



November 17, 2016

VERNON BLACK

Hungry Horse Environmental

P.O. Box 1058

Hobbs, NM 88240

RE: COTTON DRAW #182

Enclosed are the results of analyses for samples received by the laboratory on 11/15/16 9:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

 Hungry Horse Environmental  
 VERNON BLACK  
 P.O. Box 1058  
 Hobbs NM, 88240  
 Fax To: (505) 391-4585

Received:	11/15/2016	Sampling Date:	11/14/2016
Reported:	11/17/2016	Sampling Type:	Soil
Project Name:	COTTON DRAW #182	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

**Sample ID: SP 1 2' (H602556-01)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/15/2016	ND	1.82	90.8	2.00	0.868	
Toluene*	<0.050	0.050	11/15/2016	ND	1.86	92.8	2.00	0.962	
Ethylbenzene*	<0.050	0.050	11/15/2016	ND	1.80	89.8	2.00	1.43	
Total Xylenes*	<0.150	0.150	11/15/2016	ND	5.46	91.0	6.00	1.73	
Total BTEX	<0.300	0.300	11/15/2016	ND					

*Surrogate: 4-Bromofluorobenzene (PID) 113 % 73.6-140*

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>32.0</b>	16.0	11/15/2016	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/15/2016	ND	191	95.7	200	3.77	
DRO >C10-C28	<10.0	10.0	11/15/2016	ND	199	99.4	200	1.91	

*Surrogate: 1-Chlorooctane 101 % 35-147*
*Surrogate: 1-Chlorooctadecane 89.2 % 28-171*

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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 Hungry Horse Environmental  
 VERNON BLACK  
 P.O. Box 1058  
 Hobbs NM, 88240  
 Fax To: (505) 391-4585

 Received: 11/15/2016  
 Reported: 11/17/2016  
 Project Name: COTTON DRAW #182  
 Project Number: NONE GIVEN  
 Project Location: EDDY COUNTY, NM

 Sampling Date: 11/14/2016  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 2 2' (H602556-02)**

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/15/2016	ND	1.82	90.8	2.00	0.868		
Toluene*	<0.050	0.050	11/15/2016	ND	1.86	92.8	2.00	0.962		
Ethylbenzene*	<0.050	0.050	11/15/2016	ND	1.80	89.8	2.00	1.43		
Total Xylenes*	<0.150	0.150	11/15/2016	ND	5.46	91.0	6.00	1.73		
Total BTEX	<0.300	0.300	11/15/2016	ND						

Surrogate: 4-Bromofluorobenzene (PID) 114 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>208</b>	16.0	11/15/2016	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	11/15/2016	ND	191	95.7	200	3.77		
DRO >C10-C28	<10.0	10.0	11/15/2016	ND	199	99.4	200	1.91		

Surrogate: 1-Chlorooctane 97.2 % 35-147

Surrogate: 1-Chlorooctadecane 92.5 % 28-171

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\*=Accredited Analyte

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 Hungry Horse Environmental  
 VERNON BLACK  
 P.O. Box 1058  
 Hobbs NM, 88240  
 Fax To: (505) 391-4585

Received:	11/15/2016	Sampling Date:	11/14/2016
Reported:	11/17/2016	Sampling Type:	Soil
Project Name:	COTTON DRAW #182	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

**Sample ID: SP 3 2' (H602556-03)**

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/15/2016	ND	1.82	90.8	2.00	0.868		
Toluene*	<0.050	0.050	11/15/2016	ND	1.86	92.8	2.00	0.962		
Ethylbenzene*	<0.050	0.050	11/15/2016	ND	1.80	89.8	2.00	1.43		
Total Xylenes*	<0.150	0.150	11/15/2016	ND	5.46	91.0	6.00	1.73		
Total BTEX	<0.300	0.300	11/15/2016	ND						

*Surrogate: 4-Bromofluorobenzene (PID) 112 % 73.6-140*

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>304</b>	16.0	11/15/2016	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	11/15/2016	ND	191	95.7	200	3.77		
DRO >C10-C28	<10.0	10.0	11/15/2016	ND	199	99.4	200	1.91		

*Surrogate: 1-Chlorooctane 96.6 % 35-147*
*Surrogate: 1-Chlorooctadecane 92.8 % 28-171*

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 Hungry Horse Environmental  
 VERNON BLACK  
 P.O. Box 1058  
 Hobbs NM, 88240  
 Fax To: (505) 391-4585

Received:	11/15/2016	Sampling Date:	11/14/2016
Reported:	11/17/2016	Sampling Type:	Soil
Project Name:	COTTON DRAW #182	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

**Sample ID: SP 4 2' (H602556-04)**

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/16/2016	ND	2.17	109	2.00	0.665	QM-07	
Toluene*	<0.050	0.050	11/16/2016	ND	2.21	110	2.00	0.443	QM-07	
Ethylbenzene*	<0.050	0.050	11/16/2016	ND	2.15	108	2.00	0.430	QM-07	
Total Xylenes*	<0.150	0.150	11/16/2016	ND	6.51	108	6.00	0.339	QM-07	
Total BTEX	<0.300	0.300	11/16/2016	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>1180</b>	16.0	11/15/2016	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	11/15/2016	ND	191	95.7	200	3.77		
DRO >C10-C28	<10.0	10.0	11/15/2016	ND	199	99.4	200	1.91		

Surrogate: 1-Chlorooctane 90.8 % 35-147

Surrogate: 1-Chlorooctadecane 93.6 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

- QR-03            The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QM-07            The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- ND                Analyte NOT DETECTED at or above the reporting limit
- RPD                Relative Percent Difference
- \*\*                 Samples not received at proper temperature of 6°C or below.
- \*\*\*                Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report



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Celey D. Keene, Lab Director/Quality Manager

101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

**BILL TO**

**ANALYSIS REQUEST**

Company Name: Hungry Horse, LLC  
 Project Manager: Vernon K. Black  
 Address: PO Box 1058  
 City: Hobbs State: NM Zip: 88241  
 Phone #: 575-631-2253 Fax #: 575-391-4585  
 Project #: \_\_\_\_\_ Project Owner: Denson  
 Project Name: Cotton Draw #182  
 Project Location: Eddie County  
 Sampler Name: Vernon K. Black  
 P.O. #: \_\_\_\_\_ Company: \_\_\_\_\_  
 Attn: \_\_\_\_\_ Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Phone #: \_\_\_\_\_ Fax #: \_\_\_\_\_  
 FOR LAB USE ONLY

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	PH	VTEX	CL
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:					
<u>H1002556</u>	<u>CD&amp;R'</u>	<u>G</u>	<u>1</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>11-14</u>	<u>2:00pm</u>	<u>X</u>	<u>X</u>	<u>X</u>
	<u>SP1 CD2'</u>														
	<u>SP2 CD2'</u>														
	<u>SP3 CD2'</u>														
	<u>SP4 CD2'</u>														

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Relinquished By: \_\_\_\_\_ Date: 11-15-16  
 Relinquished By: \_\_\_\_\_ Time: 6:00pm  
 Received By: Yodi Denson  
 Received By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Phone Result:  Yes  No Add'l Phone #: \_\_\_\_\_  
 Fax Result:  Yes  No Add'l Fax #: \_\_\_\_\_  
 REMARKS: \_\_\_\_\_

Delivered By: (Circle One) UPS - Bus - Other: \_\_\_\_\_ # 75-112  
 Sample Condition:  Cool  Intact  
 Checked By: \_\_\_\_\_ (Initials) \_\_\_\_\_  
 Date: 11/15/16 Time: 6:15pm