Basin Environmental Service Technologies, LLC

3100 Plains Highway
P. O. Box 301
Lovington, New Mexico 88260
jwlowry@basinenv.com

Office: (575) 396-2378 Fax: (575) 396-1429



REMEDIATION SUMMARY AND SITE CLOSURE REQUEST

BOPCO, LP
POKER LAKE UNIT #441H 8" Frac Hose
Eddy County, New Mexico
Unit Letter "P" (SE/SE), Section 18, Township 24 South, Range 30 East
Latitude 32.21082° North, Longitude 103.91292° West
NMOCD Reference #2RP- 218 \

Prepared For:

BOPCO, LP 522 W. Mermod, Suite 704 Carlsbad, New Mexico 88220

Prepared By:
Basin Environmental Service Technologies, LLC
3100 Plains Highway
Lovington, New Mexico 88260

March 2014

Joel W. Aowry

Project Manager

RECEIVED

MAR 0 7 2014

NMOCD ARTESIA

TABLE OF CONTENTS

1.0	INTRODUCTION AND BACKGROUND INFORMATION	1
2.0	NMOCD SITE CLASSIFICATION	1
3.0	SUMMARY OF SOIL REMEDIATION ACTIVITIES	2
4.0	QA/QC PROCEDURES	2
	4.1 Soil Sampling	2
	4.2 Decontamination of Equipment	
	4.3 Laboratory Protocol	
5.0	SITE CLOSURE REQUEST	3
	LIMITATIONS	
7.0	DISTRIBUTION	5

FIGURES

Figure 1 - Site Location Map

Figure 2 – Site & Sample Location Map

TABLES

Table 1 - Concentrations of Benzene, BTEX, TPH & Chloride in Soil

APPENDICES

Appendix A – Release Notification and Corrective Action (Form C-141)

Appendix B – Photographs

Appendix C – Laboratory Analytical Reports

1.0 INTRODUCTION & BACKGROUND INFORMATION

Basin Environmental Service Technologies, LLC (Basin), on behalf of BOPCO, LP (BOPCO), has prepared this *Remediation Summary & Site Closure Request* for the release site known as Poker Lake Unit (PLU) #441H 8" Frac Hose. The legal description of the release site is Unit Letter "P" (SE/SE), Section 18, Township 24 South, Range 30 East, in Eddy County, New Mexico. The geographic coordinates of the release site are 32.21082° North latitude and 103.91292° West longitude. The property affected by the release is owned by the United States Department of the Interior - Bureau of Land Management (BLM). A "Site Location Map" is provided as Figure 1.

On January 23, 2014, BOPCO discovered a release had occurred on an eight-inch (8") hose connected to a portable pump that was being used while fracking the PLU #441H well. The "Release Notification and Corrective Action" (Form C-141) indicated approximately forty-five barrels (45 bbls) of produced water was released; all of the water outside the pump containment soaked into the ground. During initial response activities, approximately two barrels (2 bbls) of produced water were recovered from the containment area and the affected section of hose was replace. The initial Form C-141 indicated the release affected approximately one thousand, eight hundred and eighty-five square feet (1,885 ft²) of pasture land. The Form C-141 is provided as Appendix A. General photographs of the release site are provided as Appendix B.

2.0 NMOCD SITE CLASSIFICATION

A search of the New Mexico Water Rights Reporting System (NMWRRS) database maintained by the New Mexico Office of the State Engineer (NMOSE) indicated information was unavailable for Section 18, Township 24 South, Range 30 East. An inferred depth to groundwater reference map utilized by the NMOCD indicates groundwater should be encountered at approximately two hundred and twenty feet (220') below ground surface (bgs). Based on the NMOCD ranking system, zero (0) points will be assigned to the site as a result of this criterion.

A search of the NMWRRS database indicated there are no water wells within 1,000 feet of the release. Based on the NMOCD ranking system, zero (0) points will be assigned to the site as a result of this criterion.

There are no surface water bodies within 1,000 feet of the release. Based on the NMOCD ranking system, zero (0) points will be assigned to the site as a result of this criterion.

NMOCD guidelines indicate the PLU #441H 8" Frac Hose release site has an initial ranking score of zero (0) points. The soil remediation levels for a site with a ranking score of zero (0) points are as follows:

- Benzene 10 mg/Kg (ppm)
- BTEX -50 mg/Kg (ppm)
- $TPH 5{,}000 \text{ mg/Kg (ppm)}$

The New Mexico Administrative Code (NMAC) does not currently specify a remediation level for chloride concentrations in soil. Chloride remediation levels are set by the NMOCD on a site-specific basis.

3.0 SUMMARY OF SOIL REMEDIATION ACTIVITIES

On February 17, 2014, Basin began excavating impacted soil at the release site. The floor and sidewalls of the excavation were advanced until field tests suggested concentrations of benzene, toluene, ethylbenzene and xylene (BTEX), total petroleum hydrocarbons (TPH) and chloride were below NMOCD Regulatory Standards. Excavated material was stockpile on-site, pending final disposition. A "Site and Sample Location Map" is provided as Figure 2. Laboratory analytical reports are provided as Appendix C.

On February 18, 2014, six (6) confirmation soil samples (NSW #1, ESW #1, SSW #1, WSW #1, Floor #1 @ 2' and Floor #2 @ 10') were collected from the floor and sidewalls of the excavation and submitted to the laboratory for analysis of chloride concentrations. Laboratory analytical results indicated chloride concentrations ranged from 496 ppm for soil sample Floor #2 @ 10' to 16.0 ppm for soil samples NSW #1 and Floor #1 @ 2'. Soil samples Floor #1 @ 2' and Floor #2 @ 10' were also analyzed for concentrations of TPH, which were determined to be less than the laboratory method detection limit (MDL). Soil sample Floor #2 @ 10' was also analyzed for concentrations of BTEX, which were determined to be less than the laboratory MDL. Chloride, TPH and BTEX concentrations were below NMOCD Regulatory Standards in each of the submitted soil samples. A summary of "Concentrations of Benzene, BTEX, TPH and Chloride in Soil" is provided in Table 1.

On February 20, 2014, upon receiving laboratory analytical results from confirmation soil samples, the excavation was backfilled with locally purchased, non-impacted material. Between February 19 and 20, 2014, approximately two hundred and eighty cubic yards (280 yd³) of impacted material was transported to Lea Land, LLC (NMOCD Permit #WM-01-035) for disposal. Prior to backfilling, the final dimensions of the excavation were approximately fifty-two feet (52') in length, forty feet (40') in width and two (2) to ten feet (10') in depth.

4.0 QA/QC PROCEDURES

4.1 Soil Sampling

Soil samples were delivered to Cardinal Laboratories, Inc., in Hobbs, New Mexico, for BTEX, TPH and/or chloride analyses using the methods described below:

- BTEX concentrations in accordance with EPA Method SW-846 8021b
- TPH concentrations in accordance with EPA Method SW-846 8015M
- Chloride concentrations in accordance with EPA Method 4500 Cl-B

4.2 Decontamination of Equipment

Cleaning of the sampling equipment was the responsibility of the environmental technician. Prior to use, and between each sample, the sampling equipment was cleaned with Liqui-Nox® detergent and rinsed with distilled water.

4.3 Laboratory Protocol

The laboratory was responsible for proper QA/QC procedures after signing the chain-of-custody form(s). These procedures were either transmitted with the laboratory reports or are on file at the laboratory.

5.0 SITE CLOSURE REQUEST

Soil samples collected from the floor and sidewalls of the PLU #441H 8" Frac Hose release excavation were analyzed by an NMOCD-approved laboratory. Analytical results indicated concentrations of BTEX, TPH and chloride were below NMOCD Regulatory Standards in each of the submitted soil samples. Based on these laboratory analytical results, Basin recommends BOPCO provide the NMOCD Artesia District Office and BML a copy of this *Remediation Summary and Site Closure Request* and request the NMOCD grant site closure to the PLU #441H 8" Frac Hose release site.

6.0 LIMITATIONS

Basin Environmental Service Technologies, LLC, has prepared this *Remediation Summary and Site Closure Request* to the best of its ability. No other warranty, expressed or implied, is made or intended. Basin has examined and relied upon documents referenced in the report and on oral statements made by certain individuals. Basin has not conducted an independent examination of the facts contained in referenced materials and statements. Basin has presumed the genuineness of these documents and statements and that the information provided therein is true and accurate. Basin has prepared this report in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Basin notes that the facts and conditions referenced in this report may change over time, and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of BOPCO, LP. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the express consent of Basin Environmental Service Technologies, LLC, and/or BOPCO, LP.

7.0 **DISTRIBUTION:**

Copy 1: Mike Bratcher

New Mexico Energy, Minerals and Natural Resources Department

Oil Conservation Division (District 2)

1301 E. Grand Avenue Artesia, NM 88210

Copy 2: James Amos

Bureau of Land Management

602 E. Greene Street

Carlsbad, New Mexico 88220

Copy 3: Tony Savoie

BOPCO, LP

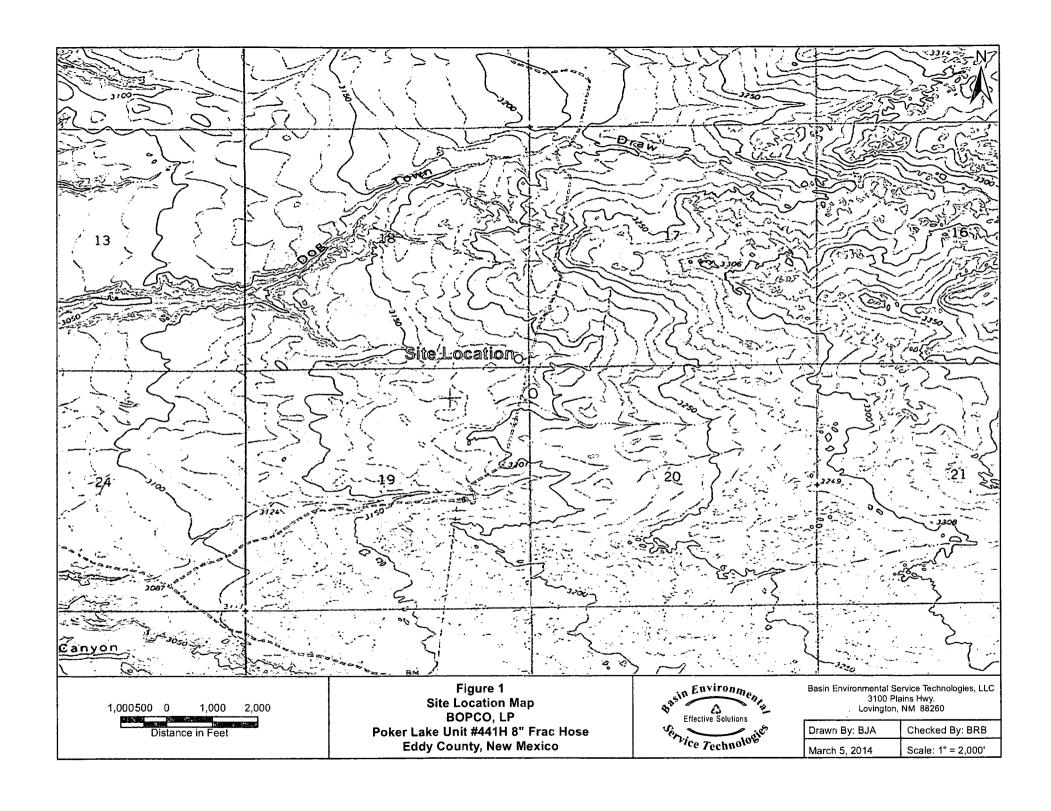
522 W. Mermod, Suite 704 Carlsbad, NM 88220

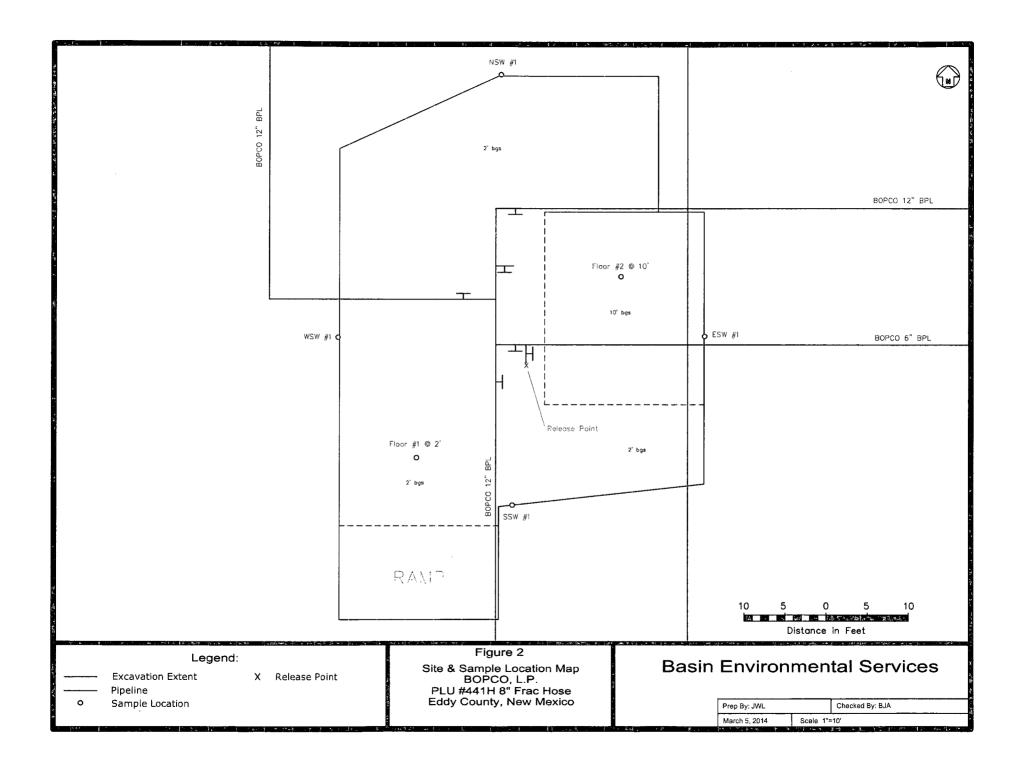
Copy 4: Basin Environmental Service Technologies, LLC

P.O. Box 301

Lovington, NM 88260

	•		
	FIC	GURES	
,			
		•	





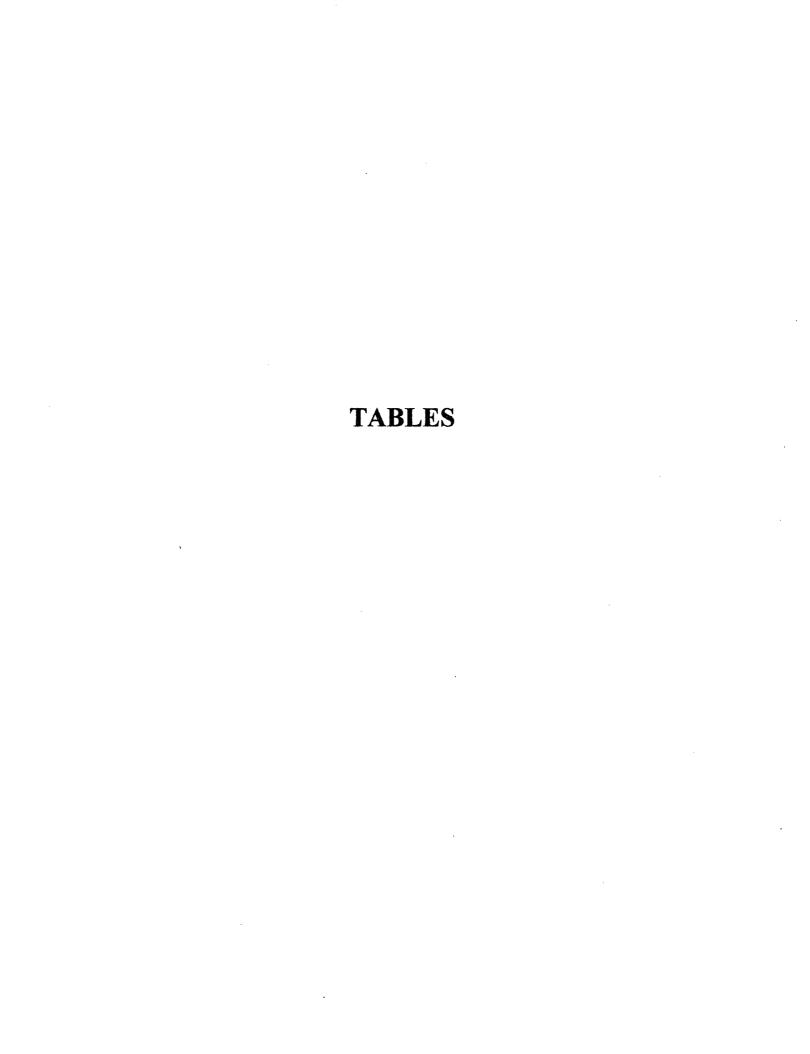


TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDES IN SOIL

BOPCO, LP PLU #441H 8" FRAC HOSE EDDY COUNTY, NEW MEXICO

	0.4145).5				METHOD: E	PA SW 846	-8021B, 503	0	ME1	HOD: 80	15M	TOTAL	4500 CI-B
SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL- BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C ₆ -C ₁₂ (mg/Kg)	DRO C ₁₂ -C ₂₈ (mg/Kg)	ORO C ₂₈ -C ₃₅ (mg/Kg)	TPH C ₆ -C ₃₅ (mg/Kg)	CHLORIDE (mg/Kg)
NWS #1	18"	2/18/2014	In-Situ	-	-	-	-	-	-	-	-	-	16.0
ESW #1	8'	2/18/2014	In-Situ	-	-	-	-	_	-	-	-	-	112.0
SSW #1	18"	2/18/2014	In-Situ	-	-	-	-	_	-	-	-	-	64.0
WSW #1	18"	2/18/2014	In-Situ	-	-	-	-		-		-	-	64.0
Floor #1 @ 2'	2'	2/18/2014	In-Situ	-	-	-	-	_	<10.0	<10.0	10.1	10.1	16.0
Floor #2 @ 10'	10'	2/18/2014	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	496
NMOCD Criteria				10				50				5,000	1,000

- = Not analyzed.

APPENDICES

Appendix A

Release Notification and Corrective Action (Form C-141)

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

Form C-141 Revised August 8, 2011

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

			Rele	ase Notific	atio	on and Co	rrective A	ction	and the second like on an all the second					
						OPERA'.	ror	Σ	Initia	al Report 🔲 Final Repo				
Name of Co						Contact: To								
				ad, N.M. 88220		Telephone No. 575-887-7329								
S.E. of the			oili was lo	cated 2485 feet		Facility Type: Exploration and Production								
Surface Ow	ner: Feder	al		Mineral C	wner	r: Federal API No. 30-015-41281								
				LOCA	ATIO	ON OF REI	LEASE			•				
Unit Letter P	Section 18	Township 24S	Range 30E	Feet from the 192	1	th/South Line outh	Feet from the 180	East/We East	st Line	County: Eddy				
						82_Longitud E OF RE L	e <u>W 103.91292</u>	· · · · · · · · · · · · · · · · · · ·						
Type of Rele	ase: Produc	ed water		IMI	UI		Release: 45 bbls.	1.	Volume F	Recovered: 2 bbls				
Source of Ro							lour of Occurrence			Hour of Discovery: 1/23/14 at				
- "						1/23/14 Ti	me unknown		2:30 p.m.					
Was Immedi	ate Notice (Yes [No 🗌 Not Re	equire	If YES, To d NMOCD 6	Whom? mergency #104 a	and the BL	M					
By Whom? 7							lour: 1/23/14 at 5							
Was a Water	course Read	ched?	Yes ⊠	l No		If YES, Ve	olume Impacting t	the Watero	course.					
		pacted, Descr								RECEIVED				
		em and Reme a portable pu			the P	LU-441H well.	The hose section	was repla	ced.	FEB 03 2014				
The spill affer water was retained the spill will. I hereby certifications a public health should their or the environal the should their continuous and the should the should the should the should be sho	cted approximately covered from the cleaned for that the ill operators or the environment. In a	m the contains up in accordant information g are required t ronment. The nave failed to	sq.ft. of p ment area. ance to the iven above to report are acceptance adequately OCD accep	NMOCD and BI is true and compador file certain to the of a C-141 report investigate and r	olete to release ort by remedi	the best of my notifications a the NMOCD mate contaminat	knowledge and und perform correcarked as "Final R	anderstand etive action eport" door eat to grow	that purs ns for rel es not rel und water	suant to NMOCD rules and eases which may endanger ieve the operator of liability r, surface water, human health ompliance with any other				
rederal, state.	or local la	ws and/or regi	diations.	•			OIL CON	SERVA	TION	DIVISION				
Signature:	1 Prw	2 Jun	وف											
Printed Name	T	oie				Approved by								
Title: Waste	Manageme	nt and Remed	iation Spe	cialist		Approval Date: Expiration			piration	Date:				
E-mail Addr	ess: tasavoi	e@basspet.co	m		Conditions of Approval: Attached			Attached						
Date: 2/3/14		ets If Necess		one: 432-556-873	30		· · · · · · · · · · · · · · · · · · ·							

<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 <u>District III</u> 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

Revised August 8, 2011

Form C-141

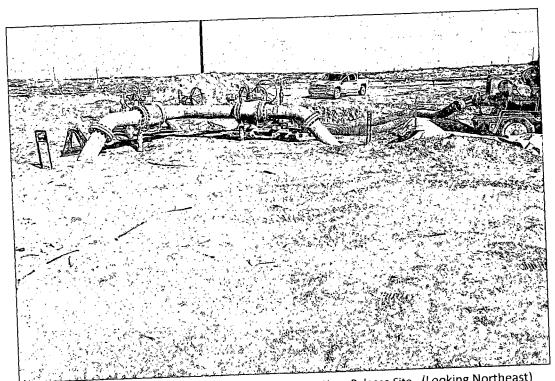
Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

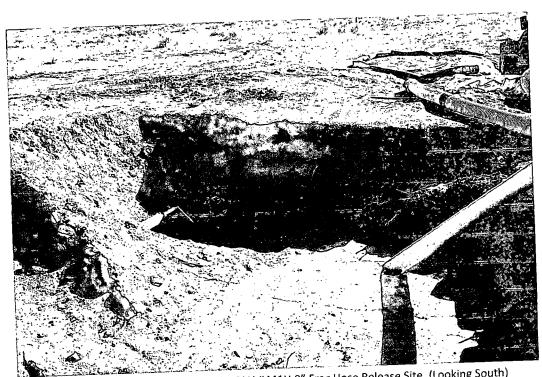
				Rele	ease Notific	atio	n and Co	rrective A	ction	1						
							OPERA	ΓOR		☐ Initia	al Report	\boxtimes	Final Re	epor		
	Name of Co	mpany: B	OPCO, L.P.				Contact: To									
					oad, N.M. 88220			No. 575-887-732								
	Facility Nan S.E. of the v			oill was lo '-218	cated 2485 feet		Facility Typ	e: Exploration a	and Pro	duction						
	Surface Own	ner: Feder	al		Mineral C)wner:	ner: Federal API No. 30-015-41281									
					LOCA	TIO	N OF REI	LEASE					_			
	Unit Letter	Section	Township	Range	Feet from the		South Line	Feet from the	East/V	Vest Line	County:	County:				
	Р	18	248	30E	192	Sou		180	East		Eddy					
				<u> </u>	Latitude N 32	2.21082	2 Longitude	e <u>W 103.91292</u>	<u> </u>							
							OF RELI									
	Type of Relea	ase: Produc	ed water		11744			Release: 45 bbls.		Volume F	Recovered: 2	2 bbls				
	Source of Re						Date and H	lour of Occurrence unknown			Hour of Dis		: 1/23/14 a	at		
	Was Immedia	nte Notice (Yes [No Not Re	equired	If YES, To		nd the F		<u></u>			,		
	By Whom? T	any Cavaia		103 _									•			
	Was a Water							lour: 1/23/14 at 5 blume Impacting t								
							RECEIVED									
	If a Watercou	rse was Im	pacted, Descr	ibe Fully.	*							07 2		1		
			em and Reme a portable pu		n Taken.* ed while fracking	the PLU	J-441H well.	The hose section	was rep	laced.	MOCE	AR1	resia	(L. Atanasa		
	The spill affe water was rec	cted approx overed from	m the contains	sq.ft. of p ment area.	asture, all of the v		_	-	soaked	into the gro	ound. Appro	oximate	ly 2 bbls o	of		
							_			54.33.40	co lo		25			
					41H Frac Hose Re and sidewalls of											
	concentration	s of BTEX	, TPH and Ch	loride wer	e less than NMO	CD Reg	ulatory Standa	ards. Between Fel	bruary 1	9 and 20, 2	2014, approx	ximately	y 280 cy o:			
					an NMOCD-appro											
					·10' in depth. Plea of remediation a			acned Basin Envi	ironme	ntai Servic	es Technol	ogies K	emediatio	n		
	L hereby certi	fy that the i	nformation of	iven above	e is true and comp	lete to t	he hest of my	knowledge and u	nderstar	nd that purs	suant to NM	IOCD r	ules and			
	regulations al	l operators	are required t	o report ai	nd/or file certain r	elease n	otifications a	nd perform correc	tive act	ions for rel	eases which	n may er	ndanger			
					ce of a C-141 repo											
					investigate and rotance of a C-141									h		
	federal, state,				hance of a C-141	тероп а	oes not renev	e the operator of	гезропы	ionity for c	omphanec	vitii airy	Other			
							OIL CONSERVATION DIVISION									
	Signature:	Om	Dime													
		4					Approved by Environmental Specialist:									
	Printed Name	: Tony Sav	oie				Approved by Environmental Specialist.									
	Title: Waste !	Managemer	nt and Remedi	iation Spe	cialist		Approval Dat	te:	_ 1	Expiration	Date:		_			
E-mail Address: tasavoie@basspet.com							Conditions of Approval:									
	Date: 2/3/14 Phone: 432-556-8730															

Appendix B

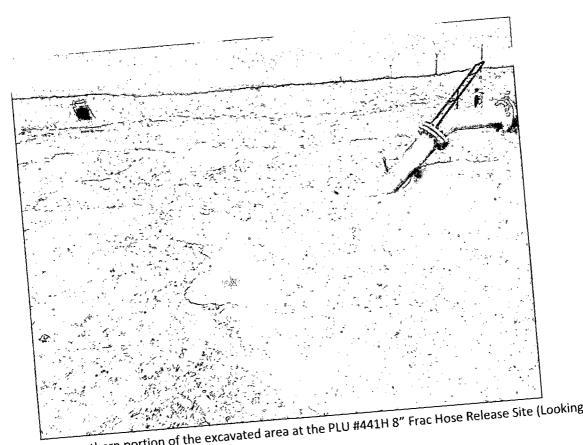
Photographs



Photograph the initial release at the PLU #441H 8" Frac Hose Release Site. (Looking Northeast)



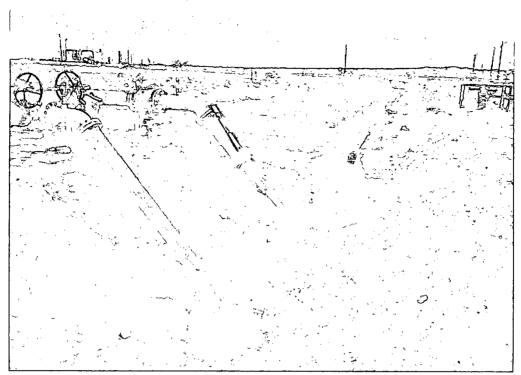
Photograph the initial release at the PLU #441H 8" Frac Hose Release Site. (Looking South)



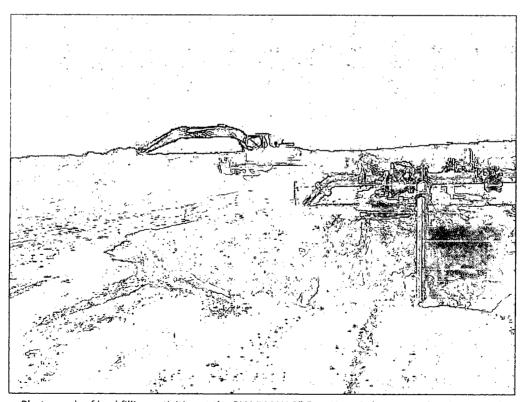
Photograph of the southern portion of the excavated area at the PLU #441H 8" Frac Hose Release Site (Looking West)



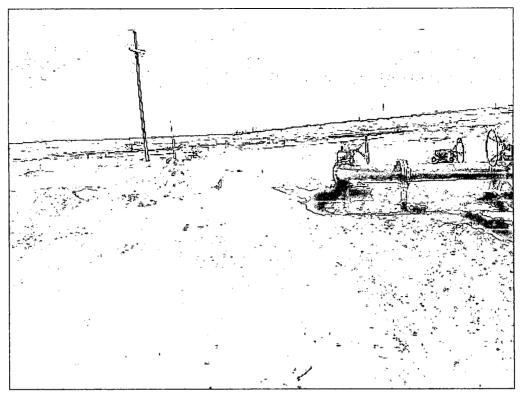
Photograph of the excavated area at the PLU #441H 8" Frac Hose Release Site (Looking Southwest)



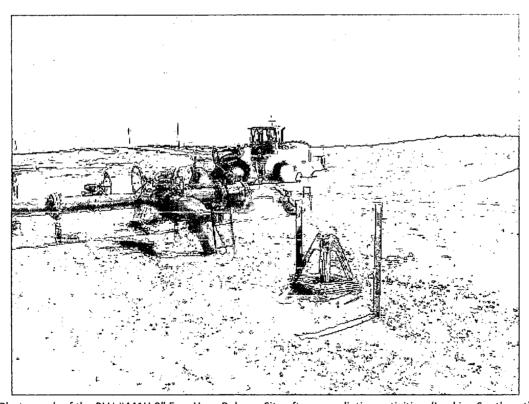
Photograph of the excavated area at the PLU #441H 8" Frac Hose Release Site (Looking North)



Photograph of backfilling activities at the PLU #441H 8" Frac Hose Release Site. (Looking West)



Photograph of backfilling activities at the PLU #441H 8" Frac Hose Release Site. (Looking East)



Photograph of the PLU #441H 8" Frac Hose Release Site after remediation activities. (Looking Southeast)

Appendix CLaboratory Analytical Reports



February 25, 2014

JOEL LOWRY

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: PLU #441

Enclosed are the results of analyses for samples received by the laboratory on 02/19/14 15:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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 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.

Celey 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



Analytical Results For:

Basin Environmental Service JOEL LOWRY P.O. Box 301 Lovington NM, 88260

Fax To:

(575) 396-1429

Received:

02/19/2014

02/25/2014

Reported: Project Name:

PLU #441

Project Number:

NONE GIVEN

Project Location:

EDDY COUNTY, NM

Sampling Date:

02/18/2014

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: NSW #1 (H400500-01)

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	02/20/2014	ND	400	100	400	0.00	
Sample ID: ESW #1 (H40	00500-02)								
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	02/20/2014	ND	400	100	400	0.00	
Sample ID: SSW #1 (H40	00500-03)								
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	02/20/2014	ND	400	100	400	0.00	
Sample ID: WSW #1 (H4	00500-04)								
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	02/20/2014	ND	400	100	400	0.00	

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other causes whatsoever shall be deemed warved unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without fimiliation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claims is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approved of Cardinal Laboratories.

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Basin Environmental Service JOEL LOWRY P.O. Box 301 Lovington NM, 88260

Fax To:

(575) 396-1429

Received:

02/19/2014

Sampling Date:

02/18/2014

Reported:

02/25/2014

Sampling Type:

Soil

Project Name:

PLU #441

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Jodi Henson

Project Location:

EDDY COUNTY, NM

Sample ID: FLOOR #1 @ 2' (H400500-05)

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	02/20/2014	ND	400	100	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	02/20/2014	ND	194	96.8	200	13.2	
DRO >C10-C28	<10.0	10.0	02/20/2014	ND	183	91.4	200	14.2	
EXT DRO >C28-C35	10.1	10.0	02/20/2014	ND					
Surrogate: I-Chlorooctane	86.6	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	88.9	% 63.6-15	4						

Cardinal Laboratories *=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including these for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Basin Environmental Service JOEL LOWRY P.O. Box 301 Lovington NM, 88260 Fax To: (575) 396-1429

Received:

02/19/2014

Reported:

02/25/2014 PLU #441

Project Name: Project Number:

NONE GIVEN

Project Location:

EDDY COUNTY, NM

Sampling Date:

02/18/2014

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: FLOOR #2 @ 10' (H400500-06)

BTEX 8260B	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	02/25/2014	ND	2.05	103	2.00	6.46	
Toluene*	<0.050	0.050	02/25/2014	ND	2.16	108	2.00	4.76	
Ethylbenzene*	hylbenzene* <0.050 0.050		02/25/2014	ND	2.04	102	2.00	6.61	
Total Xylenes*	< 0.150	0.150	02/25/2014	ND	6.20	103	6.00	7.13	
Total BTEX	otal BTEX <0.300 0.300		02/25/2014	ND					
Surrogate: Dibromofluoromethane	96.0	% 61.3-14	22						
Surrogate: Toluene-d8 103 % 7			9						
Surrogate: 4-Bromofluorobenzene	101 !	65.7-14	1						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	496	16.0	02/20/2014	ND	400	100	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	02/20/2014	ND	194	96.8	200	13.2	
DRO >C10-C28	<10.0	10.0	02/20/2014	ND	183	91.4	200	14.2	
EXT DRO >C28-C35	<10.0	10.0	02/20/2014	ND					
Surrogate: 1-Chlorooctane	90.8	% 65.2-14	0		V				
Surrogate: 1-Chlorooctadecane	93.9	% 63.6-15	4						

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed walved unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claims is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This

Celey D. Keine

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

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claims is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Keine

ARDINAL LABORATORIES 101 East Marland, Hobbs, NM 88240

Revision 1.0

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

	(575) 393-2326 FAX (575) 393-247	6																	
Company Name:						BI	LL TO						ANAL	YSIS	REC	QUES	T		
Project Manager:	and the state of t					P.O. #:													
Address: P.O. 8	Box 301				Company: BOPCO, LP						;								
City: Lovington State: NM Zip: 88260						Attn: Tony Savoie													
Phone #: (575)396-2378						dress:	522 W. Ma	-											
Project #: Project Owner:						y:	Carlsbad												
Project Name:	PLU #441			•	1 .	-		88220	_	ε	<u>ē</u>								
Project Location:					-	one #:	(432)556-		rige	015	802								
Sampler Name:	Joel Lowry				1	опе #. x #:	(432)330-	0130	Chloride	TPH (8015M)	BTEX (8021B)								
FOR LAB USE ONLY	,			MATRIX	li a	PRESERV.	SAMPLII	NG.	ľ	ΤP	18 T								i
Lab I.D. HU00500	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER WASTEWATER SOIL OIL SLUDGE	ОТНЕЯ:	ACID/BASE: ICE / COOL OTHER:	ZISIY DATE	TIME											
t	NSW #1	G	1.	×		. x	2/14/14	900	x										
2	ESW #1	G	1	×.		, × .	2/11/14	910	x										
3456	SSW #1	G	1,	×	,	. ×.	2/14/14	920	×										
4	WSW #1	G	1	, x ,		.×.	2/14/14	930	×										
5	Floor #1 @ 2'	G	1	Χ.		, × ,	2/14/14	940	x	х									
6	Floor #2 @ 10'	G	1	×		. ×.	2/14/14	950	x	х	x								
					*														
	Damages. Carolnal's liability and client's exclusive remedy f																		

PLEASE NOTE: Liability and Damages Carolina's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount pold by the client for the analyses. At dams including those for representation of the applicable

service in no event shall Cardinal be liable for incidental or consequental damages, including without firntation, outsiness interruptions, loss of use, or loss of profits (noutred by chert, its subsidiaries,

affiliates or successors arising out of or related to the performance of	of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.	
Relinquished By: Relinquished By:	Date: Received By: Phone Result: Fax Result: REMARKS: Phone Result: REMARKS:	····
		sults to pm@basinenv.com. sPet.com & SJWalters@BassPet.com
Delivered By: (Circle One)	Sample Condition CHECKED BY: Cool Intact (Invitaty)	
Sampler - UPS - Bus - Other: FORM-006	5.20 No No (TH X) MAN R	date changed as per Jul. 2/25/14 Ch

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476