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## REMEDIATION SUMMARY & RISK-BASED SITE CLOSURE REQUEST

BOPCO, LP

POKER LAKE UNIT #78 Delaware B Tank Battery Eddy County, New Mexico Unit Letter "A" (NE/NE), Section 25, Township 24 South, Range 30 East Latitude 32.194069° North, Longitude 103.827614° West

Prepared For:

BOPCO, LP 522 W. Mermod Suite 704 Carlsbad, New Mexico 88220 RECEIVED
FEB 14 2013
NMOCD ARTES!A

Prepared By:

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

January 2013

Ben J. Arguijo Project Manager

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#### 1.0 INTRODUCTION AND BACKGROUND INFORMATION

Basin Environmental Service Technologies, LLC (Basin), on behalf of BOPCO, LP (BOPCO), has prepared this *Remediation Summary & Risk-Based Site Closure Request* for the release site known as Poker Lake Unit #78 Delaware B Tank Battery ("Delaware B"). The legal description of the release site is Unit Letter "A" (NE/NE), Section 25, Township 24 South, Range 30 East, in Eddy County, New Mexico. The geographic coordinates of the release site are 32.194069° North latitude and 103.827614° 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 May 13, 2010, BOPCO discovered a release had occurred at the Delaware B tank battery. The pump on the produced water tank malfunctioned, resulting in a release of produced water and crude oil. The release was confined to the earthen containment area, and free-standing fluid was removed with a vacuum truck. The release was reported to the New Mexico Oil Conservation Division (NMOCD) Artesia District Office on May 13, 2010. The Release Notification and Corrective Action (Form C-141) indicated approximately two hundred and eighty barrels (280 bbls) of produced water and approximately five barrels (5 bbls) of crude oil were released, and approximately two hundred and sixty barrels (260 bbls) of produced water and approximately five barrels (5 bbls) of crude oil were recovered.

On July 7, 2010, BOPCO discovered an additional release had occurred at the Delaware B tank battery. A pipe connection on the water tank failed, and the two-inch (2") valve located between the tank and pump was closed, stopping the flow of water and resulting in a release of produced water. The release was confined to the earthen containment area, and free-standing fluid was removed with a vacuum truck. The release was reported to the NMOCD Artesia District Office on July 7, 2010. The Form C-141 indicated approximately ninety barrels (90 bbls) of produced water were released, and approximately eighty barrels (80 bbls) of produced water were recovered.

On August 20, 2011, BOPCO discovered a third release had occurred at the Delaware B tank battery. A storage tank overflow on unknown cause resulted in the release of crude oil. The release was confined to the earthen containment area, and free-standing fluid was removed with a vacuum truck. The release was reported to the NMOCD Artesia District Office on August 20, 2011. The Form C-141 indicated approximately forty barrels (40 bbls) of crude oil were released, and approximately thirty barrels (30 bbls) of crude oil were recovered.

The three (3) releases were remediated concurrently. The Form C-141 for each release is provided in Appendix A. General photographs of the release site are provided in 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 25, Township 24 South, Range 30 East. A depth-to-groundwater reference map utilized by the NMOCD indicates groundwater should be encountered at approximately three hundred and sixty feet (360') to three hundred and sixty-five feet (365')

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 one thousand feet (1,000') 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 one thousand feet (1,000') 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 Delaware B 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)
- Benzene, toluene, ethylbenzene and xylenes (BTEX) 50 mg/Kg (ppm)
- Total petroleum hydrocarbons (TPH) 5,000 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 May 25, 2010, one (1) soil boring (SB-1) was advanced to evaluate the vertical extent of impacted soil at the site. Soil samples were collected at five foot (5') drilling intervals and field-screened using a Photo-Ionization Detector (PID) and a chloride field test kit. Selected soil samples were submitted to Cardinal Laboratories in Hobbs, New Mexico, for analysis of BTEX, TPH, and chloride concentrations using EPA Methods SW-846 8021b, SW-846 8015M, and 4500 Cl-B, respectively. Table 1 summarizes the "Concentrations of Benzene, BTEX, TPH & Chloride in Soil". A "Site & Sample Location Map" is provided as Figure 2. A soil boring log is provided as Appendix C. Laboratory analytical reports are provided as Appendix D.

Soil boring SB-1 was located inside the containment area on the north side of the battery. The soil boring was advanced to a total depth of approximately forty five feet (45') bgs. Soil samples collected at five feet (5'), ten feet (10'), twenty feet (20'), twenty-five feet (25'), thirty feet (30'), forty feet (40'), and forty-five feet (45') bgs were submitted to the laboratory for analysis of BTEX, TPH, and/or chloride concentrations. Laboratory analytical results indicted benzene concentrations were less than the appropriate laboratory method detection limit (MDL) in each of the submitted soil samples. BTEX concentrations ranged from less than the appropriate laboratory MDL in soil samples SB-1 @ 25', SB-1 @ 40', and SB-1 @ 45' to 2.172 mg/Kg in soil sample SB-1 @ 5'. TPH concentrations ranged from less than the appropriate laboratory MDL in soil samples SB-1 @ 40' and SB-1 @ 45' to 126.4 mg/Kg in soil sample SB-1 @ 5'. Chloride concentrations ranged from 416 mg/Kg in soil samples SB-1 @ 40' and SB-1 @ 45' to 3,120 mg/Kg in soil sample SB-1 @ 20'. A review of laboratory analytical results indicated benzene, BTEX and TPH concentrations were less than the appropriate NMOCD regulatory standard.

A background soil sample (Background) was also collected and analyzed for chloride concentrations. Laboratory analytical results indicated the chloride concentration in soil sample Background was less than the laboratory MDL of 16.0 mg/Kg.

On October 14, 2011, four soil samples (Sample #1, Sample #2, Sample #3, and Sample #4) were collected to further delineate the vertical and horizontal extent of impacted soil at the site. The soil samples were submitted to the lab for analysis of TPH concentrations. Laboratory analytical results indicated TPH concentrations ranged from 12.2 mg/Kg in soil sample Sample #2 to 11,810 mg/Kg in soil sample Sample #1. Based on laboratory analytical results, further delineation would be required in the area represented by soil samples Sample #3 and Sample #4. Further delineation in the area represented by soil sample Sample #1 was precluded by the presence of an active pipeline running through the site.

On October 18, 2011, excavation of impacted soil commenced at the site. A PID and chloride test kit were used to field-screen the horizontal and vertical extent of impacted soil and to guide the excavation. To facilitate remediation activities, the excavation was divided into two (2) sections: East Excavation and West Excavation. The East Excavation was located in the area immediately adjacent to, and between, the five (5) on-site storage tanks. To preserve the structural integrity of the storage tanks, the vertical extent of the East Excavation was limited to one and one-half feet (1.5') bgs. The West Excavation was located in the area defined by soil samples Sample #1 through Sample #4. Excavated soil was stockpiled on-site, pending final disposition.

From October 20 through October 26, 2011, approximately three hundred and sixty cubic yards (360 yd³) of impacted soil was transported to Lea Land, Inc. (NMOCD Permit # WM-01-035), for disposal.

On October 20, 2011, four (4) soil samples (Sample 4A, Tank 3 South, Tank 4 South, and Tank 5 South) were collected from the floor and sidewalls of the excavations and submitted to the laboratory for analysis of TPH concentrations. Soil sample Sample 4A was advanced in the West Excavation, in the area represented by soil sample Sample #4. Soil samples Tank 3 South, Tank 4 South, and Tank 5 South were located in the East Excavation, inside the containment area of the battery, to the south of the on-site storage tanks. Laboratory analytical results indicated TPH concentrations ranged from less than the laboratory method detection limit (MDL) of 10.0 mg/Kg in soil sample Sample 4A to 28,550 mg/Kg in soil sample Tank 5 South.

A delineation trench was advanced in the West Excavation, in the area represented by soil sample Sample #3. The trench was advanced to a total depth of approximately ten feet (10') bgs. A single soil sample (Sample 3A) was collected from the floor of the trench and submitted to the laboratory for analysis of TPH, BTEX, and chloride concentrations. Laboratory analytical results indicated the TPH concentration in soil sample Sample 3A was 36.6 mg/Kg, the chloride concentration was 4,800 mg/Kg, and BTEX constituent concentrations were less than the appropriate laboratory MDL.

Based on laboratory analytical results and field-screens, from October 21 through October 28, 2011, the West Excavation was backfilled in eighteen-inch (18") lifts, compacted, and contoured to fit the surrounding topography. Prior to backfilling, final dimensions of the excavation were

approximately forty-four feet (44') feet in length, approximately thirty-nine feet (39') feet in width, and approximately six feet (6') in depth.

On October 31, 2011, one (1) hand-augered soil bore was advanced at the western edge of West Excavation. A single confirmation soil sample (Sample #5) was collected from the soil bore and submitted to the laboratory for analysis of TPH and chloride concentrations. Laboratory analytical results indicated the TPH concentration in soil sample Sample #5 was less than the laboratory MDL of 10.0 mg/Kg, and the chloride concentration was 336 mg/Kg.

The East Excavation was backfilled with clean, crushed caliche to a depth approximately six inches (6") below the original ground surface. Prior to backfilling, three (3) soil samples (Tank 2 North, Tank 4 North, and Tank 5 North) were collected from the floor of the excavation and submitted to the laboratory for analysis of TPH concentrations. Laboratory analytical results indicated TPH concentrations were less than the laboratory MDL of 10.0 mg/Kg in all submitted soil samples.

From October 31 through November 9, 2011, to mitigate future releases, a new, steel-walled containment area was constructed around the Delaware B tank battery. The steel perimeter walls extend approximately two feet (2') above ground surface. A felt liner was installed in the floor of the new containment area, and the floor and perimeter walls were coated with an impermeable, spray-on polyurethane liner.

#### 4.0 QA/QC PROCEDURES

#### 4.1 Soil Sampling

Soil samples were delivered to Cardinal Laboratories, Inc., of 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 modified EPA Method SW-846 8015M
- Chloride concentrations in accordance with EPA Method SM 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

Contaminated soil at the Delaware B release site was excavated to the extent practicable. Soil samples collected from the floors and sidewalls of the Delaware B excavations were analyzed by an NMOCD-approved laboratory, and BTEX constituent concentrations were less than the remediation action levels (RRAL's) established for the site by the NMOCD. The floor and perimeter walls of the containment area surrounding the Delaware B were coated with an impermeable, spray-on polyurethane liner. This engineered control will inhibit the downward migration of contaminants in the areas represented by soil samples Sample #1, Sample 3A, Tank 4 South, and Tank 5 South. In-situ soil exhibiting contamination above the RRAL's established for the site will be remediated upon decommission and/or abandonment of the currently active tank battery.

Basin recommends BOPCO provide the NMOCD Artesia District Office and the BLM a copy of this *Remediation Summary & Risk-Based Site Closure Request* and request the NMOCD grant site closure to the Delaware B release site.

#### 6.0 LIMITATIONS

Basin Environmental Service Technologies, LLC, has prepared this *Remediation Summary & Risk-Based 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, New Mexico 88210

Copy 2: James Amos

Bureau of Land Management

602 E. Greene Street

Carlsbad, New Mexico 88220

Copy 3: Tony Savoie

BOPCO, LP

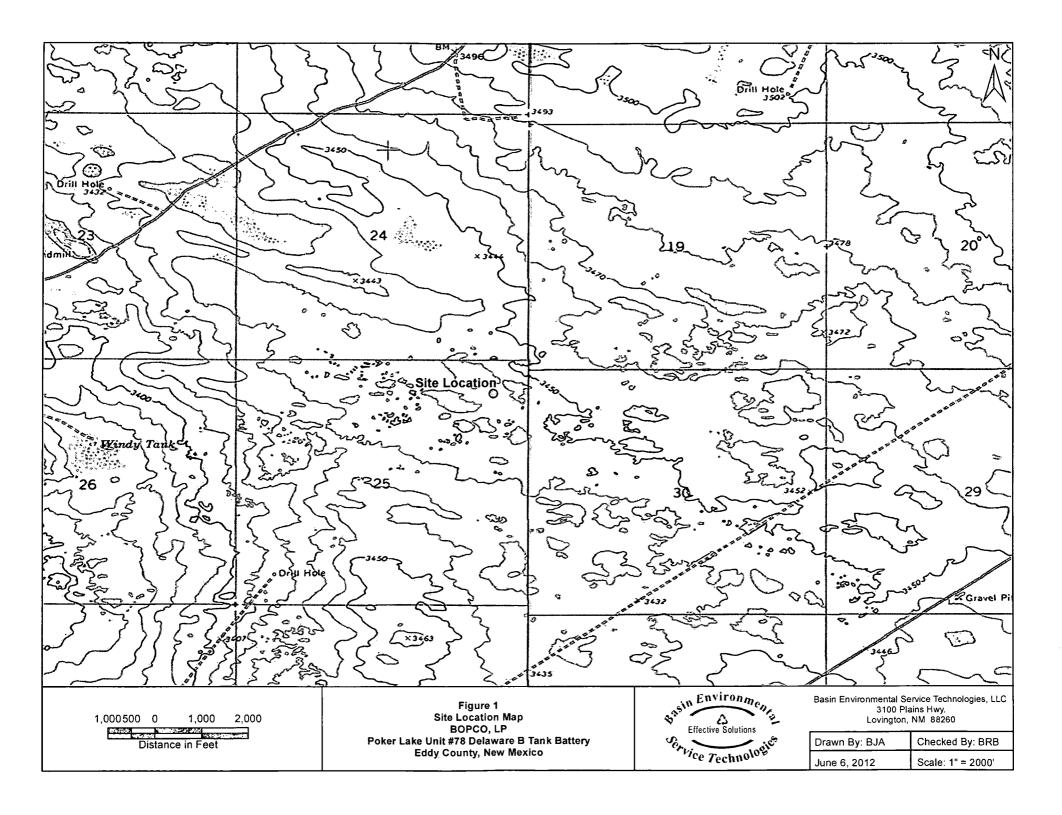
522 W. Mermod, Ste. 704 Carlsbad, New Mexico 88220

Copy 4: Basin Environmental Service Technologies, LLC

P.O. Box 301

Lovington, New Mexico 88260

**Figures** 



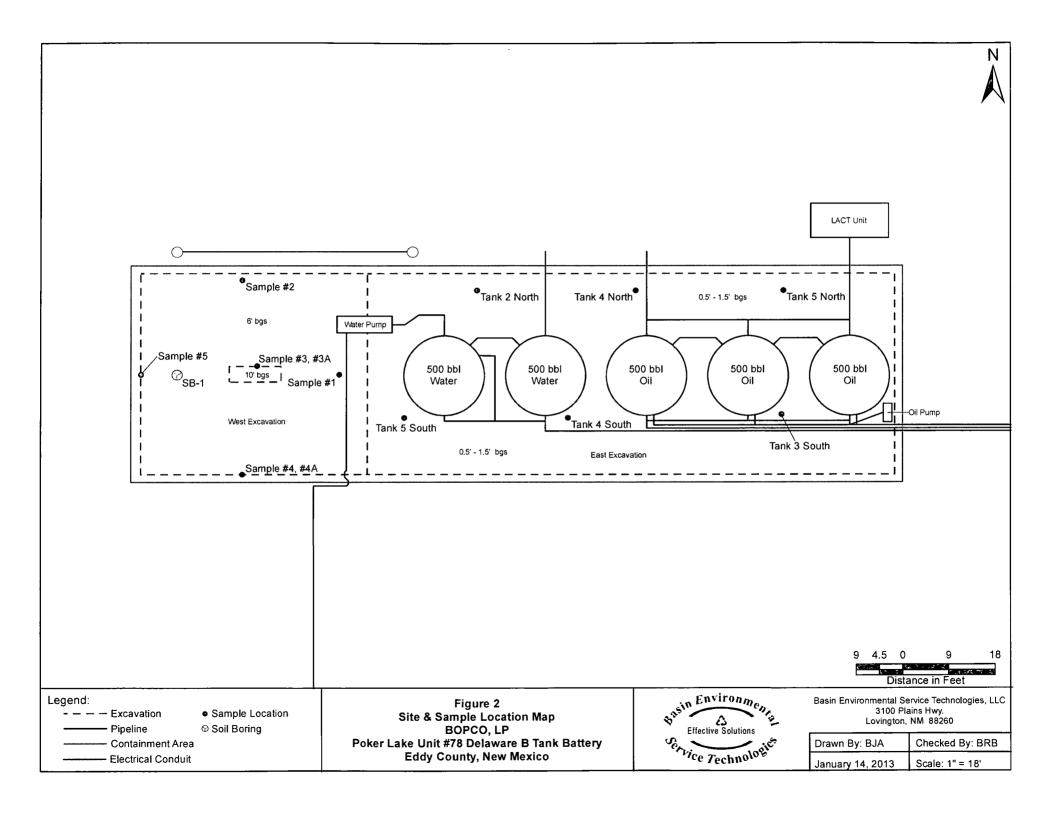




TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL

#### BOPCO, LP POKER LAKE UNIT #78 DELAWARE B TANK BATTERY EDDY COUNTY, NEW MEXICO

	T		l "		METHOD: EI	PA SW 846-80	21B, 5030		ME.	THOD: 801	5M	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 <sub>6</sub> -C <sub>12</sub> (mg/Kg)	DRO C <sub>12</sub> -C <sub>28</sub> (mg/Kg)	ORO C <sub>28</sub> -C <sub>35</sub> (mg/Kg)	TPH C <sub>6</sub> -C <sub>35</sub> (mg/Kg)	CHLORIDE (mg/Kg)
Background	Surface	05/25/10	In-Situ	-	-	-	-	-	-	-	-		<16.0
SB-1 @ 5'	5'	05/25/10	In-Situ	<0.050	0.131	0.321	1.72	2.172	19.4	107	<10.0	126.4	•
SB-1 @ 10'	10'	05/25/10	In-Situ	-	-	-	-	-	-	-	-	-	640
SB-1 @ 20'	20'	05/25/10	In-Situ	-	-	-	-	-	-	-	-		3,120
SB-1 @ 25'	25'	05/25/10	In-Situ	<0.050	<0.050	< 0.050	<0.300	<0.300	<10.0	32.8	<10.0	32.8	_
SB-1 @ 30'	30'	05/25/10	In-Situ	-	-	-	-	-	-	-	-		768
SB-1 @ 40'	40'	05/25/10	In-Situ	<0.050	<0.050	< 0.050	< 0.300	< 0.300	<10.0	<10.0	<10.0	<10.0	416
SB-1 @ 45'	45'	05/25/10	In-Situ	<0.050	<0.050	<0.050	<0.300	<0.300	<10.0	<10.0	<10.0	<10.0	416
Sample #1	1 1	10/14/2011	In-situ	-					3,200	7,970	640	11,810	
	1'	10/14/2011	In-situ	-			-	-	<10.0	12.2	<10.0	12.2	_
Sample #2	1'	10/14/2011	Excavated	-	-	<del></del>	-	-	690	1,380	90.1	2,160	_
Sample #3	1'	10/14/2011		<del></del>	-	-	-	-	239	1,600	116	1,955	<u>-</u>
Sample #4	1	10/14/2011	Excavated	•	•				239	1,000	110	1,955	-
Sample 3A	10'	10/20/2011	In-situ	<0.050	<0.050	<0.050	<0.150	<0.150	<10.0	36.6	<10.0	36.6	4,800
Sample 4A	6'	10/20/2011	In-situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	-
Tank 3 South	1.5'	10/20/2011	In-situ	-	-	-	-	-	<50.0	643	104	747	-
Tank 4 South	1.5'	10/20/2011	In-situ	-	-	-	-		1,440	19,300	1,510	22,250	-
Tank 5 South	1.5'	10/20/2011	In-situ	•	-	-	-	-	1,920	24,600	2,030	28,550	-
	ļ	10/04/0011							400	40.0	100	40.0	
Sample #5	4	10/31/2011	In-situ	-	-			-	<10.0	<10.0	<10.0	<10.0	336
Tank 2 North	1.5'	10/31/2011	In-situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	
Tank 4 North	1.5'	10/31/2011	In-situ	-	-	-	-		<10.0	<10.0	<10.0	<10.0	-
Tank 5 North	1.5'	10/31/2011	In-situ	•	-	-	ļ <u>-</u>	-	<10.0	<10.0	<10.0	<10.0	-
NMOCD Standard				10				50				5,000	1.000

<sup>- =</sup> Not analyzed.



# Appendix A Release Notification & Corrective Action (Form C-141)

(NMOCO)

Oil Conservation Division

District I 1 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District [1] 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 ECEIVED

Form C-141 Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

1220 South St. Francis Dr. MACCO ARTESIA Santa Fe. NM 87505

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Name of Co				<i>260737</i> ad, N.M. 88220		Contact Tor	iy Savoie No. 432-556-873	20						
				are B Tank Batte		acility Typ								
Surface Ow	nor Fodora	1		Mineral O	wner Fe	aderal			Lease N	Jo.				
Surface Ow	nei reueia	···							Lease	<u>NO.</u>				
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			I	Latitude_N 32.19	94069_	Longitu	de W 103.8276	14		<u> </u>				
	NATURE OF RELEASE  Type of Release: Produced water and crude oil  Volume of Release: 280 Bbls of Volume Recovered: 260 bbls of produced													
Type of Rele	ase: Produc	ed water and o	crude oil									duced		
Produced water and 5 Bbls of Crude oil  Source of Release: 300 bbl produced water tank overflow  Produced water and 5 Bbls of Crude oil  Date and Hour of Occurrence  Date and Hour of Discovery														
Source of Re	lease: 300 t	obl produced v	vater tank	overflow		Date and F Unkown	lour of Occurrence	e	Date and 5/13/10 8		overy			
Was Immedia	ate Notice (		Vec [	No □ Not Re	ouired	If YES, To	Whom? OCD on call oper	rotor						
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Was a Water		ched?					olume Impacting t		ercourse.					
			Yes 🗵	] No										
Describe Are around the ta selected insic approximatel sample result The Site rem	e. The pumer a Affected anks, the factle the contains a long with ediation for	and Cleanup Acility does not imment for an ow ground sur h a remediation the produced	Action Tal have impo air rotary face and s n plan and water and	n Taken.* The pro- ken.*The released ervious containmenting to advance a se sampled a 5 ft. intedicentainment upg I crude oil spill wi	fluid aff nt. The f oil bore t ervals for rade wil ll follow	ected an area rec standing to determine r TPH, BTE: I be submitte the NMOC	a of approximately fluids were removertical extent. T X and Chlorides. It to the NMOCD D guidelines for the	y 3,000 ved with he soil l Estimate ).	sq. ft insident a vacuum bore was aced depth to	e the earthen truck. On 5/2 dvanced to a c water is grea	containment 25/10 An area depth of ter than 400 f	n was		
I hereby certi regulations a public health should their cor or the environ	fy that the ill operators or the envionment. In a	information gi are required to ronment. The nave failed to a	ven above o report an acceptane dequately OCD accep	e is true and complete is true and complete of a C-141 report investigate and restance of a C-141 report investigate and restance of a C-141 report investigate.	lete to the elease no et by the emediate	e best of my otifications a NMOCD me contaminat	knowledge and und perform correct arked as "Final Rion that pose a three the operator of	indersta etive act eport" ( reat to g respons	nd that pur ions for rel loes not rel round wate ibility for c	eases which r ieve the opera er, surface wat compliance w	may endanger ator of liabilit ter, human he ith any other	r ty ealth		
Signature: Printed Name	e: Tony Sav	ony 2	auw	<del>-</del>		Approved by	OIL CON  District Supervis  Signed By	or:		DIVISIO	<u>N</u>			
Title: Waste	Mgmt.& Re	emediation Sp	ecialist			Approval Da	te: 3/3/11		Expiration Date:					
E-mail Addre	ess: TASav	oie@BassPet.	com	Phone:432-556-8	Conditions of Approval:  Remediation per OCD Rules & Guidelines. SUBMIT REMEDIATION PROPOSAL NOT LATER THAN:  Attached  Attached						<del>-</del>	2		
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District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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

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

RECEIVED

Form C-141 evised October 10, 2003

JUL 15 2010
Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

30-015-1	27536	; 1	Rele	ease Notific	ation	and Co	rrective A	ction	l					
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Facility Nar	ne Poker L	ake Unit #7	8 Delawa	are B Tank Batte	ery I	Facility Typ	e E&P							
Surface Ow	ner Federa	1		Mineral C	)wner F	ederal			Lease N	10 ·				
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I lmit I attan	Section	Toumshin	Donne	Feet from the		OF RE		I	Mark I inc	Country				
Unit Letter A	25	Township 24S	Range 30E	reet from the	North/	South Line	Feet from the	East/V	West Line	County Eddy				
	<u> </u>		I	l Latitude N 32.1	94069	Longitu	de W 103 8276	 514						
	NATURE OF RELEASE													
Tuno of Polo	Type of Release: Produced water.  Volume of Release: 90 Bbls of Volume Recovered: 80 bbls of produced													
Type of Keic	asc. Froduc	ed water.				Produced		S OI	water.	Recovered: 80 bbis of produced				
Source of Re	lease: 500 b	bl produced v	vater tank			Date and I	lour of Occurrence	e	Date and	Hour of Discovery				
Was Immedia	ata Matica (	Given?				Unkown If YES, To	11/19		7/7/10 10	:00 a.m.				
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Describe Are	a Affected a	and Cleanup .	Action Tal	ken.*The released	fluid aff	fected an are	a of approximately	y 2,000	sq. ft insid	e the earthen containment truck. On 5/25/10 An area was				
selected insid	le the conta	inment for an	air rotary	rig to advance a s	oil bore	to determine	vertical extent. T	he soil b	bore was ac	Ivanced to a depth of				
approximatel	y 45 ft. belo	ow ground sur	face and	sampled a 5 ft. into	ervals fo	r TPH, BTE	X and Chlorides. !	Estimate	ed depth to	water is greater than 400 ft. The				
sample result	s along with determine i	h a remediation	n plan an extent has	d containment upg migrated further (	grade wil	ll be submitte ice the 2 <sup>nd</sup> S	ed to the NMOCD	). We w	ill schedule	another sampling event in the				
The Site rem	ediation for	the produced	water and	d crude oil spill wi	ill follow	the NMOC	D guidelines for le	eaks and	d spills.					
I hereby certi	fy that the i	nformation g	ven abov	e is true and comp	lete to th	ne best of my	knowledge and u	ındersta	nd that pur	suant to NMOCD rules and				
regulations a	or the envi	are required t	o report a - acceptan	nd/or file certain r	clease no	otifications a	nd perform correc	ctive act	tions for rel	eases which may endanger ieve the operator of liability				
should their of	perations h	ave failed to	adequately	y investigate and r	emediate	c contaminat	ion that pose a thr	eat to g	round wate	r, surface water, human health				
or the enviro	nment. In a	ddition, NMC	CD accep	ptance of a C-141	report de	oes not reliev	e the operator of	respons	ibility for o	compliance with any other				
federal, state,	or local lay	ws and/or regi	ilations.				OIL CON	CEDY	ATION	DIVISION				
		9	>				OIL CON	<u>SER v</u>	ATION	DIVISION				
Signature:	1 94	DOM	<u>u</u>			Approved by	District Supervis	sqr: ,	1.1					
Printed Name	Tony Say	roie					Signed By	MI	14 DR	ATULER_				
Trinted Frank	v. 10119 011.						0/1/							
Title: Waste	Mgmt.& Re	emediation Sp	ecialist			Approval Da	te: 3/3///	Expiration	Date:					
E-mail Addre	ess: TASavo	oie@BassPet.	com			Conditions o	f Approval:							
							diation per OC	D Rule	es &	Attached				
Date: 7/14/10		-4 1CN		Phone:432-556-	8730		•							
' Attach Addi	tional She	ets II Necess	ary		Guidelines. SUBMIT REMEDIATION  PROPOSAL NOT LATER THAN:  20-8730  ARP 514					2RD 514				
							4/3/11			all' J'				

District I
1625 N. French Dr., Hobbs, NM 88240
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1000 Rio Brazos Road, Aztec, NM 87410
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1220 S. St. Francis Dr., Santa Fc, NM 87505

#### State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

			Rele	ease Notific	catio	on and Co	orrective A	ction						
						_OPERA	ГOR	■ Init	ial Report Final Repor					
Name of Co						Contact Tor								
				ad, N.M. 88220			No. 432-556-87.	30						
Facility Na	me Poker I	Lake Unit #7	/8 Delaw	are B Tank Batte	егу	Facility Typ	e E&P							
Surface Ow	ner Federa	al		Mineral C	Эwпег	Federal		Lease	No.					
÷				LOCA	\TIC	N OF REI	LEASE							
Unit Letter	Section	Township	Range	Feet from the		th/South Line	Feet from the	East/West Line	County					
A	25	248	30E						Eddy					
L.	<u> </u>	<u> </u>	J		0406									
			Ĺ	_atitude_N 32.1				) [4						
				NAT	URI	E OF RELI								
Type of Rele	ase: Crude	oil					Release: 40 Bbls	Bbls of Volume Recovered: 30 bbls.						
Source of Re	lease: 500 f	obl oil produc	tion tank			Date and F	lour of Occurrence	e Date and	Hour of Discovery					
			_			8/20/11 tin			8:00 a.m.					
Was Immedi	ate Notice (		Yes [	No Not Re	equire		If YES, To Whom? NMOCD emergency #104							
By Whom? 7						Date and 1	lour 8/20/11 11:0	7 a.m.						
Was a Water	course Read			7		If YES, Vo	lume Impacting t	the Watercourse.	TOPOCO (ED)					
			Yes 🗵						RECEIVED					
If a Watercon	urse was Im	pacted, Descr	ibe Fully.	<b>*</b>					AUG <b>2 2</b> 2011					
									NMOCD ARTESIA					
Describe Cau	ise of Probl	em and Reme	dial Actio	n Taken.* One of	the oi	production tan	iks overflowed. C	Cause unknown.						
Describe Are	a Affected	and Cleanup A	Action Tal	en *The spill was	s conta	nined within the	e earthen contains	ment around the t	ank battery, all of the free product					
was removed	with a vacu	rum truck.		crude oil spill wi					ane outcory, an or the nee product					
I hereby certi	ify that the i	nformation gi	iven above	is true and comp	lete to	the best of my	knowledge and u	inderstand that pu	rsuant to NMOCD rules and					
									leases which may endanger					
									lieve the operator of liability er, surface water, human health					
or the enviro	nment. In a	ddition, NMC	OCD accep	tance of a C-141	report	does not reliev	e the operator of	responsibility for	compliance with any other					
reuerai, state	, or local lav	ws and/or regu	nations.				OIL CON	SERVATION	NOISIVIO					
		. 0	0		İ		<u> </u>	<u>DESIGNATION</u>	1 101011					
Signature:	10	wy Za	mar			Approved by	District Supervise	or:						
Printed Name	e: Tony Sav	oie												
Title: Waste	Mgmt.& Re	emediation Sp	ecialist			Approval Dat	e:	Expiration	ı Date:					
E-mail Addre	ess: TASavo	oie@BassPet.	com	7.00		Conditions of	Approval:		Attached					
Date: 8/22/11	İ			Phone:432-556-8	8730									

<u>District 1</u>
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Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised October 10, 2003

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#### **Release Notification and Corrective Action**

				O	OPERATOR Initial R  Contact Tony Savoie  Contact Tony Savoie						X Fir	al Report	
Name of Co		BOPCO, LI											
				sbad, NM 88220			No. (432)556-87	730					
Facility Nar	ne Poker	Lake Unit #7	8 Delaw	are B Tank Batter	y   ]	Facility Typ	e E&P						
Surface Ow	ner Feder	ral		Mineral Ow	ner	Federal			Lease N	lo.			
				LOCAT	Oľ	N OF REI	LEASE						
Unit Letter	Section	Township	Range			South Line	Feet from the	East/V	Vest Line	County			
A	25	24S	30E							Eddy			
			<u>Latit</u>	ude 32.194069° N	Iorth		Longitude 10	4° West	1				
				NATU	RE	OF REL	EASE						
Type of Rele	ase Produc	ed water and	crude oil				Release: 280 bb	ls of	Volume F	Recovered:	260 bbl	s of	
"						•	vater and 5 bbls o	f	produced	water and	5 bbls of	crude oil	
C. SD.	200	1.1.1 1 1		0		crude oil	lour of Occurrenc		Data and		•		
Source of Re	lease 300	bbl produced	water tank	overnow		Unknown	iour of Occurrenc	e		Hour of D 0, 8:00 AM			
Was Immedi	ate Notice (	Given?				If YES, To	Whom?	1		2			
		ΧY	es No	Not Required		Randy, NN	AOCD on-call ope	erator					
By Whom?							lour 5/13/10, 10:						
Was a Water	course Read		] Yes Σ	( No		If YES, Vo	olume Impacting t	the Wate	ercourse.				
						<u> </u>			<del> </del>				
If a watercon	irse was im	pacted, Descr	ibe Fully.	•									
		em and Reme ump motor wa		n Taken:* The prod I.	uced	water tank ov	erflowed due to a	a pump i	nalfunction	n. The mai	n water ti	ransfer pump	
									ely 3,000 sq. ft inside the earthen contain were removed with a vacuum truck. Follower of Rick Route 18 10 10 10 10 10 10 10 10 10 10 10 10 10				
initial respor	ise activitie	s, the release	was remed	liated as per NMO0 ties and laboratory	CD gu	idelines. Ple	ase reference the	attached	Remediat				
I hereby cert	ify that the	information ;	given abov	ve is true and comp	lete to	the best of	my knowledge at	nd unde	rstand that				
				and/or file certain i ice of a C-141 repo									
should their	or the env	have failed to	adequatel	y investigate and re	media	tte contamina	tion that pose a tl	ar Kepor hreat to	ground wa	ter, surfac	e water, h	numan health	
or the enviro	nment. In	addition, NN	IOCD acc	eptance of a C-141									
federal, state	, or local la	ws and/or regu	llations.		ı		OH CON	CEDI	ATION	DIVIG	ION <sup>T</sup>		
	رميه	//					OIL CON	<u>SEKV</u>	AHON	DIVIS	<u>iUN</u>		
Signature:		-											
Printed Nam	ASTR	Ben 5	s. Argni	o Egent of BOPCO.	أفيا	Approved by	District Supervis	or:					
AST	Project			Environ mental	7-7								
Title: Wante	Mgod. 6	democraticus				Approval Da	te:	1	Expiration	Date:			
E-mail Addr	ess: TASav	oie@BassPet.	com <b>b</b>	incanijo Ebasines	vi co	©onditions o	f Approval:						
Date: 2/	14/13			o: (432)556-8730				Г	REC	EIV/F	=D		
Dutc. 6/	• 11 17		1 none	(806) 549-959	7				<u> </u>	7 () 1 1 1 B			
				G-7371-137	,.				FEB	1 4 20	13		
								1	MOC	D ART	ESIA	Tanada e	
								1	M Mar C			••	

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Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141
Revised October 10, 2003

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#### **Release Notification and Corrective Action**

				Contact Tony Savoie							X Fir	al Report		
Name of Co		BOPCO, LI				Contact To	ny Savoie							
				sbad, NM 88220			No. (432)556-8	730						
Facility Nan	ne Poker	Lake Unit #7	78 Delaw	are B Tank Batte	ry	Facility Typ	e E&P							
Surface Ow	ner Fede	ral		Mineral O	wner	Federal			Lease N	lo.				
				LOCA	TIO	N OF RE	LEASE		-					
Unit Letter	Section	Township	Range	Feet from the		South Line	Feet from the	East/\	West Line	County				
A	25	248	30E							Eddy				
	I		<u>Latit</u>	ude 32.194069°	North	ı	Longitude 10	3.827614° West						
				NAT	URE	OF REL	EASE							
Type of Rele	ase Produc	ed water					Release: 90 bbls	of	Volume F	Recovered:	80 bbls	of produced		
				,		produced v			water					
Source of Re	lease 500	bbl produced	water tank			Date and F Unknown	lour of Occurrenc	е		Hour of D 10:00 AM				
Was Immedia	ate Notice (	Given?		_		If YES, To	Whom?		1 11112010,	10.00 11.0	<u> </u>			
		ΧY	es No	Not Required		Randy, NN	OCD on-call ope	erator						
By Whom?							lour 7/7/10, 2:39							
Was a Watero	course Read		Yes >	( No		If YES, Vo	olume Impacting t	he Wate	ercourse.					
If a Watercou	ırse was Im	pacted, Descr	ibe Fully.*			!	_							
Describe Cau	ise of Prob	lem and Rem	edial Acti	on Taken:* A pin	e coni	nection on the	back of the wat	ater tank broke for reasons unknown. The 2" va						
between the t	ank and the	pump was cl	osed, stop	ping the flow of wa	ater. T	he connection	was later replace	d.	orone for	cusons un	ikiio wii.	1110 2 141110		
Dogoriho Ara	a Affactad	and Classia	A ation T	alaan # Tha malaas	- J G	.d - CC4 - 1		. 1 0	1000 6					
around the ta	nks. The fa	and Cleanup acility did not	have imp	aken.* The release ervious containme	ed Hui	the time. The	area or approxim	natery z ds were	2,000 sq. 11 removed s	inside the	eartnen	containment k Following		
initial respons	se activities	s, the release v	vas remed	iated per NMOCD	guide	elines in conju	nction with a rele	ase that	occurred o	n 5/13/10	and affect	ted the same		
area. Please r	eference th	e attached Rei	nediation	Summary & Risk-I	Based	Site Closure I	Request for details	of rem	ediation ac	tivities and	d laborate	ry analytical		
I hereby cert	onfirmation of the	n soil samples information	ziven abor	ve is true and com	nlete i	to the best of	my knowledge a	nd unde	erstand that	nursuant	to NMO	D rules and		
regulations a	ll operators	are required	to report	and/or file certain	releas	se notification	s and perform co	rrective	actions for	r releases,	which m	nay endanger		
public health	or the env	ironment. Th	e acceptai	nce of a C-141 rep	ort by	the NMOCD	marked as "Fina	l Repor	rt" does not	relieve th	ie operato	or of liability		
or the enviro	operations in	nave railed to	adequater	y investigate and reptance of a C-14	emedi:	ate contamina	tion that pose a the	reat to	ground war	ter, surfac	e water, h	th any other		
federal, state,	or local la	ws and/or regu	lations.	eptance of a C-14	Терс	on does not n	eneve the operate	n or res	sponsionity	ioi comp	Traffice wi	illi aliy otilci		
	_	//					OIL CON	SERV	ATION	DIVISI	<u>iON</u>			
Signature:	19/1	n												
Printed Name	. To the	Sen.	5. An	niso Casento	(م)	Approved by	District Supervis	or:						
65/A	15011			Prosect Manag	1	1. 15			<b>.</b>	<b>.</b>				
Title: Meste						Approval Da			Expiration	Date:				
E-mail Addre	,	oie@BassPet.	com <b>b</b> j	acgnizo & basinea	Vi COT	*Conditions of	f Approval:							
Date: 2/14	/13		Phone	: (432)556-8730								1		
				(806) 549-99	97				REC	EIV	ED			
								Ì	בבט	<b>1 4</b> 20	113	1		
									i ED	17 (0	10	<u> </u>		
									NMOC	D ART	ESIA			

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### State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Revised October 10, 2003 Submit 2 Copies to appropriate

Form C-141

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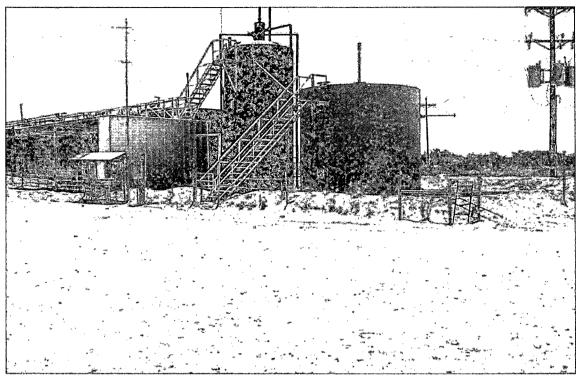
FEB **14** 2013

NMOCD ARTESIA

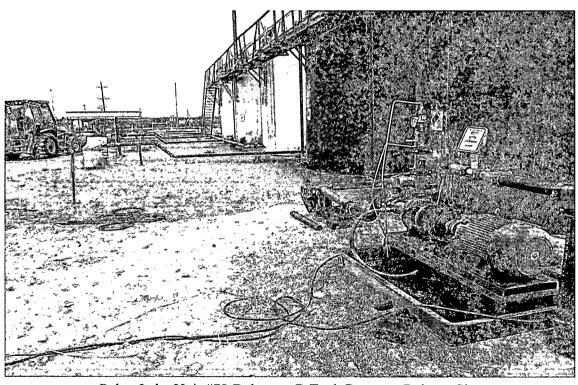
#### **Release Notification and Corrective Action**

	OPERATOR Initial Report X Final Report  The state of Company BOPCO, LP Contact Tony Savoie  Idress 522 W. Mermod, Suite 704, Carlsbad, NM 88220 Telephone No. (432)556-8730													
Name of Co	mpany	BOPCO, LI	>			Contact To	ony Savoie			•				
Address 5	22 W. Me	rmod, Suite	704, Carl	sbad, NM 8822	0	Telephone N	No. (432)556-8'	730						
Facility Nan	ne Poker	Lake Unit #7	78 Delaw	are B Tank Batte	ery	Facility Typ	e E&P							
Surface Ow	Fada	1		Mineral O		Federal			Lr >	т				
Surface Ow.	nei redei	ıaı		Milleral O	wilei	rederai			Lease N	NO.				
						N OF REI				1				
Unit Letter	Section	Township	Range	Feet from the	Nortl	h/South Line	Feet from the	East/W	Vest Line	County				
Α	25	24S	30E							Eddy				
											•			
			Latit	ude 32.194069°	North	•	Longitude 102	3 82761	14º West					
			Laut				-	3.02/01	14 W 681					
Type of Release: Crude Oil  NATURE OF RELEASE  Volume of Release: 40 bbls of Volume Recovered: 30 bbls of crude oil														
Type of Release: Crude Oil  Volume of Release: 40 bbls of crude oil  Source of Release: 500 bbl oil production tank  Volume Recovered: 30 bbls of crude oil  Date and Hour of Occurrence:  Date and Hour of Discovery:														
Source of Re	lease: 500	bbl oil produc	ction tank			Date and I-	lour of Occurrenc	e:	Date and	Hour of Di	scovery:			
117 1 1		3' 0					time unknown		8/20/2011	1, 8:00 AM				
Was Immedia	ite Notice (		es No	Not Required		If YES, To	Whom? mergency #104							
Dr. Whom?	Ta Ca							1.07.11	•					
By Whom? Was a Water					_		Jour 8/20/2011, 1 blume Impacting t							
was a water	ourse read		Yes X	. No		11 125, 10	nume impacting t	iic wat	reourse.					
If a Watercou	irse was Im	pacted, Descri	ibe Fully.*	<u> </u>					<del></del>	···				
		,												
Describe Cau	se of Probl	em and Remed	dial Action	Taken:* One of	the oil	production tar	nks overflowed. C	'auce unl	known					
						•								
Describe Are	a Affected	and Cleanup	Action T	aken.* The spill	was c	ontained withi	n the earthen cor	ntainmer	t around t	the tank ba	tery. All of the free			
two others re	removea w leases that	occurred on 5	truck. Foi /13/10 & '	lowing initial resp	onse a	activities, the i	elease was remed	liated pe	er NMOCL	) guidelines	s in conjunction with ry & Risk-Based Site			
							om confirmation :			ин зитта	ry & Risk-Dasea Site			
I hereby certi	fy that the	information g	given abov	e is true and con	plete	to the best of	my knowledge ar	nd under	rstand that	pursuant to	NMOCD rules and			
regulations a	ll operators	are required	to report	and/or file certain	relea	se notification	s and perform co	rrective	actions for	r releases,	which may endanger			
public health	or the env	ironment. Th	e acceptar	ice of a C-141 rep	port by	y the NMOCD	marked as "Fina	d Report	t" does not	t relieve the	operator of liability			
or the enviro	pperations r nment In	addition NM	adequatery	/ investigate and i	remeai 11 ren	ort does not re	tion that pose a tr	reat to	ground wat	ter, surface	water, human health iance with any other			
		ws and/or regu		optance of a C-1-	vi iep	ort does not n	cheve the operate	n or ics	ponsionity	ioi compi	ance with any other			
<u> </u>							OIL CON	SERV	ATION	DIVISION	ON			
Signature:	19/1		_											
•	155	n	<del>-</del>	lagent of	7	Approved by	District Supervise	or:						
Printed Name			J. Argn	<u> </u>	ip)			<u> </u>						
Title: Approval Date: Expiration Date:														
E-mail Addre	ss: TASavo	oie@BassPet.o	com h	To Comin Abs an	رعادی (	onditions of	f Annroval·							
_	1.41.	2.269.24307 01.1		7 7 7 7 7 7 7	ENE C	onditions of	ipprovai.							
Date: 2	114/13		Phone	: (432)556-8730						<u> </u>				
				(806)549-95	7/				ECE	IVE	1			

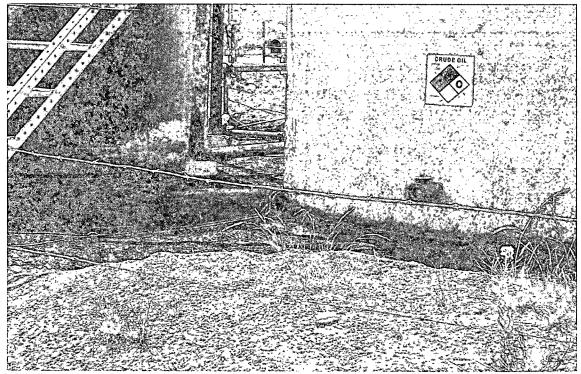
## Appendix B Photographs



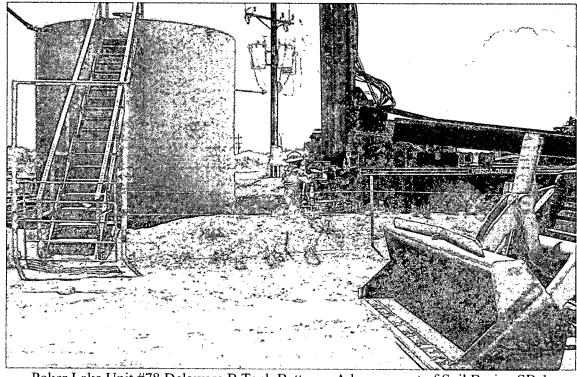
Poker Lake Unit #78 Delaware B Tank Battery



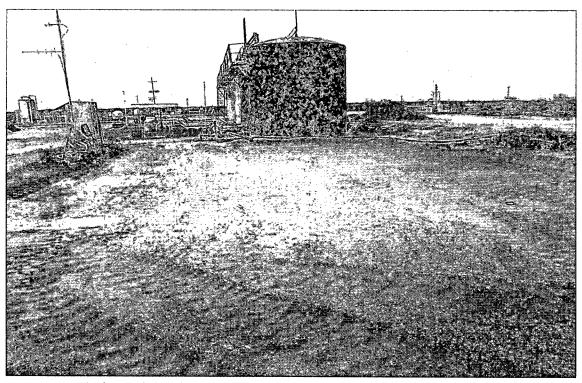
Poker Lake Unit #78 Delaware B Tank Battery - Release Site



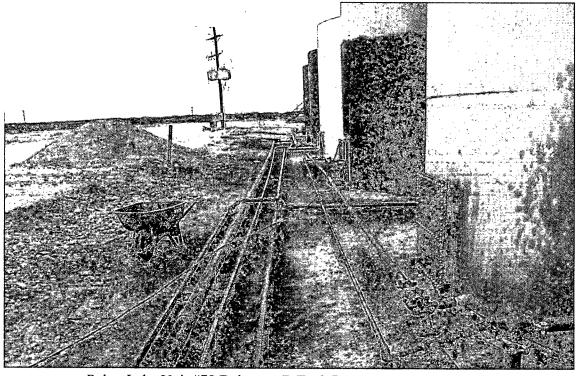
Poker Lake Unit #78 Delaware B Tank Battery - Release Site



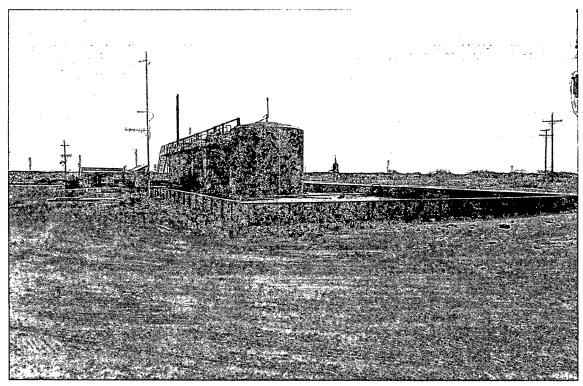
Poker Lake Unit #78 Delaware B Tank Battery - Advancement of Soil Boring SB-1



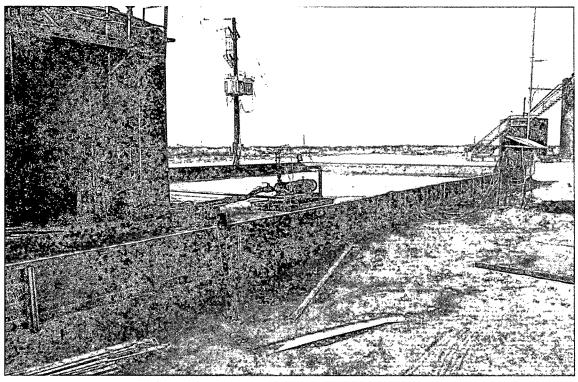
Poker Lake Unit #78 Delaware B Tank Battery - West Excavation (Following Backfill, Looking East)



Poker Lake Unit #78 Delaware B Tank Battery - East Excavation (Following Backfill, Looking West)



Poker Lake Unit #78 Delaware B Tank Battery - New Containment Area



Poker Lake Unit #78 Delaware B Tank Battery -New Containment Area & Polyurethane Liner

Depth below					So	il Boring SB-1
ground surface	Soil Columns	Chloride Field Test	PID t Reading	Petroleum F Odor	Petroleum Stain	Soil Description
E°		>2,500	162	Moderate	Heavy	0-5' - Caliche, Tannish, dry
-5 - - - - - 10		924 527	(69.4)	None	Slight	5-10' - Sand with caliche, tan, dry
Ē				None	None	10-15' - Sand, reddish brown, fine grained, damp
- 15 		>2500	(44.3) (62.3)	None	None	15-20' - Sand and sandstone, reddish brown, fine grained, damp
25		1,244	(45.9)	None	None	20-25' - Sand with sandstone, tan, dry
E		480	(55.9)	None	None	
35		220	54.6	None	None	25-45' - Sand, reddish brown, fine grained, dry
		(188)	(52.6)	None	None	
E <sub>45</sub>		188	41.7	None	None	

#### Boring SB-1

Date I	Drilled May 25, 2010
Thick	ness of Bentonite Seat 45 Ft
Depth	of Exploratory Boring 45 Ft bgs
Depth	to Groundwater
Groun	nd Water Elevation
▼	Indicates the PSH level measured
<u>v</u>	on
_	on Indicates the groundwater level measured on
_	on Indicates the groundwater level

#### Completion Notes

- The soil boring was advanced on date using air rotary drilling techniques.
   The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.

BOPCO

Delaware "B" Tank Battery Eddy County, New Mexico

Basin Environmental Consulting

Checked By: CJB Prep By: JWL June 24, 2010

## Appendix D Laboratory Analytical Reports



June 3, 2010

Camille Bryant
Basin Environmental Consulting, LLC.
P.O. Box 381
Lovington, NM 88260

Re: Delaware B (BOPCO)

Enclosed are the results of analyses for sample number H19993, received by the laboratory on 05/28/10 at 8:20 am.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021

Benzene, Toluene, Ethyl Benzene, and Total Xylenes

Method SW-846 8260

Benzene, Toluene, Ethyl Benzene, and Total Xylenes

Method TX 1005

Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accredited though 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 524.2

Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 4 (includes Chain of Custody)

Sincerely.

Laboratory Director



ANALYTICAL RESULTS FOR BASIN ENVIRONMENTAL CONSULTING, LLC

ATTN: CAMILLE BRYANT

P.O. BOX 381

LOVINGTON, NM 88260 FAX TO: (575) 396-1429

Receiving Date: 05/28/10 Reporting Date: 06/02/10 Project Owner: BOPCO

Project Name: DELAWARE B

Project Location: EDDY CO., NM

Analysis Date: 06/01/10 Sampling Date: 05/25/10 Sample Type: SOIL

Sample Condition: COOL & INTACT @ -4°C

Sample Received By: JH

Analyzed By: HM

CI LAB NO. SAMPLE ID (mg/kg) H19993-1 **BACKGROUND** < 16 H19993-3 SB-1 @ 10' 640 H19993-4 SB-1 @ 20' 3,120 H19993-6 SB-1 @ 30' 768 H19993-7 SB-1 @ 40' 416 H19993-8 SB-1 @ 45' 416 **Quality Control** 500 True Value QC 500 % Recovery 100 Relative Percent Difference < 0.1

METHOD: Standard Methods 4500-Cl<sup>-</sup>B

Note: Analyses performed on 1:4 w:v aqueous extracts.

Not accredited for Chloride.

Chemist

Date



ANALYTICAL RESULTS FOR

BASIN ENVIRONMENTAL CONSULTING, LLC

ATTN: CAMILLE BRYANT

P.O. BOX 381

LOVINGTON, NM 88260 FAX TO: (575) 396-1429

Receiving Date: 05/28/10 Reporting Date: 06/01/10

Project Owner: BOPCO

Project Name: DELAWARE B Project Location: EDDY CO., NM

Sampling Date: 05/25/10

Sample Type: SOIL

Sample Condition: COOL & INTACT @ -4 °C

Sample Received By: JH Analyzed By: AB/ZL

GRO DRO DRO ext. **ETHYL** TOTAL (>C10-C28) (>C28-C35) BENZENE TOLUENE BENZENE XYLENES  $(C_6-C_{10})$ LAB NO. SAMPLE ID (mg/kg) (mg/kg) (mg/kg) (mg/kg) (mg/kg) (mg/kg) (mg/kg)

	(33)	(33)	(3/3)	(55)	(99)	(99)	(55)
ANALYSIS DATE:	05/28/10	05/28/10	05/28/10	05/28/10	05/28/10	05/28/10	05/28/10
H19993-2* SB-1 @ 5'	19.4	107	<10.0	<0.050	0.131	0.321	1.72
H19993-5 SB-1 @ 25'	<10.0	32.8	<10.0	<0.050	<0.050	<0.050	<0.300
H19993-7 SB-1 @ 40'	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.300
H19993-8 SB-1 @ 45'	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.300
Quality Control	469	435	-	0.019	0.020	0.022	0.066
True Value QC	500	500	-	0.020	0.020	0.020	0.060
% Recovery	93.8	87.0	-	95.0	100	110	110
Relative Percent Difference	0.5	7.2	-	4.2	1.7	9.3	11.9

METHODS: TPH GRO & DRO - EPA SW-846 8015 M; BTEX - SW-846 8021B.

TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE, AND TOTAL XYLENES. Reported on wet weight. Not accredited for GRO/DRO/DRO ext.

\*One or more TPH surrogates outside historical limits due to matrix interference.

Lab Director

Date

## ARDINAL LABORATORIES 101 East Marland, Hobbs, NM 88240

#### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Nam	pany Name: Basin Consulting ect Manager: Camille Bryant						T			<i>(</i> 2)	ILL TO			**********			۸۱۸۸	LYSI	C DE	OUE	CT			
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<sup>†</sup> Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476



October 25, 2011

BEN J. ARGULJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: DELAWARE B

Enclosed are the results of analyses for samples received by the laboratory on 10/19/11 15:30.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021

Benzene, Toluene, Ethyl Benzene, and Total Xylenes

Method SW-846 8260

Benzene, Toluene, Ethyl Benzene, and Total Xylenes

Method TX 1005

Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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 (V2, V3)

Accreditation applies to public drinking water matrices.

Celey D. Keena

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 BEN J. ARGUIJO P.O. Box 301 Lovington NM, 88260 Fax To: (575) 396-1429

Received:

10/19/2011

Reported: Project Name: 10/25/2011 DELAWARE B NONE GIVEN

Project Number: Project Location:

NOT GIVEN

Sampling Date:

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

10/14/2011

Sample Received By:

Jodi Henson

#### Sample ID: SAMPLE #1 (H102263-01)

TPH 8015M	mg/kg		Analyzed By: AB						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	3200	50.0	10/22/2011	ND	182	91.1	200	3.87	
DRO >C10-C28	7970	50.0	10/22/2011	ND	172	86.1	200	4.36	
EXT DRO >C28-C35	640	50.0	10/22/2011	ND					
Surrogate: 1-Chlorooctane	128 %	6 55.5-15	4						
Surrogate: 1-Chlorooctadecane	106 %	6 57.6-15	8						

#### Sample ID: SAMPLE #2 (H102263-02)

TPH 8015M  Analyte	mg/kg		Analyzed By: AB						
	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/22/2011	ND	182	91.1	200	3.87	
DRO >C10-C28	12.2	10.0	10/22/2011	ND	172	86.1	200	4.36	
EXT DRO >C28-C35	<10.0	10.0	10/22/2011	ND					
Surrogate: 1-Chlorooctane	94.7 %	6 55.5-15	4						
Surrogate: 1-Chlorooctadecane	101 %	57.6-15	8						

\*=Accredited Analyte Cardinal Laboratories

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any daim 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 whistoever 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.

Celey D. Keene



#### Analytical Results For:

Basin Environmental Service BEN J. ARGUIJO P.O. Box 301 Lovington NM, 88260

Fax To:

(575) 396-1429

Received: Reported: 10/19/2011

10/25/2011

Project Name: Project Number: DELAWARE B NONE GIVEN

Project Location:

NOT GIVEN

Sampling Date:

10/14/2011

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: SAMPLE #3 (H102263-03)

TPH 8015M  Analyte	mg/kg		Analyzed By: AB				_		
	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	690	10.0	10/22/2011	ND	182	91.1	200	3.87	
DRO >C10-C28	1380	10.0	10/22/2011	ND	172	86.1	200	4.36	
EXT DRO >C28-C35	90.1	10.0	10/22/2011	ND					
Surrogate: 1-Chlorooctane	99.9 9	% 55.5-15	4						

Surrogate: 1-Chlorooctane

Surrogate: 1-Chlorooctadecane

106 %

57.6-158

#### Sample ID: SAMPLE #4 (H102263-04)

TPH 8015M  Analyte	mg/kg		Analyzed By: AB						
	Result	Reporting Limit	Analyzed	Method Blank	BS % Reco	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	239	10.0	10/22/2011	ND	182	91.1	200	3.87	
DRO >C10-C28	1600	10.0	10/22/2011	ND	172	86.1	200	4.36	
EXT DRO >C28-C35	116	10.0	10/22/2011	ND					
Surrogate: 1-Chlorooctane	102 %	55.5-15	4						
Surrogate: 1-Chlorooctadecane	93.0 %	6 57.6-15	8						

#### Cardinal Laboratories

\*=Accredited Analyte

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 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

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 clients 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 waved 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 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. Keene



# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name	npany Name: Busin Environmentel Service Technolo ject Manager: Ben J Arguijo										ILL TO					***************************************	ANA	LYS	S R	QUE	ST			
Project Manage	r: Ben J Arguijo							P.	0. #:															
Address: 20.	BOX 301							Cc	mpa	ny:	BOPCO,	LP			İ		İ							
City: Louin	State: NM 5\396-2378 Fax #:(575	Zip	o: 6	82	260			Αt	tn: ^	Ton	y Sauoiz													
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November 06, 2011

BEN J. ARGUIJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: DELAWARE B

Enclosed are the results of analyses for samples received by the laboratory on 10/20/11 16:20.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021

Benzene, Toluene, Ethyl Benzene, and Total Xylenes

Method SW-846 8260

Benzene, Toluene, Ethyl Benzene, and Total Xylenes

Method TX 1005

Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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 (V2, V3)

Accreditation applies to public drinking water matrices.

Celey D. Keine

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



Basin Environmental Service BEN J. ARGUIJO P.O. Box 301 Lovington NM, 88260

Fax To:

(575) 396-1429

Received: Reported: 10/20/2011

11/06/2011

Project Name: Project Number: **DELAWARE B** NONE GIVEN

Project Location:

EDDY CO., NM

Sampling Date:

10/20/2011

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Jodi Henson

## Sample ID: SAMPLE 3A 10' BGS (H102279-01)

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	11/02/2011	ND	2.23	112	2.00	1.14	
Toluene*	<0.050	0.050	11/02/2011	ND	2.17	109	2.00	2.23	
Ethylbenzene*	<0.050	0.050	11/02/2011	ND	2.12	106	2.00	2.41	
Total Xylenes*	<0.150	0.150	11/02/2011	ND	6.37	106	6.00	3.43	
Surrogate: 4-Bromofluorobenzene (PIL	87.7	% 64.4-13	4						
Chloride, SM4500CI-B	mg/	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4800	16.0	11/06/2011	ND	464	116	400	3.51	
TPH 8015M	mg/	/kg	Analyze	d By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/23/2011	ND	181	90.6	200	3.21	
DRO >C10-C28	36.6	10.0	10/23/2011	ND	167	83.5	200	3.42	
EXT DRO >C28-C35	<10.0	10.0	10/23/2011	ND					
Surrogate: 1-Chlorooctane	100	% 55.5-15	4						
Surrogate: 1-Chlorooctadecane	103	% 57.6-15	8						

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 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.

Celuy D. Kuna



Basin Environmental Service BEN J. ARGUIJO P.O. Box 301 Lovington NM, 88260

Fax To:

(575) 396-1429

Received:

10/20/2011

Reported:

11/06/2011 DELAWARE B

Project Name: Project Number: Project Location:

NONE GIVEN EDDY CO., NM Sampling Date:

10/20/2011

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

# Sample ID: SAMPLE 4A 6' BGS (H102279-02)

TPH 8015M	mg/k	kg	Analyze	d By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/23/2011	ND	181	90.6	200	3.21	
DRO >C10-C28	<10.0	10.0	10/23/2011	ND	167	83.5	200	3.42	
EXT DRO >C28-C35	<10.0	10.0	10/23/2011	ND					
Surrogate: 1-Chlorooctane	92.8 %	6 55.5-15	4						
Surrogate: 1-Chlorooctadecane	104 %	57.6-15	8						

### **Sample ID: TANK 5 SOUTH (H102279-03)**

TPH 8015M	mg,	/kg	Analyze	d By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	10/23/2011	ND	181	90.6	200	3.21	
DRO >C10-C28	643	50.0	10/23/2011	ND	167	83.5	200	3.42	
EXT DRO >C28-C35	104	50.0	10/23/2011	ND					
Surrogate: 1-Chlorooctane	99.3	% 55.5-15	4			10.0			
Surrogate: 1-Chlorooctadecane	108	% 57.6-15	8						

#### 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 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 limitation, business interruptions, loss of use, or loss of profits incurred by clernt, 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.

Celey D. Keene



Basin Environmental Service BEN J. ARGUIJO P.O. Box 301 Lovington NM, 88260

Fax To: (575) 396-1429

Received:

10/20/2011

Reported:

11/06/2011 DELAWARE B

Project Name: Project Number: Project Location:

NONE GIVEN EDDY CO., NM Sampling Date:

10/20/2011

Sampling Type:

Soil

 ${\bf Sampling\ Condition:}$ 

Cool & Intact

Sample Received By:

Jodi Henson

## Sample ID: TANK 4 SOUTH (H102279-04)

TPH 8015M	mg/l	(g	Analyze	d By: AB					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	1440	100	10/23/2011	ND	181	90.6	200	3.21	
DRO >C10-C28	19300	100	10/23/2011	ND	167	83.5	200	3.42	
EXT DRO >C28-C35	1510	100	10/23/2011	ND					
Surrogate: 1-Chlorooctane	172 %	55.5-15	4						
Surrogate: 1-Chlorooctadecane	95.3 %	6 57.6-15	8						

#### Sample ID: TANK 3 SOUTH (H102279-05)

TPH 8015M	mg/	kg	Analyze	d By: AB					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	1920	100	10/23/2011	ND	181	90.6	200	3.21	
DRO >C10-C28	24600	100	10/23/2011	ND	167	83.5	200	3.42	
EXT DRO >C28-C35	2030	100	10/23/2011	ND					
Surrogate: 1-Chlorooctane	204 9	% 55.5-15	4						
Surrogate: 1-Chlorooctadecane	112 9	% 57.6-15	8						

Cardinal Laboratories \*=Accredited Analyte

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Celeg D. Keene



#### **Notes and Definitions**

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

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



# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name	Basin Environmental Service	Techno	logies LLC	BI	LL TO	4F F	:	-			ANA	LYSI	S RE	QUE	ST		
Project Manage	r: Ben J Arguijo		J	P.O. #:		A					T						
Address: ?	D. Box 301			Company: )	Bapco L	P											
	vington State: 77	Zip: 8	8260	Attn: Ton	y Savoi	e											
	396-2378 Fax #:(575)			Address: 5										1	1		
Project #:	Project Owns			City: Car			1										
Project Name:				State: NM		27D											
	1: EDDY WM.			Phone #:( 4;													
1	Jody Walters			Fax #:				Ъ,							]		
FOR LAB USE ONLY		TIT	MATRIX	PRESERV	SAMPL	NG	1	BEER									
		(C)OMP	VTER ER			:		12 FOR									
Lab I.D.	Sample I.D.	AB OR (	GROUNDWATER WASTEWATER SOIL OIL SLUDGE	OTHER: ACID/BASE: ICE / COOI.			Boism	Ft Hold									
H102-279		G)R/	SOIL SOIL SILUD	ACID/BA ICE / CO OTHER	DATE	! TIME	8	圈			İ			1			
- 1	Samole 3A 10' BAS	G	K ,	$\frac{y}{x}$	10.20-11	10:00	~	~									
7_	Sample 3A 10'B65 Sample 4A 6' B65 Tank 5 South Tunk \$4 South	61	y	у	10-20-11		X	У								 	
3	Tank 5 South	61	i x	γ	10-20-11	1:00	X	Y								 	
4	Tank \$4 south	61	x	Y,	10-20-11	1:10	ΙX	K								 	
.5	Tank 3 South	61	Y	X	10-20-11	1:20	X	¥									
		<u>.</u>														 	
DI FASE NOTE, 1 Station	nd Damages. Cardinal's liability and client's exclusive remody for	anu elsim asiai	no uh mar karad in sentrad	as and whall be limited	to the amount of	d by the sizer fu	( the		-		<u></u>				<u> </u>	 	
analyses. All claimy includi	ng those for negligence and any other cause whatsoever shall be ardinas be liable for incidental or consequental damages, include	deemed walv	ed unless made in writing and	d received by Cardinal	within 30 days aft	ır completion of t	he applicat	le									
	ng out of prirelated to the performance of services hereunder by	Cardinal, regar					se.	☐ Yes		No	Addi	Phone	#:			 	
lood in	) a Tirrey: 20	W.	di Ne	u)HA		Fax Resul REMARKS	lt:	□ Yes			I'bbA					 , ,	
Relinquished B	/: Date:	Beceiv	ved By:														
1/0	Time:	1															
Delivered By	(Circle One)		Sample Conditi	ion CHECK	(ED BY:												
Sampler - UPS	- Bus - Other:	3º	Cool Intact Yes Yes		tials)		On the same are small			,						 	



November 06, 2011

BEN J. ARGUIJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: DELAWARE B

Enclosed are the results of analyses for samples received by the laboratory on 11/01/11 16:12.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021 Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260 Benzene, Toluene, Ethyl Benzene, and Total Xylenes

Method TX 1005 Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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 (V2, V3)

Accreditation applies to public drinking water matrices.

Celeg 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



Basin Environmental Service BEN J. ARGUIJO P.O. Box 301 Lovington NM, 88260 (575) 396-1429

Fax To:

Sampling Date:

10/31/2011

Received: Reported: 11/01/2011 11/06/2011

Sampling Type:

Soil Cool & Intact

Project Name:

**DELAWARE B** NONE GIVEN

Sampling Condition:

Project Number: Project Location:

EDDY CO., NM

Sample Received By:

Jodi Henson

### Sample ID: SAMPLE #5 (H102369-01)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	11/04/2011	ND	448	112	400	3.64	
TPH 8015M	mg	/kg	Analyze	d By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/05/2011	ND	162	81.1	200	2.02	
DRO >C10-C28	<10.0	10.0	11/05/2011	ND	169	84.6	200	5.33	
EXT DRO >C28-C35	<10.0	10.0	11/05/2011	ND					
Surrogate: 1-Chlorooctane	103	% 55.5-15	4						
Surrogate: 1-Chlorooctadecane	123	% 57.6-15	8						

### Sample ID: TANK 2 NORTH (H102369-02)

TPH 8015M	mg,	/kg	Analyze	d By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/05/2011	ND	162	81.1	200	2.02	
DRO >C10-C28	<10.0	10.0	11/05/2011	ND	169	84.6	200	5.33	
EXT DRO >C28-C35	<10.0	10.0	11/05/2011	ND					
Surrogate: 1-Chlorooctane	111	% 55.5-15	4						
Surrogate: 1-Chlorooctadecane	141	% 57.6-15	8						

### Cardinal Laboratories

\*=Accredited Analyte

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Celeg & Keene



Basin Environmental Service BEN J. ARGUIJO P.O. Box 301 Lovington NM, 88260

Fax To: (575) 396-1429

Received:

11/01/2011 11/06/2011 Sampling Date: Sampling Type: 10/31/2011

Soil

Reported: Project Name: **DELAWARE B** NONE GIVEN

Sampling Condition:

Cool & Intact

Project Number: Project Location:

EDDY CO., NM

Sample Received By:

Jodi Henson

### Sample ID: TANK 4 NORTH (H102369-03)

TPH 8015M	mg/	/kg	Analyze	d By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/05/2011	ND	162	81.1	200	2.02	
DRO >C10-C28	<10.0	10.0	11/05/2011	ND	169	84.6	200	5.33	
EXT DRO >C28-C35	<10.0	10.0	11/05/2011	ND					
Surrogate: 1-Chlorooctane	111 9	% 55.5-15	4					-	
Surrogate: 1-Chlorooctadecane	130 9	% 57.6-15	8						

### Sample ID: TANK 5 NORTH (H102369-04)

TPH 8015M	mg/i	(g	Analyze	d By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/05/2011	ND	162	81.1	200	2.02	
DRO >C10-C28	<10.0	10.0	11/05/2011	ND	169	84.6	200	5.33	
EXT DRO >C28-C35	<10.0	10.0	11/05/2011	ND					
Surrogate: 1-Chlorooctane	111%	55.5-15	4						
Surrogate: 1-Chlorooctadecane	134 %	57.6-15	8						

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keine



ND

### **Notes and Definitions**

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

Analyte NOT DETECTED at or above the reporting limit

Cardinal Laboratories \*=Accredited Analyte

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Celeg D. Keene



## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name	ompany Name: Busin Empleonmental Services Techolosis Li oject Manager: Ben J. Aguijo						·.c.			B	ILL TO	)			***************************************	*****		ANA	LYSI	S RE	QUE	ST	Warran 1 W / Lon	 
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Phone #: (5 75	396-2378	Fax #: 575 - 3	96	142	9			A	ddre	ss: 5	27. W.	M	ermod			,					ł			
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Project Name:								St	ate:	<b>7</b> (7/1)	Zip: 88	122	0											
	1: EDDY MM.							Pi	none	#: <i>Y</i> .	32.556	-81	730						1		1			
Sampler Name:	Jady Walters							Fa	ıx #:									İ	ł		ĺ			
FOR LAB USE ONLY	<b>,</b>					MA	TRIX		PRI	SERV	/ SAMP	LIN	G		<b>.</b>						•			
Lab I.D.	(G)RAB OR (C)OMP.  (G)RAB OR (C)OMP.  #CONTAINERS GROUNDWATER SOIL OIL						OIL	SLUDGE	ACID/BASE:	ICE / COOL	DATE	Ξ	TIME	12108	Chibrides									
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4	Tank 5 North	***************************************	6	L		У		-		X	10-31-11	1	3:15	У				ļ						 
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analyses. All claims include	nd Damages, Cardinal's liability and clien ny those for negligence and any other ca	iuse whatsoever shall be	deeme	d waive	d unless	made in	witing	and rec	eived by	Cardinal	l within 30 days	after c	completion of th	e applicat	ile				***************************************					
affiliates di successors arisi	ardinal be liable for incidental or consequency out of or related to the performance o	f services hereunder by C	ardina	regard	dess of	whether						reas	ons or otherwis	4.			maranaka iko				*************			
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