

Remediation Summary Report

General Information

This summary report address the remediation efforts at Wishbone Operating's HH Harris #2 location located in northeastern Lea County, New Mexico. Equipment failure resulted in the unplanned release of approximately 40 bbls of water/oil.

INFORMATION ONLY

Date: 31July17

Client: Wishbone Operating

Site Name: HH Harris #2

API: 30-025-20931

Site Coordinates

Latitude: 33.2297

Longitude: -103.0658

County: Lea

State: New Mexico

Legals: UL. O, Sec. 35, T12S, R38E

Property Owner: Private

New Mexico Oil Conservation Division RP No.: 1RP-4543

Release Description and Assessment

Date of Spill: 19Dec16

Type of Spill: ☒ Oil ☒ Produced Water ☐ Condensate ☐ Other (Specify):

Cause of Spill: ☐ Equipment Failure ☐ Valve Failure ☒ Line Rupture ☐ Leaking Tank ☐ Tank Overfill

Other (Specify):

Other Contributing Factors or Comments: N/A

Quantity Spilled: 40 bbls

Quantity Recovered: 20 bbls

Total Released: 20 bbls

Method of Recovery: ☒ Vacuum Truck ☐ Other (Specify):

New Mexico Oil Conservation Division Notified: ☒ Yes ☐ No

C-141 Completed and Submitted: ☒ Yes ☐ No ☐ Not Required

Spill Area Impacted: ☐ Inside Firewall ☒ On Production Pad ☒ In Pasture ☐ In Cultivated Land


Other (Specify):

Other Comments: N/A

Remediation Activity Summary

Remedial remediation upon discovery of the release was conducted by a vacuum truck and a third party contractor with a backhoe and consisted of removing all free standing fluid and excavation and stockpiling the heavily saturated soil. Upon completion of initial remediation efforts, focus was placed on the final excavation and sampling for closure approval. Most work was conducted on the east and west boundaries of the impacted site with extensive soil sampling of the impacted area. Confirmation sampling of east and west side walls and bottom hole samples confirm the impacted area is remediated. Further confirmation sampling of the excavated areas was conducted at 7' and 12' BGS with lab results indicating not further downward migration of contaminants had occurred.

Request approval to close and backfill.


Vernon K. Black, Hungry Horse, LLC

Analytical Summary

Operator: Wishbone Operating

Location: HH Harris #2

Summary of Remediation Sampling Analytical Results as Parts Per Million (PPM)

Lab ID #701841

Chlorides

Sample Point	Depth	LAB
West Side Wall		16 ppm
West Side Bottom Hole	6'	16 ppm

West Side

side wall
+
Bottom Hole

Sample Date 14 Jul 17

July 24, 2017

VERNON BLACK

Hungry Horse Environmental

P.O. Box 1058

Hobbs, NM 88240

RE: H-H HARRIS

Enclosed are the results of analyses for samples received by the laboratory on 07/17/17 8:05.

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.

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,



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: 07/17/2017
 Reported: 07/24/2017
 Project Name: H-H HARRIS
 Project Number: WESTSIDE
 Project Location: *West* WISHBONE OPER.

 Sampling Date: 07/14/2017
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: SIDE WALL (H701841-01)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	07/17/2017	ND	432	108	400	0.00	

Sample ID: BOTTOMHOLE (H701841-02)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	07/17/2017	ND	432	108	400	0.00	

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

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

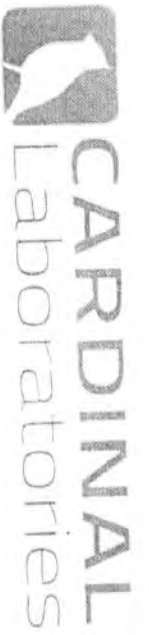
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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

BILL TO

ANALYSIS REQUEST

Company Name: Hungry Horse, LLC		P.O. #:	
Project Manager: Vernon K. Black		Company:	
Address: P.O. Box 1058		Attn:	
City: Hobbs		Address:	
Phone #: 575-393-3381		City:	
State: NM Zip: 88241		State:	
Fax #: 575-391-4585		Phone #:	
Project Owner: Wishbone		Zip:	
Project #: 144 Harris		Fax #:	
Project Location:		PRESERV	
Sampler Name: Alberto Baraza		SAMPLING	
Lab I.D. H701841	Sample I.D. (westside)	DATE TIME	
1 Side wall		7-14-17 9:00	
2 Bottom Hole		7-14-17 10:00	
(G)RAB OR (C)OMP		1	
# CONTAINERS		1	
GROUNDWATER			
WASTEWATER			
SOIL			
OIL			
SLUDGE			
OTHER			
ACID/BASE			
ICE / COOL			
OTHER			
REMARKS		1	

Relinquished By: **[Signature]** Date: **7-17-17** Received By: **[Signature]**

Delivered By: **[Signature]** Date: **7-17-17** Received By: **[Signature]**

Sampler - UPS - Bus - Other: **Corrected 14:05** **7-19-17**

* Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

Analytical Summary

Operator: Wishbone Operating

Location: HH Harris #2

Summary of Remediation Sampling Analytical Results as Parts Per Million (PPM)

Lab ID #701551

BTEX

Sample Point	Depth	LAB
East Side	7' BGS	ND
	12' BGS	ND
West Side	7' BGS	ND
	12' BGS	ND
West Side Bottom Hole	4'	ND

Chlorides

Sample Point	Depth	LAB
East Side	7' BGS	256 ppm
	12' BGS	304 ppm
West Side	7' BGS	305 ppm
	12' BGS	560 ppm
West Side Bottom Hole	4'	1200 ppm

TPH

Sample Point	Depth	LAB
East Side	7' BGS	ND
	12' BGS	ND
West Side	7' BGS	ND
	12' BGS	ND
West Side Bottom Hole	4' BGS	ND

Confirmation
Samples

Sample Date 13 Jun 17



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

June 19, 2017

VERNON BLACK

Hungry Horse Environmental

P.O. Box 1058

Hobbs, NM 88240

RE: H-H HARRIS

Enclosed are the results of analyses for samples received by the laboratory on 06/13/17 16:10.

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.

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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,

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: 06/13/2017
Reported: 06/19/2017
Project Name: H-H HARRIS
Project Number: NONE GIVEN
Project Location: WISHBONE OPER.

Sampling Date: 06/13/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: EAST 7' (H701551-01)

BTX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/14/2017	ND	2.38	119	2.00	0.885	
Toluene*	<0.050	0.050	06/14/2017	ND	2.32	116	2.00	0.422	
Ethylbenzene*	<0.050	0.050	06/14/2017	ND	2.38	119	2.00	1.03	
Total Xylenes*	<0.150	0.150	06/14/2017	ND	6.39	107	6.00	1.37	
Total BTX	<0.300	0.300	06/14/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 98.4 % 72-148

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	06/14/2017	ND	432	108	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	06/14/2017	ND	187	93.6	200	0.233	
DRO >C10-C28	<10.0	10.0	06/14/2017	ND	191	95.5	200	3.48	

Surrogate: 1-Chlorooctane 88.6 % 28.3-164

Surrogate: 1-Chlorooctadecane 72.9 % 34.7-157

Cardinal Laboratories

*=Accredited Analyte

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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: 06/13/2017
Reported: 06/19/2017
Project Name: H-H HARRIS
Project Number: NONE GIVEN
Project Location: WISHBONE OPER.

Sampling Date: 06/13/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: EAST 12' (H701551-02)
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	06/14/2017	ND	2.38	119	2.00	0.885	
Toluene*	<0.050	0.050	06/14/2017	ND	2.32	116	2.00	0.422	
Ethylbenzene*	<0.050	0.050	06/14/2017	ND	2.38	119	2.00	1.03	
Total Xylenes*	<0.150	0.150	06/14/2017	ND	6.39	107	6.00	1.37	
Total BTEX	<0.300	0.300	06/14/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 98.6 % 72-148

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	06/14/2017	ND	432	108	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	06/14/2017	ND	187	93.6	200	0.233	
DRO >C10-C28	<10.0	10.0	06/14/2017	ND	191	95.5	200	3.48	

Surrogate: 1-Chlorooctane 96.0 % 28.3-164

Surrogate: 1-Chlorooctadecane 80.7 % 34.7-157

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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: 06/13/2017
Reported: 06/19/2017
Project Name: H-H HARRIS
Project Number: NONE GIVEN
Project Location: WISHBONE OPER.

Sampling Date: 06/13/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: WEST 7' (H701551-03)
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	06/14/2017	ND	2.38	119	2.00	0.885	
Toluene*	<0.050	0.050	06/14/2017	ND	2.32	116	2.00	0.422	
Ethylbenzene*	<0.050	0.050	06/14/2017	ND	2.38	119	2.00	1.03	
Total Xylenes*	<0.150	0.150	06/14/2017	ND	6.39	107	6.00	1.37	
Total BTEX	<0.300	0.300	06/14/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 99.8 % 72-148

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	06/14/2017	ND	432	108	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	06/14/2017	ND	187	93.6	200	0.233	
DRO >C10-C28	<10.0	10.0	06/14/2017	ND	191	95.5	200	3.48	

Surrogate: 1-Chlorooctane 91.1 % 28.3-164

Surrogate: 1-Chlorooctadecane 78.3 % 34.7-157

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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: 06/13/2017
Reported: 06/19/2017
Project Name: H-H HARRIS
Project Number: NONE GIVEN
Project Location: WISHBONE OPER.

Sampling Date: 06/13/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: WEST 12' (H701551-04)

BTX 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	06/14/2017	ND	2.38	119	2.00	0.885	
Toluene*	<0.050	0.050	06/14/2017	ND	2.32	116	2.00	0.422	
Ethylbenzene*	<0.050	0.050	06/14/2017	ND	2.38	119	2.00	1.03	
Total Xylenes*	<0.150	0.150	06/14/2017	ND	6.39	107	6.00	1.37	
Total BTX	<0.300	0.300	06/14/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 98.3 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	560	16.0	06/14/2017	ND	432	108	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	06/14/2017	ND	187	93.6	200	0.233	
DRO >C10-C28	<10.0	10.0	06/14/2017	ND	191	95.5	200	3.48	

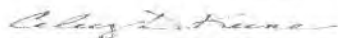
Surrogate: 1-Chlorooctane 97.6 % 28.3-164

Surrogate: 1-Chlorooctadecane 82.0 % 34.7-157

Cardinal Laboratories

*=Accredited Analyte

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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: 06/13/2017
Reported: 06/19/2017
Project Name: H-H HARRIS
Project Number: NONE GIVEN
Project Location: WISHBONE OPER.

Sampling Date: 06/13/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BOTTOM HOLE (H701551-05) *West*

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	06/14/2017	ND	2.38	119	2.00	0.885	
Toluene*	<0.050	0.050	06/14/2017	ND	2.32	116	2.00	0.422	
Ethylbenzene*	<0.050	0.050	06/14/2017	ND	2.38	119	2.00	1.03	
Total Xylenes*	<0.150	0.150	06/14/2017	ND	6.39	107	6.00	1.37	
Total BTEX	<0.300	0.300	06/14/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 98.4 % 72-148

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1200	16.0	06/14/2017	ND	432	108	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	06/14/2017	ND	187	93.6	200	0.233	
DRO >C10-C28	<10.0	10.0	06/14/2017	ND	191	95.5	200	3.48	

Surrogate: 1-Chlorooctane 90.7 % 28.3-164

Surrogate: 1-Chlorooctadecane 72.7 % 34.7-157

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

[illegible]

Analytical Summary

Operator: Wishbone Operating

Location: HH Harris #2

Summary of Remediation Sampling Analytical Results as Parts Per Million (PPM)

Lab ID #701429

Chlorides

West Wall		ND
West Bottom Hole	4' BGS	ND
East Wall		49 ppm

Wall & Bottom Hole
Samples after further
excavation of walls

Sample Date 26 May 17



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

June 02, 2017

VERNON BLACK

Hungry Horse Environmental

P.O. Box 1058

Hobbs, NM 88240

RE: H-H HARRIS

Enclosed are the results of analyses for samples received by the laboratory on 05/30/17 15:26.

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.

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,

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: 05/30/2017
 Reported: 06/02/2017
 Project Name: H-H HARRIS
 Project Number: NONE GIVEN
 Project Location: WISHBONE OPER.

 Sampling Date: 05/26/2017
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Jodi Henson

Sample ID: WEST WALL (H701429-01)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/02/2017	ND	432	108	400	0.00	

Sample ID: WEST BOTTOM HOLE (H701429-02)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/02/2017	ND	432	108	400	0.00	

Sample ID: EAST WALL (H701429-03)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	06/02/2017	ND	432	108	400	0.00	

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

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

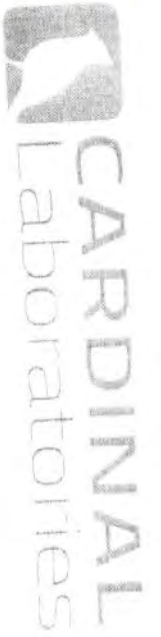
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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

BILL TO

ANALYSIS REQUEST

Company Name:

Project Manager:

Address:

City:

Phone #:

Project #:

Project Name:

Project Location:

Sampler Name:

State: Zip:

Fax #:

Project Owner:

P.O. #:

Company:

Attn:

Address:

City:

State:

Phone #:

Fax #:

MATRIX

PRESERV

SAMPLING

Lab I.D.

Sample I.D.

H701429

West Wall
West Bathroom
East Wall

(GIRAS ON 100MP)

CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

SLURRY

OTHER

ACID/BASE

ICE COOL

OTHER

DATE TIME

5-26-17 12:30

1:00

Relinquished By:

Relinquished By:

Date: 5-30-17

Time: 3:20-17

Date:

Time:

Phone Result:

REMARKS:

Yes

No

Adm Phone #:

Adm Fax #:

Delivered By: (Circle One)

UPS - Bus - Other

#75

15:30

5-26-17

1:00

5-26-17

12:30

1:00

5-26-17

12:30

1:00

5-26-17

12:30

Please Fax with the following to 505-393-2476

Analytical Summary

Operator: Wishbone Operating

Location: HH Harris #2

Summary of Remediation Sampling Analytical Results as Parts Per Million (PPM)

Lab ID #701323

Chlorides

Sample Point	Depth	LAB
West Side	12' BGS	96 ppm
East Side	12' BGS	48 ppm
West Wall		2530 ppm
East Wall		320 ppm
West Side	4'	2080 ppm
East Side	4	32 ppm

Sample Date 17 May 17

May 18, 2017

VERNON BLACK

Hungry Horse Environmental

P.O. Box 1058

Hobbs, NM 88240

RE: H-H HARRIS #2

Enclosed are the results of analyses for samples received by the laboratory on 05/17/17 16:20.

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.

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,



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: 05/17/2017
 Reported: 05/18/2017
 Project Name: H-H HARRIS #2
 Project Number: NONE GIVEN
 Project Location: WISHBONE OPER.

 Sampling Date: 05/17/2017
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: 12 BGS WESTSIDE (H701323-01)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	05/18/2017	ND	448	112	400	3.64	

Sample ID: 12 BGS EASTSIDE (H701323-02)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	05/18/2017	ND	448	112	400	3.64	

Sample ID: EAST WALL 5' OUT 2ND (H701323-03)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	05/18/2017	ND	448	112	400	3.64	

Sample ID: WEST WALL 5' OUT 4TH (H701323-04)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2560	16.0	05/18/2017	ND	448	112	400	3.64	

Cardinal Laboratories

*=Accredited Analyte

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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: 05/17/2017
 Reported: 05/18/2017
 Project Name: H-H HARRIS #2
 Project Number: NONE GIVEN
 Project Location: WISHBONE OPER.

 Sampling Date: 05/17/2017
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: WEST BOTTOM HOLE (H701323-05)

Chloride, SM4500Cl-B			mg/kg							Analyzed By: AC	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Chloride	2080	16.0	05/18/2017	ND	448	112	400	3.64			

Sample ID: EAST BOTTOM HOLE (H701323-06)

Chloride, SM4500Cl-B			mg/kg							Analyzed By: AC	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Chloride	32.0	16.0	05/18/2017	ND	448	112	400	3.64			

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

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

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: **Hungry Horse, LLC**

Project Manager: **Bernon K. Black**

Address: **P.O. Box 1058**

City: **Hobbs**

State: **NM** Zip: **88241**

Phone #: **575-393-3881** Fax #: **575-591-4585**

Project #: **Project Owner: Ashbone**

Project Name: **H. H Harris lease 2**

Project Location: **16H**

Sampler Name: **Alberto Baraza**

BILL TO

ANALYSIS REQUEST

P.O. #:

Company:

Attn:

Address:

City:

State:

Phone #:

Fax #:

Zip:

Matrix:

Groundwater

Wastewater

Soil

Oil

Sludge

Other

Acid/Base

Ice/Cool

Other

DATE

TIME

DATE

TIME

Lab I.D.

Sample I.D.

#701323

1 12 Bgs West side

2 12 Bgs East side

3 East wall side East

4 West wall side 4th

5 West Bottom hole

6 East Bottom hole

(G)RAB OR (C)OMP

CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER

ACID/BASE

ICE / COOL

OTHER

DATE

TIME

DATE

TIME

DATE

TIME

DATE

TIME

DATE

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DATE

TIME

Relinquished By:

Date: **3-7-17**

Received By:

Reinforced By:

Date: **4-6-17**

Received By:

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

Phone Result:

Fax Result:

Yes

No

Add'l Phone #:

Add'l Fax #:

REMARKS:

Yes

No

Hold also

for future

tests

4-6-17

4-6-17

4-6-17

4-6-17

4-6-17

4-6-17

4-6-17

4-6-17

4-6-17

Analytical Summary

Operator: Wishbone Texas Operating, LLC

Location: H H Harris #2 Confirmation Sampling 24-Apr-17

Summary of Remediation Sampling Analytical Results as Parts Per Million (PPM)

Lab ID# H701083

BTEX

Sample Point	Depth	LAB
SP #1	12'	ND
SP #2	12'	ND
SP #3	12'	ND
North Wall	2'	ND
South Wall	2'	ND
East Wall	2'	ND
West Wall	2'	ND
BackGround	6"	ND

Chlorides

Sample Point	Depth	LAB
SP #1	12'	208 ppm
SP #2	12'	240 ppm
SP #3	12'	160ppm
North Wall	2'	144 ppm
South Wall	2'	240 ppm
East Wall	2'	2440 ppm
West Wall	2'	29600 ppm
BackGround	6"	32 ppm

TPH

Sample Point	Depth	LAB
SP #1	12'	ND
SP #2	12'	ND
SP #3	12'	154 ppm
North Wall	2'	412 ppm
South Wall	2'	755 ppm
East Wall	2'	422ppm
West wall	2'	230 ppm
BackGround	6"	ND

#1 Sampling After
initial EXCAVATION

Sample Date 24Apr17



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

May 01, 2017

VERNON BLACK

Hungry Horse Environmental

P.O. Box 1058

Hobbs, NM 88240

RE: H-H HARRIS #2

Enclosed are the results of analyses for samples received by the laboratory on 04/24/17 12:05.

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.

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

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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,

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: 04/24/2017
 Reported: 05/01/2017
 Project Name: H-H HARRIS #2
 Project Number: NONE GIVEN
 Project Location: WISHBONE OPER.

 Sampling Date: 04/24/2017
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: SP1 (H701083-01)

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	04/27/2017	ND	2.08	104	2.00	0.841	
Toluene*	<0.050	0.050	04/27/2017	ND	1.95	97.6	2.00	0.586	
Ethylbenzene*	<0.050	0.050	04/27/2017	ND	1.96	98.2	2.00	1.15	
Total Xylenes*	<0.150	0.150	04/27/2017	ND	5.57	92.9	6.00	1.03	
Total BTEX	<0.300	0.300	04/27/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 101 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	04/27/2017	ND	416	104	400	3.77	

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	04/25/2017	ND	201	101	200	6.71		
DRO >C10-C28	<10.0	10.0	04/25/2017	ND	210	105	200	4.91		

Surrogate: 1-Chlorooctane 96.4 % 28.3-164

Surrogate: 1-Chlorooctadecane 91.4 % 34.7-157

Cardinal Laboratories

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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: 04/24/2017
 Reported: 05/01/2017
 Project Name: H-H HARRIS #2
 Project Number: NONE GIVEN
 Project Location: WISHBONE OPER,

 Sampling Date: 04/24/2017
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: SP2 (H701083-02)

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	04/27/2017	ND	2.08	104	2.00	0.841	
Toluene*	<0.050	0.050	04/27/2017	ND	1.95	97.6	2.00	0.586	
Ethylbenzene*	<0.050	0.050	04/27/2017	ND	1.96	98.2	2.00	1.15	
Total Xylenes*	<0.150	0.150	04/27/2017	ND	5.57	92.9	6.00	1.03	
Total BTEx	<0.300	0.300	04/27/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 101 % 72-148

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	04/27/2017	ND	416	104	400	3.77	

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	04/25/2017	ND	211	105	200	3.68	
DRO >C10-C28	<10.0	10.0	04/25/2017	ND	215	107	200	6.38	

Surrogate: 1-Chlorooctane 90.1 % 28.3-164

Surrogate: 1-Chlorooctadecane 89.9 % 34.7-157

Cardinal Laboratories

*=Accredited Analyte

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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: 04/24/2017
 Reported: 05/01/2017
 Project Name: H-H HARRIS #2
 Project Number: NONE GIVEN
 Project Location: WISHBONE OPER.

 Sampling Date: 04/24/2017
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: SP3 (H701083-03)

BTX 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	04/27/2017	ND	2.08	104	2.00	0.841	
Toluene*	<0.050	0.050	04/27/2017	ND	1.95	97.6	2.00	0.586	
Ethylbenzene*	<0.050	0.050	04/27/2017	ND	1.96	98.2	2.00	1.15	
Total Xylenes*	<0.150	0.150	04/27/2017	ND	5.57	92.9	6.00	1.03	
Total BTX	<0.300	0.300	04/27/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 105 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	04/27/2017	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	04/25/2017	ND	211	105	200	3.68	
DRO >C10-C28	154	50.0	04/25/2017	ND	215	107	200	6.38	

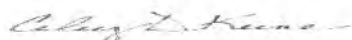
Surrogate: 1-Chlorooctane 89.5 % 28.3-164

Surrogate: 1-Chlorooctadecane 94.6 % 34.7-157

Cardinal Laboratories

*=Accredited Analyte

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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: 04/24/2017
Reported: 05/01/2017
Project Name: H-H HARRIS #2
Project Number: NONE GIVEN
Project Location: WISHBONE OPER.

Sampling Date: 04/24/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: NORTH (H701083-04)

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	04/27/2017	ND	2.08	104	2.00	0.841	
Toluene*	<0.050	0.050	04/27/2017	ND	1.95	97.6	2.00	0.586	
Ethylbenzene*	<0.050	0.050	04/27/2017	ND	1.96	98.2	2.00	1.15	
Total Xylenes*	<0.150	0.150	04/27/2017	ND	5.57	92.9	6.00	1.03	
Total BTEX	<0.300	0.300	04/27/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 101 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	04/27/2017	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	04/25/2017	ND	211	105	200	3.68	
DRO >C10-C28	412	50.0	04/25/2017	ND	215	107	200	6.38	

Surrogate: 1-Chlorooctane 81.5 % 28.3-164

Surrogate: 1-Chlorooctadecane 104 % 34.7-157

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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: 04/24/2017
Reported: 05/01/2017
Project Name: H-H HARRIS #2
Project Number: NONE GIVEN
Project Location: WISHBONE OPER.

Sampling Date: 04/24/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: SOUTH (H701083-05)

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	04/27/2017	ND	2.08	104	2.00	0.841	
Toluene*	<0.050	0.050	04/27/2017	ND	1.95	97.6	2.00	0.586	
Ethylbenzene*	<0.050	0.050	04/27/2017	ND	1.96	98.2	2.00	1.15	
Total Xylenes*	<0.150	0.150	04/27/2017	ND	5.57	92.9	6.00	1.03	
Total BTEx	<0.300	0.300	04/27/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 99.4 % 72-148

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	04/27/2017	ND	416	104	400	3.77	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	04/25/2017	ND	211	105	200	3.68	
DRO >C10-C28	755	50.0	04/25/2017	ND	215	107	200	6.38	

Surrogate: 1-Chlorooctane 85.5 % 28.3-164

Surrogate: 1-Chlorooctadecane 106 % 34.7-157

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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: 04/24/2017
 Reported: 05/01/2017
 Project Name: H-H HARRIS #2
 Project Number: NONE GIVEN
 Project Location: WISHBONE OPER.

 Sampling Date: 04/24/2017
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: EAST (H701083-06)

BTX 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	04/27/2017	ND	2.08	104	2.00	0.841		
Toluene*	<0.050	0.050	04/27/2017	ND	1.95	97.6	2.00	0.586		
Ethylbenzene*	<0.050	0.050	04/27/2017	ND	1.96	98.2	2.00	1.15		
Total Xylenes*	<0.150	0.150	04/27/2017	ND	5.57	92.9	6.00	1.03		
Total BTX	<0.300	0.300	04/27/2017	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 96.5 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2440	16.0	04/27/2017	ND	432	108	400	0.00	QM-07	

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<50.0	50.0	04/25/2017	ND	211	105	200	3.68		
DRO >C10-C28	422	50.0	04/25/2017	ND	215	107	200	6.38		

Surrogate: 1-Chlorooctane 75.2 % 28.3-164

Surrogate: 1-Chlorooctadecane 92.9 % 34.7-157

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Analytical Results For:

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

 Received: 04/24/2017
 Reported: 05/01/2017
 Project Name: H-H HARRIS #2
 Project Number: NONE GIVEN
 Project Location: WISHBONE OPER.

 Sampling Date: 04/24/2017
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: WEST (H701083-07)

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	04/27/2017	ND	2.08	104	2.00	0.841	
Toluene*	<0.050	0.050	04/27/2017	ND	1.95	97.6	2.00	0.586	
Ethylbenzene*	<0.050	0.050	04/27/2017	ND	1.96	98.2	2.00	1.15	
Total Xylenes*	<0.150	0.150	04/27/2017	ND	5.57	92.9	6.00	1.03	
Total BTEX	<0.300	0.300	04/27/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 108 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	29600	16.0	04/27/2017	ND	432	108	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	04/25/2017	ND	211	105	200	3.68	
DRO >C10-C28	230	10.0	04/25/2017	ND	215	107	200	6.38	

Surrogate: 1-Chlorooctane 89.6 % 28.3-164

Surrogate: 1-Chlorooctadecane 95.0 % 34.7-157

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Analytical Results For:

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

Received: 04/24/2017
Reported: 05/01/2017
Project Name: H-H HARRIS #2
Project Number: NONE GIVEN
Project Location: WISHBONE OPER.

Sampling Date: 04/24/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: PASTURE (H701083-08)

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	04/27/2017	ND	2.08	104	2.00	0.841	
Toluene*	<0.050	0.050	04/27/2017	ND	1.95	97.6	2.00	0.586	
Ethylbenzene*	<0.050	0.050	04/27/2017	ND	1.96	98.2	2.00	1.15	
Total Xylenes*	<0.150	0.150	04/27/2017	ND	5.57	92.9	6.00	1.03	
Total BTEx	<0.300	0.300	04/27/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 104 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	04/27/2017	ND	432	108	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	04/25/2017	ND	211	105	200	3.68	
DRO >C10-C28	<10.0	10.0	04/25/2017	ND	215	107	200	6.38	

Surrogate: 1-Chlorooctane 84.2 % 28.3-164

Surrogate: 1-Chlorooctadecane 86.6 % 34.7-157

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Notes and Definitions

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

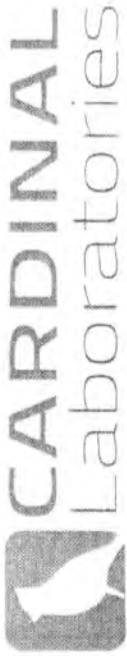
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Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO				ANALYSIS REQUEST													
P.O. #:																	
Company:																	
Attn:																	
Address:																	
City:																	
State:																	
Phone #:																	
Fax #:																	
Company Name:	Hungry Horse LLC			State:	NM			Zip:	88240								
Project Manager:	Dennis K. Albrecht			Phone #:	575 631-2253			Fax #:	575 393-2476								
Address:	PO Box 1058			Project Owner:	Wishbone												
City:	Hobbs			Project Name:	H-H Harris lease 2												
State:	NM			Project Location:	Lea County												
Zip:	88240			Sampler Name:	Dennis K. Albrecht												
Phone #:	575 631-2253			Lab I.D.	Sample I.D.												
Fax #:	575 393-2476			H701083	H-H Harris												
				1	SP1												
				2	SP2												
				3	SP3												
				4	North												
				5	South												
				6	East												
				7	West												
				8	Pasture												

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Relinquished By:	Date:	Time:	Received By:	Date:	Time:	Relinquished By:	Date:	Time:	Received By:	Date:	Time:
<i>Atkins</i>	4-24-17		<i>Amara</i>	4-24-17		<i>Amara</i>	4-24-17		<i>Amara</i>	4-24-17	
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Delivered By: (Circle One)											
Sampler - UPS - Bus - Other:											
27.9%											
Brought Straight from field to Lab											