# HUNGRY HORSE, LLC

3709 S. Eunice HWY P.O. Box 1058 Hobbs, NM 88241 Office: 575-393-3386 Fax: 575-391-4585 info@hungry-horse.com DIRT WORK \* ON-SITE REMEDIATION

SOIL TESTING \* EXCAVATION \* ELECTRICAL

#### 7Mar16

To: Mike Bratcher, New Mexico Oil Conservation Division, District II

Reference: Remediation Work Plan

Operator: Devon Energy Production Company

Location: Onyx PWU 29 #3H

API: 30-015-39373

Legasl: Ul. L, Sec 29, T19S, R29E GPS: 32.63042 -104.10451

2RP-3481

#### **Site Information**

This site is located in rural Eddy County, New Mexico 1.3 miles west of the intersection of CR 235 (Curry Comb Road) and CR 210 (S. Old Loco Road) and 1.9 miles south of CR 235. The surrounding area is relatively flat with sparse vegetation. Based upon the Eddy County Depth to Groundwater Map, ground water appears to be between 50'-100'. The New Mexico Office of the State Engineer's website list no groundwater date for this section.

This release was due to a leak on the LACT unit. All fluids released remained on the caliche pad, nothing off the pad was impacted. The impacted area is approximately 25' x 35'.

# **Work Conducted to Date**

Delineation was conducted using a hand auger. Soil samples were collected from two sample points and laboratory analysis conducted for Chlorides, TPH, and BTEX. No Chlorides were detected, so they are not a contaminant of concern for this release. TPH level were elevated between the surface and 2' BGS.

#### **Remediation Proposal**

I propose to conduct the remediation by using the in-situ method. Hand tools will be used to prepare the impacted soil. Once the soil has been prepared, a solution of a 10% mixture of MicroBlaze will be liberally applied to the impacted area. Loosening of the soil will allow a complete penetration of the MicroBlaze thereby speeding the process of the hydrocarbon remediation.

The impacted area will be re-sampled 60-90 days after the MicroBlaze application to determine the effectiveness of the treatment. If lab results indicate TPH levels at or below closure limits, closure documents will be submitted. If TPH levels remain elevated, another MicoBlaze treatment will be applied and the area re-sampled.

Sincerely,

Vernon K. Black, Hungry Horse, LLC

# MM OIL CONSERVATION

ARTESIA DISTRICT

Form C-141

JAN 0 5 2016 Revised August 8, 2011

State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division Santa Fe. NM 87505

1220 South St. Francis Dr.

District I 1625 N. French Dr., Hobbs, NM 88240 District II

District III 1000 Rio Brazos Road, Aztec, NM 87410

811 S. First St., Artesia, NM 88210

Submit 1 Copy to appropriate District Office in RECEIVED

District IV 220 S. St. France	eis Dr., Santa	Fe, NM 87505				NM 8750				
			Rele	ase Notific	ation	and Co	rrective A	ction		
NABIL	101127	117				OPERAT	OR		Report	Final Report
Name of Co	mnany D	evon Energy	Producti	on Company 4	137	Contact R	udy Zuniga Prod	luction Foreman		
Address 64	88 Seven I	Rivers Hwy	Artesia, N	IM 88210	1	'elephone l	No. 575-390-54	35		
Facility Na	me Onyx F	PWU 29 #3			F	acility Typ	oe Oil			
Surface Ov				Mineral	Owner S	State	V	API No	30-015-39	9373
Suriace Ov	viiei State	g)				OF REI	LEASE			9
II-'s I atten	Section	Township	Range	Feet from the		South Line	Feet from the	East/West Line		County
Unit Letter			_			South	330	West		Eddy
L	29	19S	29E	2145						8 1
		I	atitude:	N 32'63'04.88	7	Lo	ngitude: W 104	1 10 43.09		
				NAT	TURE	OF REL	EASE			0.11.1
Type of Rel	ease Spill	Oil				Volume of	f Release 5 bbls	Volume R	Hour of D	() bbls
Source of R	elease					1.4.16 @ 8	Hour of Occurre	1.4.16 @8		iscovery
Lact Unit		C:2			-	If YES, T	o Whom?			
Was Immed	liate Notice	Given:	Yes [	No Not R	Required	OCD @ H	leather Patterson			
D. Whom?	lesse Arme	ndariz Assista	nt Produc	tion Foreman		Date and	Hour 1.5.2016 @	⊇ 1:55 pm		
Was a Wate	ercourse Re	eached?				10000 AND TO 1000	olume Impacting	g the Watercourse		
			Yes 🛭	J No		N/A				
If a Waterc	ourse was l	Impacted, De	scribe Fu	lly.*						
Leak on the	ause of Pro Lact Unit c	aused a 5 bbl	oil spill. V	ction Taken.* Vell was shut in to	o prevent	further relea	se. Still investiga	ting where the leak	started due	to the snow.
5 bbls oil w fluids remain I hereby cer regulations public healt	as released ined on the left that the all operator the environment.	information g s are required vironment. Th	South Westonmental  given above to report a e acceptar	agency will be engency will be engency will be engency will be engency and/or file certain and/or file certain and engency of a C-141 re-	i release r	he best of motifications are NMOCD:	y knowledge and and perform corre marked as "Final	understand that pursective actions for rel Report" does not rel	suant to NN eases whic ieve the op	erator of liability
or the envir	conment. In	have failed to addition, NM aws and/or reg	OCD acco	eptance of a C-14	1 report o	loes not relie	re the operator	f responsibility for c	·	
Signature:	Corina	Моуа					Signed 1	By Flile Di		-
Printed Nai	me: Corina	Moya				Approved b	y Environmental			10
Title: Field	l Admin Su	pport				Approval D	, , ,	Expiration		<u> </u>
E-mail Add	dress: corin	a.moya@dvn				Conditions Remed	of Approval: O.C. ation per O.C. T REMEDIAT	D. Rules & Gui	idel <u>jngs</u> . NO	ed 🗌
Date:	1.5.16		ne: 575.7	46.5559		LATER	THAN:	12/16	$\cap$	00 7701
Attach Ad	ditional Sh	eets If Nece	ssary					•	2	KY-5701



# New Mexico Office of the State Engineer Water Column/Average Depth to Water

No records found.

PLSS Search:

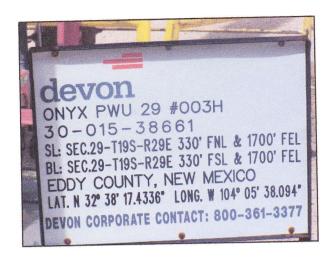
Section(s): 29

Township: 19S

Range: 29E

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data. WATER COLUMN/ AVERAGE

# **Devon Energy Production Company-Onyx PWU 29 #3H**













# Devon Energy Production Company-Onyx PWU 29 Fed #3H





February 29, 2016

VERNON BLACK Hungry Horse Environmental P.O. Box 1058 Hobbs, NM 88240

RE: ONYX PWU 29 #3

Enclosed are the results of analyses for samples received by the laboratory on 02/22/16 8:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-15-7. 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 <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accred certif.html.

Cardinal Laboratories is accreditated 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.

Celes & Keene

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



Hungry Horse Environmental VERNON BLACK P.O. Box 1058 Hobbs NM, 88240

Fax To:

(505) 391-4585

Received:

02/22/2016

Reported:

02/29/2016 ONYX PWU 29 #3

Project Name: Project Number:

NONE GIVEN

Project Location:

EDDY COUNTY, NM

Sampling Date:

02/16/2016

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Jodi Henson

# Sample ID: SP 1 SURFACE (H600396-01)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	30.3	2.00	02/24/2016	ND	1.97	98.4	2.00	5.85	
Toluene*	178	2.00	02/24/2016	ND	1.93	96.5	2.00	6.07	
Ethylbenzene*	69.5	2.00	02/24/2016	ND	1.76	88.1	2.00	5.87	
Total Xylenes*	201	6.00	02/24/2016	ND	5.37	89.5	6.00	5.48	
Total BTEX	479	12.0	02/24/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIE	105	% 73.6-14	10						
Chloride, SM4500CI-B			Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	02/23/2016	ND	400	100	400	7.69	
	mg	/ka	Analyze	ed By: MS		2			S-06
TPH 8015M  Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
	4230	100	02/23/2016	ND	193	96.4	200	1.46	
GRO C6-C10		100	02/23/2016	ND	214	107	200	13.1	
DRO >C10-C28	34200	100	02/23/2010						
Surrogate: 1-Chlorooctane	202	% 35-14	7						
Surrogate: 1-Chlorooctadecane	916	% 28-17	1						

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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:

02/22/2016

Reported:

02/29/2016

Project Name:

ONYX PWU 29 #3

Project Number: Project Location: NONE GIVEN

EDDY COUNTY, NM

Sampling Date:

02/16/2016

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: SP 1 6" (H600396-02)

STEX 8021B	mg/	/kg	Analyzed	By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
	35.2	2.00	02/24/2016	ND	1.97	98.4	2.00	5.85	
Benzene*	249	2.00	02/24/2016	ND	1.93	96.5	2.00	6.07	
Toluene*	87.2	2.00	02/24/2016	ND	1.76	88.1	2.00	5.87	
Ethylbenzene*	234	6.00	02/24/2016	ND	5.37	89.5	6.00	5.48	
Total Xylenes* Total BTEX	605	12.0	02/24/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIL	104	% 73.6-14							
Chloride, SM4500Cl-B				d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
,	208	16.0	02/23/2016	ND	400	100	400	7.69	
Chloride		ı/kg	Analyze	ed By: MS					S-06
TPH 8015M  Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
,	5180	50.0	02/23/2016	ND	193	96.4	200	1.46	
GRO C6-C10 DRO >C10-C28	8770	50.0	02/23/2016	ND	214	107	200	13.1	
Surrogate: 1-Chlorooctane	156	5% 35-14	17						
Surrogate: 1-Chlorooctadecane	189	28-17	1						

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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:

02/22/2016

Reported:

02/29/2016

Project Name: Project Number: ONYX PWU 29 #3

Project Location:

NONE GIVEN EDDY COUNTY, NM Sampling Date:

02/16/2016

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: SP 1 1' (H600396-03)

Sample 1D. 3F 1 1 (11000330 0	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
and the second second	18.1	2.00	02/24/2016	ND	1.97	98.4	2.00	5.85	
Senzene*	135	2.00	02/24/2016	ND	1.93	96.5	2.00	6.07	
Coluene*	47.9	2.00	02/24/2016	ND	1.76	88.1	2.00	5.87	
Ethylbenzene* Fotal Xylenes*	135	6.00	02/24/2016	ND	5.37	89.5	6.00	5.48	
rotal BTEX	336	12.0	02/24/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIE	102	% 73.6-14	0						
Chloride, SM4500Cl-B	mg/kg		Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Chloride	176	16.0	02/23/2016	ND	400	100	400	7.69	
грн 8015М	mg	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualific
	2620	100	02/23/2016	ND	193	96.4	200	1.46	
GRO C6-C10 DRO >C10-C28	5700	100	02/23/2016	ND	214	107	200	13.1	
Surrogate: 1-Chlorooctane	128	% 35-14	7						
Surrogate: 1-Chlorooctadecane	139	% 28-17	I						

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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:

02/22/2016

Reported:

02/29/2016

Project Name:

ONYX PWU 29 #3

Project Number:

NONE GIVEN

Project Location:

EDDY COUNTY, NM

Sampling Date:

02/16/2016

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: SP 2 SURFACE (H600396-04)

Sample ID: SP Z SUKFACE (1100	00000	')							
3TEX 8021B	mg/		Analyzed	By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
•	5.11	1.00	02/24/2016	ND	1.97	98.4	2.00	5.85	
Benzene*	59.3	1.00	02/24/2016	ND	1.93	96.5	2.00	6.07	
Toluene*	35.6	1.00	02/24/2016	ND	1.76	88.1	2.00	5.87	
Ethylbenzene*	117	3.00	02/24/2016	ND	5.37	89.5	6.00	5.48	
Total Xylenes* Total BTEX	217	6.00	02/24/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIL	108	% 73.6-14	10						
Chloride, SM4500Cl-B		/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
,	<16.0	16.0	02/23/2016	ND	400	100	400	7.69	
Chloride		/kg		ed By: MS					S-06
трн 8015М		Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Analyte	Result		02/23/2016	ND	193	96.4	200	1.46	
GRO C6-C10	2080	100			214	107	200	13.1	
DRO >C10-C28	18800	100	02/23/2016	ND	714	107			
Surrogate: 1-Chlorooctane	158	35-14	17						
Surrogate: 1-Chlorooctadecane	470	28-17	71						

Cardinal Laboratories

Surrogate: 1-Chlorooctadecane

\*=Accredited Analyte

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Hungry Horse Environmental VERNON BLACK P.O. Box 1058 Hobbs NM, 88240

Fax To:

(505) 391-4585

Received:

02/22/2016

Reported:

02/29/2016

Project Name: Project Number: ONYX PWU 29 #3

Project Location:

NONE GIVEN EDDY COUNTY, NM Sampling Date:

02/16/2016

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: SP 2 6" (H600396-05)

Sample 1D: SP 2 6 (11000550 )	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
	47.5	2.00	02/24/2016	ND	1.97	98.4	2.00	5.85	
Benzene*	314	2.00	02/24/2016	ND	1.93	96.5	2.00	6.07	
Toluene*	98.3	2.00	02/24/2016	ND	1.76	88.1	2.00	5.87	
Ethylbenzene* Total Xylenes*	258	6.00	02/24/2016	ND	5.37	89.5	6.00	5.48	
Total BTEX	717	12.0	02/24/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIL	104	% 73.6-14	10						
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
	<16.0	16.0	02/23/2016	ND	400	100	400	7.69	
Chloride		/kg	Analyze	ed By: MS					S-06
TPH 8015M  Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
	5240	100	02/23/2016	ND	193	96.4	200	1.46	
GRO C6-C10 DRO >C10-C28	8780	100	02/23/2016	ND	214	107	200	13.1	
Surrogate: 1-Chlorooctane	153	% 35-14	7						
Surrogate: 1-Chlorooctadecane	201	% 28-17	TI .						

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Hungry Horse Environmental VERNON BLACK P.O. Box 1058 Hobbs NM, 88240

Fax To:

28-171

281 %

(505) 391-4585

Received:

02/22/2016

Reported:

02/29/2016

Project Name:

ONYX PWU 29 #3

Project Number: Project Location: NONE GIVEN EDDY COUNTY, NM Sampling Date:

02/16/2016

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: SP 2 1' (H600396-06)

Sample ID: SP 2 1' (H600396-0 STEX 8021B	mg/	kg	Analyze	By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
	86.7	5.00	02/24/2016	ND	1.97	98.4	2.00	5.85	
Benzene*	436	5.00	02/24/2016	ND	1.93	96.5	2.00	6.07	
foluene*	126	5.00	02/24/2016	ND	1.76	88.1	2.00	5.87	
Ethylbenzene*	339	15.0	02/24/2016	ND	5.37	89.5	6.00	5.48	
Fotal Xylenes* Fotal BTEX	988	30.0	02/24/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIE	103	% 73.6-14	10						
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
	<16.0	16.0	02/23/2016	ND	400	100	400	7.69	
Chloride		/kg	Analyze	ed By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
	7030	100	02/23/2016	ND	193	96.4	200	1.46	
GRO C6-C10 DRO >C10-C28	12100	100	02/23/2016	ND	214	107	200	13.1	
Surrogate: 1-Chlorooctane	176	% 35-14	7						

Cardinal Laboratories

Surrogate: 1-Chlorooctadecane

\*=Accredited Analyte

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align trens



Insufficient time to reach temperature.

### **Notes and Definitions**

The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC QR-02 batch were accepted based on percent recoveries and completeness of QC data. Analyte NOT DETECTED at or above the reporting limit ND Relative Percent Difference Samples not received at proper temperature of 6°C or below.

> 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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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

ANALYSIS REQUEST	201/0/1/2 X3ID	States	
OT I Ha	Address:	occition to that shall be profited for the agreement powed to the close for the agreement powed to County deep worth a state of the county worth of the agreement of the county deep was a success and the county of the agreement of the county of the coun	No. 1945 PATE
101 East Mariand, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476	# CONTAINERS  # CONTAINERS  # CONTAINERS  # CONTAINERS  # SOIL  SO	the state of the s	V.C. C. N.



March 03, 2016

VERNON BLACK
Hungry Horse Environmental
P.O. Box 1058
Hobbs, NM 88240

RE: ONYX PWU 29 #3

Enclosed are the results of analyses for samples received by the laboratory on 02/25/16 10:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-15-7. 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 <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accred certif.html.

Cardinal Laboratories is accreditated 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.

Celes D. Keene

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



Hungry Horse Environmental VERNON BLACK P.O. Box 1058 Hobbs NM, 88240

Fax To:

(505) 391-4585

Received:

02/25/2016

Reported:

03/03/2016

Project Name: Project Number:

ONYX PWU 29 #3 NONE GIVEN

Project Location:

EDDY COUNTY, NM

Sampling Date:

02/24/2016

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Jodi Henson Sample Received By:

Sample ID: SP 1 2' (H600421-01)

Sample ID: SP 1 2 (H600421-0 BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	2.15	0.500	02/27/2016	ND	2.06	103	2.00	0.0598	
Toluene*	17.3	0.500	02/27/2016	ND	2.03	101	2.00	0.159	
Ethylbenzene*	6.47	0.500	02/27/2016	ND	1.82	90.8	2.00	0.254	
Total Xylenes*	19.5	1.50	02/27/2016	ND	5.58	92.9	6.00	0.718	
Total BTEX	45.4	3.00	02/27/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIL	100	% 73.6-14	0						
Chloride, SM4500Cl-B				d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Chloride	288	16.0	02/26/2016	ND	416	104	400	0.00	
TPH 8015M	mg	/ka	Analyze	d By: MS					
	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Analyte	574	10.0	02/26/2016	ND	198	98.8	200	7.73	
GRO C6-C10 DRO >C10-C28	1170	10.0	02/26/2016	ND	208	104	200	14.9	
Surrogate: 1-Chlorooctane	115	% 35-14	7	1,000					
Surrogate: 1-Chlorooctadecane	106		I						

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\*=Accredited Analyte

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

Received:

02/25/2016

Reported:

03/03/2016

Project Name: Project Number: ONYX PWU 29 #3 NONE GIVEN

Project Location:

EDDY COUNTY, NM

Sampling Date:

02/24/2016

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: SP 1 3' (H600421-02)

BTEX 8021B	mg/	kg	Analyze	By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
	< 0.050	0.050	02/26/2016	ND	2.06	103	2.00	0.0598	
Benzene*	0.289	0.050	02/26/2016	ND	2.03	101	2.00	0.159	
Toluene*	0.242	0.050	02/26/2016	ND	1.82	90.8	2.00	0.254	
Ethylbenzene* Total Xylenes*	0.990	0.150	02/26/2016	ND	5.58	92.9	6.00	0.718	
Total BTEX	1.52	0.300	02/26/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIL	103	% 73.6-14	0						
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	02/26/2016	ND	416	104	400	0.00	
ТРН 8015М	mg	/kg	Analyze	ed By: MS					
	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Analyte	<10.0	10.0	02/26/2016	ND	198	98.8	200	7.73	
GRO C6-C10	86.5	10.0	02/26/2016	ND	208	104	200	14.9	
DRO >C10-C28	80.5	10.0	02,20,21						
Surrogate: 1-Chlorooctane	98.8	% 35-14	7						
Surrogate: 1-Chlorooctadecane	108	% 28-17	I						

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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:

02/25/2016

Reported:

03/03/2016

Project Name:

ONYX PWU 29 #3

Project Number: Project Location: NONE GIVEN EDDY COUNTY, NM

88.8 %

28-171

Sampling Date:

02/24/2016

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: SP 1 4' (H600421-03)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
	< 0.050	0.050	02/26/2016	ND	2.06	103	2.00	0.0598	
Benzene* Toluene*	0.100	0.050	02/26/2016	ND	2.03	101	2.00	0.159	
	0.276	0.050	02/26/2016	ND	1.82	90.8	2.00	0.254	
Ethylbenzene*	1.18	0.150	02/26/2016	ND	5.58	92.9	6.00	0.718	
Total Xylenes* Total BTEX	1.56	0.300	02/26/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIL	101	% 73.6-14	0						
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	02/26/2016	ND	416	104	400	0.00	
TPH 8015M	mg	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
	<10.0	10.0	02/26/2016	ND	198	98.8	200	7.73	
GRO C6-C10  DRO >C10-C28	74.9	10.0	02/26/2016	ND	208	104	200	14.9	
Surrogate: 1-Chlorooctane	100	% 35-14	7						

Cardinal Laboratories

Surrogate: 1-Chlorooctadecane

\*=Accredited Analyte

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Hungry Horse Environmental **VERNON BLACK** P.O. Box 1058 Hobbs NM, 88240

Fax To:

(505) 391-4585

Received:

02/25/2016

Reported:

03/03/2016

Project Name:

ONYX PWU 29 #3

Project Number: Project Location: NONE GIVEN EDDY COUNTY, NM Sampling Date:

02/24/2016

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Jodi Henson

Sample ID: SP 2 2' (H600421-04)

Sample ID: SP 2 2' (H600421-0 BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	< 0.050	0.050	02/26/2016	ND	2.06	103	2.00	0.0598	
Toluene*	0.258	0.050	02/26/2016	ND	2.03	101	2.00	0.159	
Ethylbenzene*	0.442	0.050	02/26/2016	ND	1.82	90.8	2.00	0.254	
Total Xylenes*	1.78	0.150	02/26/2016	ND	5.58	92.9	6.00	0.718	
Total BTEX	2.48	0.300	02/26/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIE	108	% 73.6-14	0						
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Chloride	<16.0	16.0	02/26/2016	ND	416	104	400	0.00	
TPH 8015M	mg	/kg	Analyze	ed By: MS				and the second	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
198 (SS), (SS) #40	82.2	10.0	02/26/2016	ND	198	98.8	200	7.73	
GRO C6-C10	751	10.0	02/26/2016	ND	208	104	200	14.9	
DRO >C10-C28	/31	10.0	32, 23, 222						-
Surrogate: 1-Chlorooctane	116	% 35-14	7						
Surrogate: 1-Chlorooctadecane	104	% 28-17	I and a						

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\*=Accredited Analyte

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align trens



Hungry Horse Environmental **VERNON BLACK** P.O. Box 1058 Hobbs NM, 88240

Fax To:

(505) 391-4585

Received:

02/25/2016

Reported:

03/03/2016

Project Name:

ONYX PWU 29 #3

Project Number: Project Location: NONE GIVEN EDDY COUNTY, NM Sampling Date:

02/24/2016

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: SP 2 3' (H600421-05)

Sample ID: SP 2 3 (H600421-0	mg/	kg	Analyzed	By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
,	< 0.050	0.050	02/26/2016	ND	2.06	103	2.00	0.0598	
Benzene*	< 0.050	0.050	02/26/2016	ND	2.03	101	2.00	0.159	
Toluene*	< 0.050	0,050	02/26/2016	ND	1.82	90.8	2.00	0.254	
thylbenzene*	<0.150	0.150	02/26/2016	ND	5.58	92.9	6.00	0.718	
Γotal Xylenes* Γotal BTEX	<0.300	0.300	02/26/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIL	101 9	% 73.6-14							
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
,	<16.0	16.0	02/26/2016	ND	416	104	400	0.00	
Chloride	mg,	/ka	Analyze	ed By: MS					
TPH 8015M	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifi
Analyte	<10.0	10.0	02/26/2016	ND	198	98.8	200	7.73	
GRO C6-C10  DRO >C10-C28	26.0	10.0	02/26/2016	ND	208	104	200	14.9	
DKO >C10-C20									
Surrogate: 1-Chlorooctane	90.7	% 35-14	7						
Surrogate: 1-Chlorooctadecane	96.7	% 28-17	1						

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\*=Accredited Analyte

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Celly & treme



Hungry Horse Environmental VERNON BLACK P.O. Box 1058 Hobbs NM, 88240

Fax To:

(505) 391-4585

Received:

02/25/2016

Reported:

03/03/2016

Project Name:

ONYX PWU 29 #3

Project Number: Project Location: NONE GIVEN

EDDY COUNTY, NM

Sampling Date:

02/24/2016

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Jodi Henson

Sample ID: SP 2 4' (H600421-06)

Sample 1D: SP 2 4 (11000421 C	mg/	kg	Analyze	By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
100000 00000 V	< 0.050	0.050	02/26/2016	ND	2.06	103	2.00	0.0598	
Benzene*	< 0.050	0.050	02/26/2016	ND	2.03	101	2.00	0.159	
Toluene* Ethylbenzene*	< 0.050	0.050	02/26/2016	ND	1.82	90.8	2.00	0.254	
Total Xylenes*	< 0.150	0.150	02/26/2016	ND	5.58	92.9	6.00	0.718	
Total BTEX	<0.300	0.300	02/26/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIL	98.6	% 73.6-14	10						
Chloride, SM4500Cl-B	mg/	′kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/26/2016	ND	416	104	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/26/2016	ND	198	98.8	200	7.73	
DRO >C10-C28	112	10.0	02/26/2016	ND	208	104	200	14.9	
Surrogate: 1-Chlorooctane	94.0	% 35-14	7						
Surrogate: 1-Chlorooctadecane	102	% 28-17	I						

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\*=Accredited Analyte

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#### **Notes and Definitions**

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
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

Cardinal Laboratories

\*=Accredited Analyte

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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