	
4. Were all samples received at a temperature of	>0° C to 6.0°C	Yes 🗹	No 🗌	NA 🗆	
5. Sample(s) in proper container(s)?		Yes 🗸	No 🗌		
6. Sufficient sample volume for indicated test(s)?		Yes 🗸	No 🗌		
7. Are samples (except VOA and ONG) properly pro	eserved?	Yes 🗸	No 🗌		
8. Was preservative added to bottles?		Yes 🗌	No 🗸	NA 🗌	
9. VOA vials have zero headspace?		Yes 🗌	No 🗌	No VOA Vials 🗸	_
10. Were any sample containers received broken?		Yes	No 🗸	# of preserved	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗸	No 🗌	bottles checked for pH:	>12 unless noted)
12. Are matrices correctly identified on Chain of Cust	tody?	Yes 🗸	No 🗌	Adjusted?	ENH AS
13. Is it clear what analyses were requested?		Yes 🗸	No 🗌	/ -	-111/7/8/10
14. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes 🗸	No 🗆	Checked by:	INM MIXIM
Special Handling (if applicable)			•		
15. Was client notified of all discrepancies with this	order?	Yes	No 🗌	NA 🗸	
Person Notified: By Whom: Regarding:	Date: Via:] eMail [Phone Fax	☐ In Person	
Client Instructions: 16. Additional remarks:					
17. Cooler Information Cooler No Temp °C Condition Seal I	ntact Seal No Se	eal Date	Signed By		
1 3.2 Good Not Pre		ai Dale	Signed by		

Chain-of-Custody Record	Turn-Around Time:	
Client: WPK Cay Social	□ Standard X Rush	ANAI VSTS I ABODATODY 9
	.;	antal com
Mailing Address:	LAD NEW #	37109
	Project #:	5 Fax 505-345-4107
	T T	Analysis Request
email or Fax#:	Project Manager:	(Oq
QA/QC Package: □ Standard □ Level 4 (Full Validation)	Kro Rowe	
Accreditation: Az Con	Sampler: Kenin Smith	02, 1) DR(0) 02, 1
	A Yes	s/806 504; or 8; , N
ype)_	olers:	ides bod 5 brail stalg viol stalg viol stalg viol viol viol viol viol viol viol viol
	Cooler Temp(including CF): 3,3 -0,1 = 3,2%	detice lethol by 83 8 Me 8 Me 17, 18 MovOA)
Date Time Matrix Sample Name	Container Preservative HEAL No.	9081 P 9081 P 9081 P 9081 P 9081 P 9081 P 9081 P 9081 P 9081 P
1, 65 wb 6 m	3	3 3 3 3
-		FG.
1 SNN 39	-003	
Date: Time: Relinquished by: Time: Relinquished by:	7/17/19	Remarks: Report to Debycon Wintson
Date: Time: Relinquished by:	Received by Via: Date Time	ge 779 YEINS 11797
_ =		is possibility. Any sub-contracted data will be clearly notated on the analytical report.

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 Department

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

	Form C-141
	Revised August 24, 2018
5	Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: WPX Energy Permian, LLC	OGRID: 246289		
Contact Name: Deborah Watson	Contact Telephone: 575-885-7561		
Contact email: deborah.watson@wpxenergy.com	Incident: 2RP-4891		
Contact mailing address: 5315 Buena Vista Drive, Carlsbad, NM 88220			

Location of Release Source

Latitude 32.33332 Longitude -104.08521 (NAD 83 in decimal degrees to 5 decimal places)

Site Name: LVP SWD #001		Site Type: Well Pad				
Date Release Discovered: July 18, 2018		API# (if applicable) 30-015-42234				
Unit Letter Section Township Range				County		
I	04	23S	28E	Eddy	ý	

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☐ Private

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)				
Crude Oil	Volume Released (bbls)less than 1,000 bbl	Volume Recovered (bbls)		
Produced Water	Volume Released (bbls) less than 4,750 bbl	Volume Recovered (bbls) 0		
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	⊠ Yes □ No		
Condensate	Volume Released (bbls)	Volume Recovered (bbls)		
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)		
Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)		
Cause of Release				
Fire at the facility.				

Pag	e.	78	10	of	782

Incident ID		
District RP		
Facility ID		
Application ID		

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: Each of the following items must be included in the closure report.

A scaled site and sampling diagram as described in 19.1:	5.29.11 NMAC
Photographs of the remediated site prior to backfill or plust be notified 2 days prior to liner inspection)	hotos of the liner integrity if applicable (Note: appropriate OCD District office
☐ Laboratory analyses of final sampling (Note: appropriate	e ODC District office must be notified 2 days prior to final sampling)
Description of remediation activities	
and regulations all operators are required to report and/or file of may endanger public health or the environment. The acceptant should their operations have failed to adequately investigate as human health or the environment. In addition, OCD acceptant compliance with any other federal, state, or local laws and/or in the state of the state	complete to the best of my knowledge and understand that pursuant to OCD rules certain release notifications and perform corrective actions for releases which ace of a C-141 report by the OCD does not relieve the operator of liability and remediate contamination that pose a threat to groundwater, surface water, ace of a C-141 report does not relieve the operator of responsibility for regulations. The responsible party acknowledges they must substantially the conditions that existed prior to the release or their final land use in the OCD when reclamation and re-vegetation are complete.
Printed Name: Deborah Watson	Title: HSE Specialist
Signature:	Date: December 20, 2019
email: deborah.watson@wpxenergy.com	Telephone: 575-885-7561
OCD Only	
Received by:	Date:
	party of liability should their operations have failed to adequately investigate and rface water, human health, or the environment nor does not relieve the responsible s and/or regulations.
Closure Approved by: Ashley Maxwell	Date: 3/29/2023
Printed Name: Ashley Maxwell	Title: Environmental Specialist
_	

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II 811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III 1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division 1220 S. St Francis Dr. **Santa Fe, NM 87505**

CONDITIONS

Action 200976

CONDITIONS

Operator:	OGRID:
WPX Energy Permian, LLC	246289
Devon Energy - Regulatory	Action Number:
Oklahoma City, OK 73102	200976
	Action Type:
	[IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By		Condition Date
amaxwell	None	3/29/2023