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REMEDIATION SUMMARY

&

SITE CLOSURE REQUEST

BOPCO, LP
POKER LAKE UNIT #89
Eddy County, New Mexico
Unit Letter "A" (NE/NE), Section 25, Township 24 South, Range 30 East
Latitude 32.189988° North, Longitude 103.832185° West

Prepared For:

BOPCO, LP 522 W. Mermod Suite 704 Carlsbad, New Mexico 88220 RECEIVED
FEB 1 4 2013
NMOCD ARTESIA

Prepared By:

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

May 2012

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 & Site Closure Request* for the release site known as Poker Lake Unit #89 ("PLU #89"). The legal description of the release site is Unit Letter "A" (NE/NE), Section 21, Township 24 South, Range 30 East, in Eddy County, New Mexico. The geographic coordinates of the release site are 32.189988° North latitude and 103.832185° 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 11, 2011, BOPCO discovered a release had occurred at the PLU #89 tank battery. A storage tank overflow resulted in the release of a mixture of produced water and crude oil. The cause of the storage tank overflow was attributed to the failure of a coupling between the motor and pump on the primary water transfer pump. The release was exacerbated by an electrical communication failure between the primary and secondary transfer pumps, which caused the secondary pump to fail to activate. During initial response activities, 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 11, 2011. The "Release Notification and Corrective Action" (Form C-141) indicated approximately four hundred and fifty-five barrels (455 bbls) of produced water and approximately six bbls (6 bbls) of crude oil were released. Approximately four hundred and thirty barrels (430 bbls) of produced water and approximately five barrels (5 bbls) of crude oil were recovered. The release affected the entire area of the earthen containment, or approximately three thousand, five hundred square feet (3,500 ft²). The release breached the containment area and released approximately seventy barrels (70 bbls) of produced water onto the adjacent caliche pad. The breach affected an area of the caliche pad measuring approximately three thousand, two hundred and sixty-eight square feet (3,268 ft²).

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 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 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 #89 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

Following initial response activities, on May 19, 2011, delineation of the release site commenced. Two (2) soil borings (SB-1 and SB-2) were advanced at the site to investigage the vertical extent of impact. Soil samples were collected at five-foot (5') drilling intervals and field screened using a chloride test kit and/or photo-ionization detector (PID). Selected soil samples were submitted to Cardinal Laboratories in Hobbs, New Mexico, for analysis of benzene, toluene, ethylbenzene, and xylenes (BTEX), total petroleum hydrocarbon (TPH), and/or 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. Soil boring logs are provided as Appendix C. Laboratory analytical reports are provided as Appendix D.

Soil boring "SB-1" was located inside the containment area of the PLU #89 tank battery, near the release point. The soil boring was advanced to a total depth of approximately twenty feet (20') bgs. Soil samples collected at the ground surface and drilling depths of five feet (5') and ten feet (10') were submitted to the laboratory for analysis of TPH and/or chloride concentrations. The soil sample collected at ten feet (10') bgs was also analyzed for BTEX concentrations. Laboratory analytical results indicated TPH concentrations ranged from less than the laboratory method detection limit (MDL) soil samples SB-1 @ 5' and SB-1 @ 10' to 544 mg/Kg in soil sample SB-1 @ 5' to 352 mg/Kg in soil sample SB-1 @ 10'. BTEX constituent concentrations in soil sample SB-1 @ 10' was less than the appropriate laboratory MDL.

Soil boring "SB-2" was located near the terminus of the flow path of the release, approximately one hundred and fifteen feet (115') south-southwest of the release point. The soil boring was advanced to a total depth of approximately forty feet (40') bgs. Soil samples collected at drilling depths of five feet (5'), ten feet (10'), thirty feet (30'), thirty-five feet (35'), and forty feet (40') were submitted to the laboratory for analysis of TPH and/or chloride concentrations. The soil sample collected at ten feet (10') bgs was also analyzed for BTEX concentrations. Laboratory analytical results indicated TPH concentrations ranged from less than the appropriate laboratory MDL in soil sample SB-2 @ 5' to 96.3 mg/Kg in soil sample SB-2 @ 10'. Chloride concentrations ranged from 1,010 mg/Kg in soil sample SB-2 @ 35' to 1,150 mg/Kg in soil sample SB-2 @ 40'. BTEX constituent concentrations in soil sample SB-2 @ 10' was less than the appropriate laboratory MDL.

A background soil sample (Background) was also collected in order to establish the baseline concentration of chloride in the area. Laboratory analytical results indicated the chloride concentration in soil sample Background was less than the laboratory MDL.

On June 7, 2011, excavation of impacted soil commenced at the site. Approximately twelve (12) to eighteen inches (18") of heavily saturated soil was removed from inside the containment area of the tank battery and along the flowpath of the release. Excavated soil was stockpiled on-site, pending final disposition.

On June 20, 2011, five (5) hand-augered soil bores (HA-1, HA-2, HA-3, HA-4, and HA-5) were collected along the flowpath of the release to further investigate the vertical and horizontal extent of impact. Soil samples were collected at two-foot (2') intervals and field-screened with a chloride test kit and/or PID. Ten (10) soil samples (HA-1 @ 2', HA-2 @ Surface, HA-2 @ 2', HA-2 @ 4', HA-3 @ Surface, HA-3 @ 2', HA-3 @ 4', HA-5 @ Surface, and HA-5 @ 4') were submitted to the laboratory for analysis of BTEX, TPH, and/or chloride concentrations. Laboratory analytical results indicated benzene concentrations were less than the laboratory MDL in all submitted soil samples. BTEX concentrations ranged from less than the laboratory MDL in soil samples HA-2 @ 4' and HA-5 @ 4' to 0.371 mg/Kg in soil sample HA-3 @ 4'. TPH concentrations ranged from less than the laboratory MDL in soil samples HA-1 @ 2', HA-2 @ 2', and HA-2 @ 4' to 25, 870 mg/Kg in soil sample HA-3 @ Surface.

Based on laboratory analytical results, further remediation was required in the areas represented by soil bores HA-2, HA-3, and HA-5.

On June 22, 2011, two (2) of the on-site production tanks were emptied, cleaned, sandblasted, and inspected for holes. The interiors of the production tanks were coated with an impermeable polyurethane coating.

Based on laboratory analytical results and field-screens, from June 24 through July 6, 2011, clean, crushed caliche was used to backfill and level the excavated area to a depth approximately six (6") to twelve inches (12") below the original ground surface.

From July 8 through July 15, 2011, a new, larger containment area was constructed around the PLU #89 tank battery, which measures approximately seven thousand, nine hundred and twenty square feet (7,920 ft²) and includes steel perimeter walls extending 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 of the containment area were coated with an impermeable, spray-on polyurethane liner.

From August 1 through August 3, 2011, approximately three hundred and twenty cubic yards (320 yd³) of impacted soil was transported to Lea Land, Inc. (NMOCD Permit # WM-01-035) for disposal.

4.0 OA/OC 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 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

Soil samples collected from the floors and sidewalls of the PLU #89 excavation were analyzed by an NMOCD-approved laboratory, and concentrations of benzene, BTEX, TPH, and chloride were below the remediation action levels established for the site. Based on these analytical results, Basin recommends BOPCO provide the NMOCD Artesia District Office and the BLM a copy of this *Remediation Summary & Site Closure Request* and request the NMOCD grant site closure to the PLU #89 release site.

6.0 LIMITATIONS

Basin Environmental Service Technologies, LLC, has prepared this *Remediation Summary & 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

Figure 1 Site Location Map

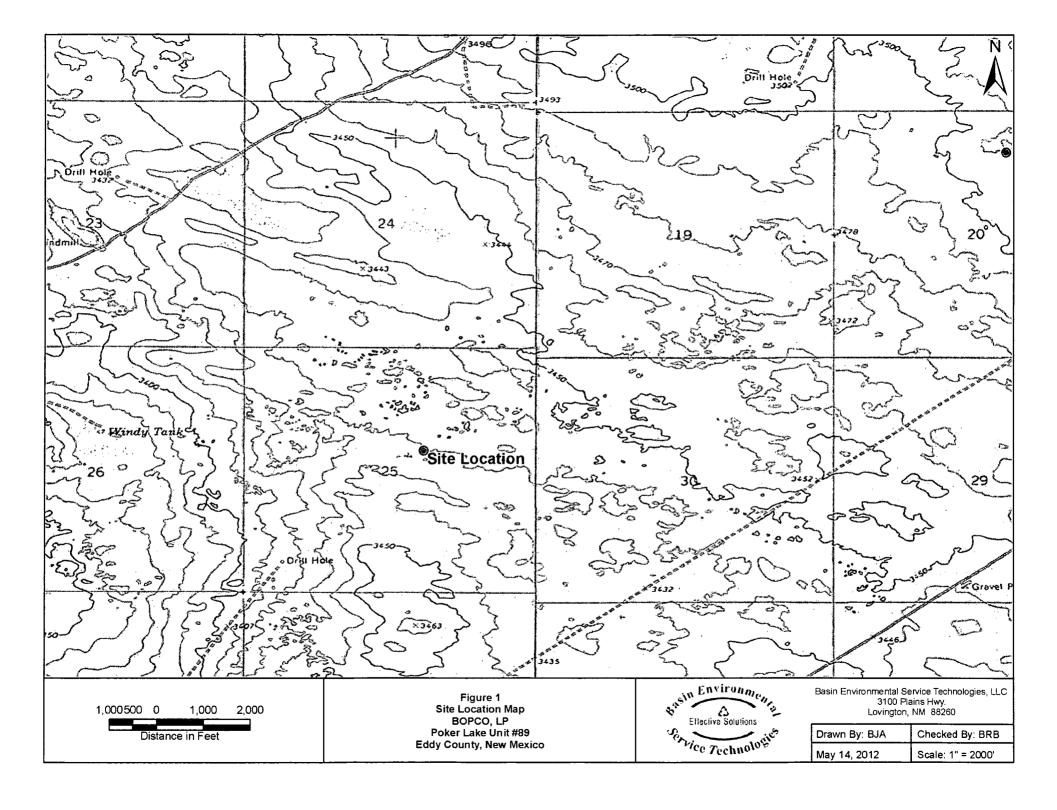
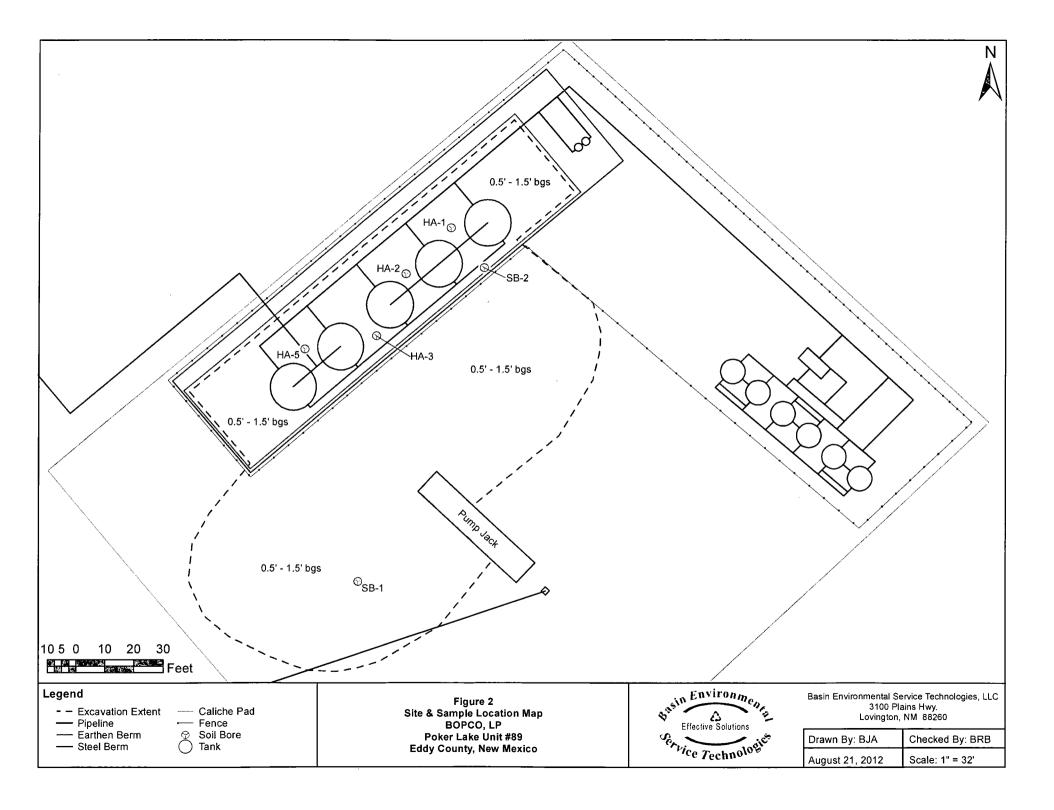


Figure 2 Site & Sample Location Map



TABLES

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

TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL

BOPCO, LP POKER LAKE UNIT #89 EDDY COUNTY, NEW MEXICO

					METHOD: EI	PA SW 846-80	21B, 5030		ME:	THOD: 801	5M	TOTAL	E 300
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)
SB-1 @ Surface	Surface	5/19/2011	In-Situ	-	-	-	-	-	<10.0	439	105	544	
SB-1 @ 5'	5'	5/19/2011	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	48.0
SB-1 @ 10'	10'	5/19/2011	In-Situ	<0.050	<0.050	<0.050	< 0.150	<0.150	<10.0	<10.0	<10.0	<10.0	352
SB-2 @ 5'	5'	5/19/2011	In-Situ	-	-	-	_		<10.0	<10.0	<10.0	<10.0	-
SB-2 @ 10'	10'	5/19/2011	In-Situ	<0.050	<0.050	<0.050	< 0.150	<0.150	<10.0	96.3	<10.0	96.3	-
SB-2 @ 30'	30'	5/19/2011	In-Situ	-	-	-		-	-	-	T	-	1,070
SB-2 @ 35'	35'	5/19/2011	In-Situ	-	-	-	-	-	-	-	-	-	1,010
SB-2 @ 40'	40'	5/19/2011	In-Situ	-	-	-	-	-	-	-	-	-	1,150
Background	3'	5/19/2011	In-Situ	-	_	-	-	-	-	-	-	-	<16.0
			1							· .			
HA-1 @ 2'	2'	6/20/2011	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	112
HA-2 @ Surface	Surface	6/20/2011	In-Situ	-	-	-	-	-	<100	7,520	688	8,208	7,440
HA-2 @ 2'	2'	6/20/2011	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	2,800
HA-2 @ 4'	4'	6/20/2011	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.150	<10.0	<10.0	<10.0	<10.0	624
HA-3 @ Surface	Surface	6/20/2011	In-Situ	-	-	-	-	-	<100	23,900	1,970	25,870	8,320
HA-3 @ 2'	2'	6/20/2011	In-Situ	-	-	-	-	-	<50.0	1,070	<50.0	1,070	6,080
HA-3 @ 4'	4'	6/20/2011	In-Situ	<0.050	<0.050	0.080	0.291	0.371	<50.0	1,020	<50.0	1,020	6,800
HA-5 @ Surface	Surface	6/20/2011	In-Situ	-	-	-		-	138	8,710	585	9,433	7,360
HA-5 @ 4'	4'	6/20/2011	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.150	<10.0	12.3	<10.0	12.3	5,200
	44). T	' .				+ F	*		,	1			
NMOCD Criteria				10				50				5,000	

^{- =} Not analyzed.

APPENDICES

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

NMOCO original Bum original Basic Copy

District 1
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., Sama Fe, NM 87505

* Attach Additional Sheets If Necessary

State of New Mexico Energy Minerals and Natural Resources

Revised October 10, 2003

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

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

Form C-141

			Rele	ease Notifica	ation and	l Co	orrective A	ction	1				
							TOR			al Report		Final Re	eport
Name of Co	mpany BO	OPCO, L.P.					ny Savoie						- L
			14 Carlsb	ad, N.M. 88220		Telephone No. 432-556-8730							
Facility Nat	ne Poker I	.ake Unit #8	9		Facility	Facility Type E&P							
Surface Ow	ner Federa	J	***	Mineral O	wner Federal				Lcase N	lo NML C	061705	В	
				LOCA'	TION OF	RE	LEASE	,					
Unit Letter A	Section 25	Township 24S	Range 30E	*****	North/South I		Feet from the	East/V	Vest Line	County Eddy			
	L,	I	La	titude_N 32.189	988Long	itud	e W 103.83218	5		<u> </u>			
·				NATU NATU	URE OF R								
Type of Relea	ase: Produc	ed water and o	crude oil		produ	ced v	Release: 455 bbl water and 6 bbls o Fotal fluid 461 bb	f I		tecovered: 4 .5 bbls of ci			
Source of Re	lease: Stora	ge tank overfl	ow	······································		*********	lour of Occurrence			Hour of Dis	covery		
							our unknown		5/11/11 8	:55 a.m.			
Was Immedia	ate Notice C		Yes [No ☐ Not Req			Whom? ther NMOCD and	l Jim Án	oos BLM				i
By Whom? T	ory Savoje			, , , , , , , , , , , , ,	·								
Was a Water		hed?				Date and Hour 5/11/11 9:11 a.m. If YES, Volume Impacting the Watercourse. RECEIVED							
			Yes 🏻	No No					j	MAY 1	a 20	11	
Describe Cau	se of Proble	m and Remee	lial Action	n Taken.* The prim	ary water tran	ster p	ump coupling bet	ween the	· L	MOCD			
pump failed to communication	o come on c on problem	lue to a comm was corrected	unication	problem between t	he primary and	i secc	ondary pump. The	pump v	vas repaired	d and the ek	ectrical		
containment to 3268 sq. fl. A	oreached car If of the free	using approxi e stauding flui	mately 70 d was ren	en.*The entire area bbls of produced w noved with a vacuum diation and contains	vater to spill or m truck. A ren	to the	e catiche well pad	and hat	tery pad. T	his arca wa:	в арргох	cimately -	
regulations all public health should their o	operators: or the envir perations ha ment. In ac	are required to nonment. The ave failed to a dition, NMO	report an acceptanc dequately CD accept	is true and complet d/or file certain rele e of a C-141 report investigate and ren tance of a C-141 rep	ease notification by the NMOC nediate contame	ns an D m a inatio	id perform correct irked as "Final Ro on that pose a thre	ive action port" do at to gro	ons for rele ces not relie ound water,	ases which eve the oper surface wa	may end ator of l ter, hum	langer liability ıan health	
							OIL CONS	SERV	ATION	DIVISIO	N		
Signature:	1 cry	- Bai	Cucu		Approve	d by l	District Superviso	er:					
Printed Name	: Tony Savo	oie								<u></u>			
Title: Waste N	4gmt.& Ker	nediation Spe	cialist		Approva	Date	s:	E	xpiration D	Pate:	······································		_
E-mail Addres	ss: TASavo	ie@BassPet.c	OED	· · · · · · · · · · · · · · · · · · ·	Condition	as of	Арргоvał;			Attached			
Date: 5/11/11				Phone:432-556-87	30								1

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

Project Manager

Date: 3/14/13 Phone: (432) 556-8730 (836) 549-9597

E-mail Address: tasavoie@basspet.com

Environment

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 ubmit 2 Copies to appropriate

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

1220 S. St. Francis Dr., Santa Fe, NM 87505 Santa Fe, NM 87505 Release Notification and Corrective Action **OPERATOR** Initial Report X Final Report BOPCO, LP Name of Company Contact Tony Savoie Address 522 W. Mermod, Suite 704 Carlsbad, NM 88220 Telephone No. (432) 556-8730 Poker Lake Unit #89 Facility Name Facility Type E&P Lease No. NML C061705B Surface Owner Federal Mineral Owner: Federal LOCATION OF RELEASE Unit Letter Feet from the North/South Line Section Township Range Feet from the East/West Line County 25 **24S** 30E Α Eddy Latitude N. 32.189988 Longitude W. 103.832185 NATURE OF RELEASE Type of Release Produced water and crude oil Volume of Release: 455 bbls of Volume Recovered: 430 bbls of produced produced water and 6 bbls of water and 5 bbls of crude oil. Total fluid crude oil. Total fluid 461 bbls 435 bbls Date and Hour of Occurrence Source of Release: Storage tank overflow Date and Hour of Discovery 5/11/11, Hour unknown 5/11/11 8:55 a.m. Was Immediate Notice Given? If YES, To Whom? X Yes Not Required No Mike Bratcher NMOCD and Jim Amos BLM By Whom? Tony Savoie Date and Hour: 5/11/11 9:11 a.m. Was a Watercourse Reached? If YES, Volume Impacting the Watercourse. ☐ Yes ☒ No If a Watercourse was Impacted, Describe Fully.* Describe Cause of Problem and Remedial Action Taken.* The primary water transfer pump coupling between the motor and pump failed, the secondary pump failed to come on due to a communication problem between the primary and secondary pump. The pump was repaired and the electrical communication problem was corrected. Describe Area Affected and Cleanup Action Taken.* The release affected approximately 3500 sq. ft. within the earthen containment and 3268 sq. ft. of caliche on the adjacent well/battery bad. The release was remediated as per NMOCD guidelines. Please see the attached Remediation Summary and Site Closure Request, dated May 2012, for details of remediation activities and laboratory analytical results from confirmation soil samples. I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases, which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. OIL CONSERVATION DIVISION Signature: Approved by District Supervisor: Printed Name: 74

Approval Date:

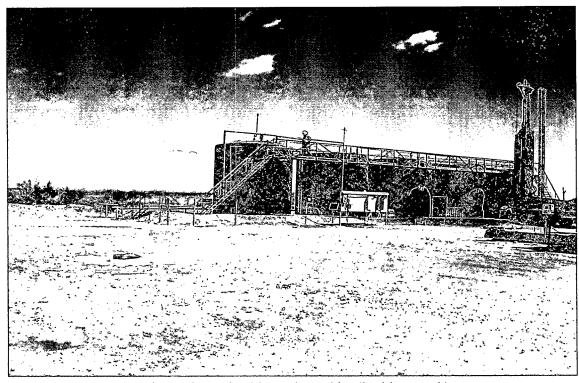
biargain Dasin envicon Conditions of Approval:

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FEB 1 4 2013
NMOCD ARTES!A

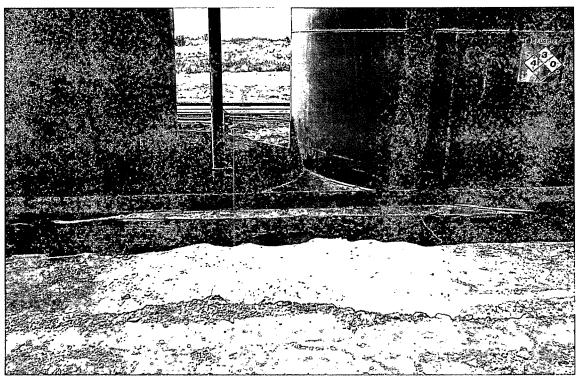
Expiration Date:

Attached [

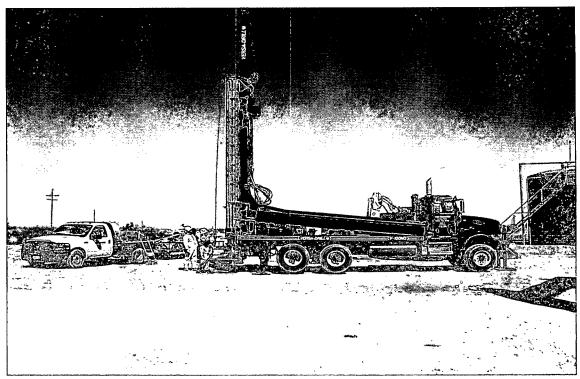
Appendix B Photographs



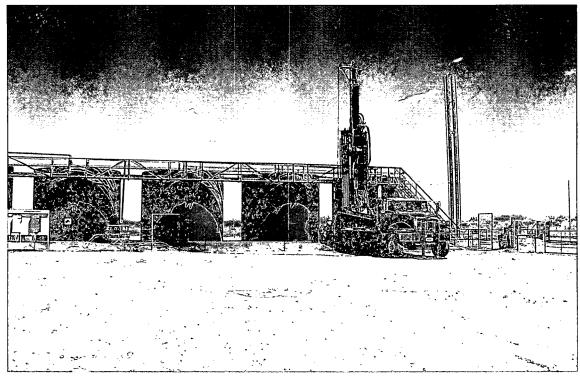
Poker Lake Unit #89 - Release Site (looking north)



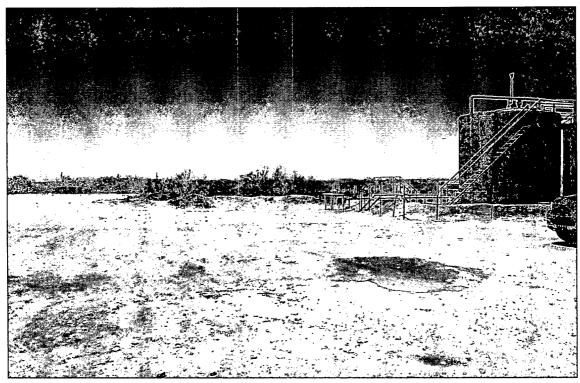
Poker Lake Unit #89 - Release Site



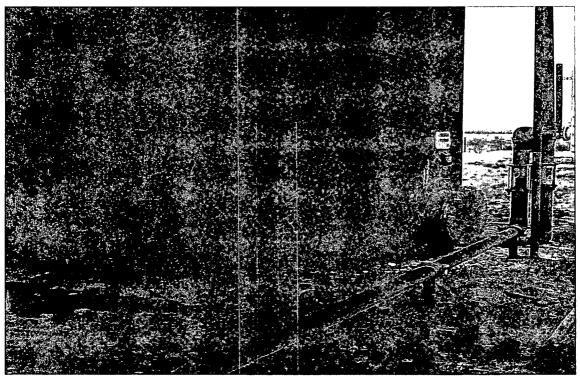
Poker Lake Unit #89 - Advancement of soil boring SB-1



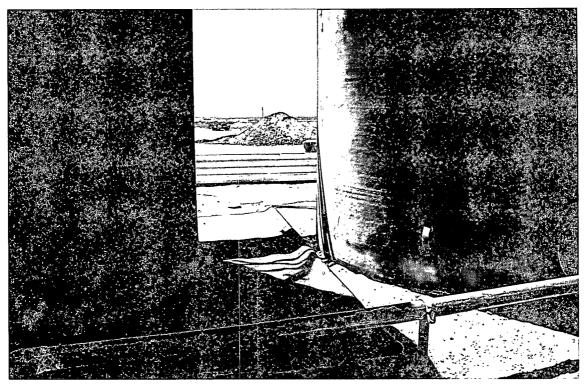
Poker Lake Unit #89 - Advancement of soil boring SB-1



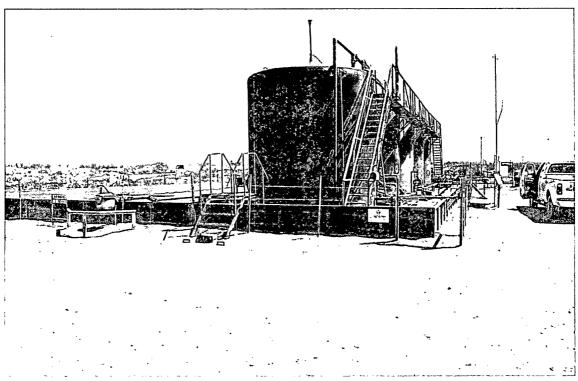
Poker Lake Unit #89 - Soil boring SB-1 (following P&A)



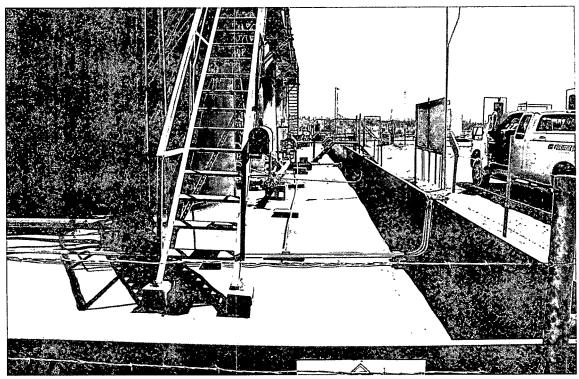
Poker Lake Unit #89 - Excavation



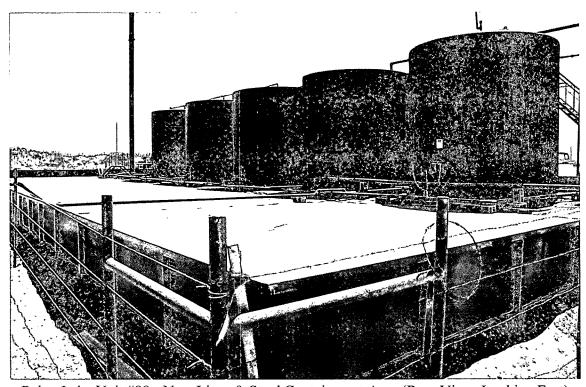
Poker Lake Unit #89 - Liner Installation



Poker Lake Unit #89 - Following Installation of Liner & Steel Containment Area



Poker Lake Unit #89 - New Liner & Steel Containment Area (Front View; Looking Northeast)



Poker Lake Unit #89 - New Liner & Steel Containment Area (Rear View; Looking East)

Appendix C Soil Boring Logs

Soil Boring SB-1

Depth Below		Chloride							
Ground Surface	Soil Column	Field <u>Test</u>	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description		Boring SB-	<u>-1</u>
E°		2,428	8.3	Slight	Moderate	0' - 4' - Caliche	Date D		. 2011 .0 FL
<u>-</u> 5		2,428	4.2	None	None	4' - 6' - Red fine sand	Depth		20 Ft bgs
- 10		256	1.6	None	None	8' - 19' - Tan fine sand - caliche - sandstone	Groun	d Water Elevation	
-15		256		None	None	o - 19 - Tan fille Sand - Caliche - Sandstone	모	Indicates the PSH level ma	easured
- - - 20		256	3.5	None	None		PID	Indicates the groundwater measured on Indicates samples selector Laboratory Analysis. Head-space reading in ppr with a photo-ionization det	d for m obtained

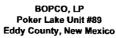
Completion Notes

- 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.

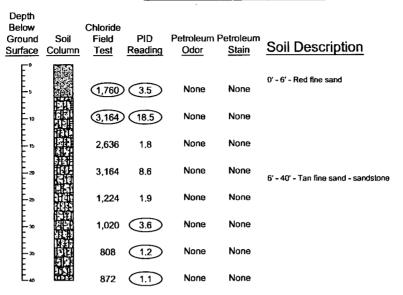
Basin Environmental Service Technologies, LLC 3100 Plains Hwy. Lovington, NM 88260 Prep By: BJA Checked By: BRB May 14, 2012

Effective Solutions

Soil Boring SB-1



Soil Boring SB-2



Boring SB-2

Completion Notes

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

Basin Environmental Service Technologies, LLC 3100 Plains Hwy. Lovington, NM 88260 Prep By: BJA Checked By: BRB

BOPCO, LP Poker Lake Unit #89 Eddy County, New Mexico



Appendix D Laboratory Analytical Reports



May 25, 2011

BEN J. ARGUIJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: POKER LAKE UNIT #89

Enclosed are the results of analyses for samples received by the laboratory on 05/23/11 16:15.

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.

alex Neme

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: 05/23/2011

05/25/2011

POKER LAKE UNIT #89

Project Name: Project Number:

Project Location:

PLU 89

EDDY CO., NM

Sampling Date:

05/19/2011

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Jodi Henson

Sample ID: SB 1 @ SURFACE (H101049-01)

TPH 8015M	mg/k	(g	Analyze	d By: AB			· - - ·		<u></u>
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	05/24/2011	ND	216	108	200	0.355	
DRO >C10-C28	439	10.0	05/24/2011	ND	188	93.8	200	1.10	
EXT DRO >C28-C35	105	10.0	05/24/2011	ND					
Surrogate: 1-Chlorooctane	103 %	5 70-130)						
Surrogate: 1-Chlorooctadecane	92.6 %	6 70-130)						

Sample ID: SB 1 @ 5' (H101049-02)

Chloride, SM4500CI-B	mg/kg		. Analyze	Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	05/24/2011	ND	448	112	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	05/25/2011	ND	216	108	200	0.355	
DRO >C10-C28	<10.0	10.0	05/25/2011	ND	188	93.8	200	1.10	
EXT DRO >C28-C35	<10.0	10.0	05/25/2011	ND					
Surrogate: 1-Chlorooctane	98.8	% 70-130)					<u> </u>	
Surrogate: 1-Chlorooctadecane	95.1	% 70-130)						

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remody for any claim arising, whether haved in contract or tort, shall be limited to the amount pold by client for analyses. All claims, including those for negligence and any other cause whistoevers shall be deemed watered 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 hoursed by client, its subsidiaries, difficients or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whethe such claims is based upon any of the above stated remons 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.

Celegit Keine



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

Fax To:

(575) 396-1429

Received: Reported: 05/23/2011

05/25/2011

Project Name:

POKER LAKE UNIT #89

Project Number:

Project Location:

PLU 89

EDDY CO., NM

Sampling Date:

05/19/2011

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact Jodi Henson

Sample ID: SB 1 @ 10' (H101049-03)

BTEX 8021B	mg/	kg	Analyze	d By: CMS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/24/2011	ND	2.16	108	2.00	1.14	
Toluene*	<0.050	0.050	05/24/2011	ND	2.06	103	2.00	1.29	
Ethylbenzene*	<0.050	0.050	05/24/2011	ND	2.11	106	2.00	0.484	
Total Xylenes*	<0.150	0.150	05/24/2011	ND	6.27	105	6.00	1.62	
Surrogate: 4-Bromofluorobenzene (PIE	95.1	% 70-130)						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: HM					_
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	05/24/2011	ND	448	112	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	05/25/2011	ND	216	108	200	0.355	
DRO >C10-C28	<10.0	10.0	05/25/2011	ND	188	93.8	200	1.10	
EXT DRO >C28-C35	<10.0	10.0	05/25/2011	ND					
Surrogate: 1-Chlorooctane	103 9	% 70-130)						
Surrogate: 1-Chlorooctadecane	98.0	% 70-130)						

Cardinal Laboratories

*=Accredited Analyte

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Celegit Keine



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

Fax To:

(575) 396-1429

Received:

05/23/2011

05/25/2011

Reported: Project Name:

POKER LAKE UNIT #89

Project Number:

EDDY CO., NM

Project Location:

PLU 89

Sampling Date:

05/19/2011

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: SB 2 @ 5' (H101049-04)

TPH 8015M	mg/kg		Analyzed By: AB						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	05/25/2011	ND	216	108	200	0.355	
DRO >C10-C28	<10.0	10.0	05/25/2011	ND	188	93.8	200	1.10	
EXT DRO >C28-C35	<10.0	10.0	05/25/2011	ND					
Surrogate: 1-Chlorooctane	98.8 %	% 70-130)						
Surrogate: 1-Chlorooctadecane	96.89	% 70-130)						

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Celeg B. Keine



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

Fax To:

(575) 396-1429

Received:

05/23/2011

Reported:

05/25/2011

Project Name: Project Number: POKER LAKE UNIT #89

Project Location:

PLU 89 EDDY CO., NM Sampling Date:

05/19/2011

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: SB 2 @ 10' (H101049-05)

BTEX 8021B	mg/	kg	Analyze	d By: CMS					· - · ·
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/24/2011	ND	2.16	108	2.00	1.14	
Toluene*	<0.050	0.050	05/24/2011	ND	2.06	103	2.00	1.29	
Ethylbenzene*	<0.050	0.050	05/24/2011	ND	2.11	106	2.00	0.484	
Total Xylenes*	<0.150	0.150	05/24/2011	ND	6.27	105	6.00	1.62	
Surrogate: 4-Bromofluorobenzene (PIL	95.4	% 70-130							
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	05/25/2011	ND	216	108	200	0.355	
DRO >C10-C28	96.3	10.0	05/25/2011	ND	188	93.8	200	1.10	
EXT DRO >C28-C35	<10.0	10.0	05/25/2011	ND					
Surrogate: I-Chlorooctane	104 9	% 70-130							
Surrogate: 1-Chlorooctadecane	95.6	% 70-130							

Sample ID: SB 2 @ 30' (H101049-06)

Chloride, SM4500CI-B	mg/kg		Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1070	16.0	05/24/2011	ND	448	112	400	3.51	

Cardinal Laboratories

*=Accredited Analyte

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Celegratisteens-



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

Fax To:

(575) 396-1429

Received:

05/23/2011

Sampling Date:

05/19/2011

Reported:

05/25/2011

Sampling Type:

Soil

Project Name:

POKER LAKE UNIT #89

Sampling Condition: Sample Received By:

Cool & Intact Jodi Henson

Project Number: Project Location:

Analyte

Analyte

PLU 89

EDDY CO., NM

Sample ID: SB 2 @ 35' (H101049-07)

Chloride, SM4500CI-B

mg/kg

Reporting Limit

Analyzed By: HM

% Recovery True Value QC RPD

Chloride

Result 1010

Result

16.0 05/24/2011

Analyzed

Analyzed

ND 448 112

400

Qualifier

Sample ID: SB 2 @ 40' (H101049-08)

Chloride, SM4500CI-B

Analyzed By: HM

BS

BS

% Recovery

RPD

3.51

Chloride

Chloride

1150 16.0 05/24/2011

Reporting Limit

Method Blank ND

Method Blank

448

112

True Value QC 400

Qualifier

3.51

Sample ID: BACKGROUND (H101049-09)

Chloride, SM4500CI-B

mg/kg

Analyzed By: HM

Result Reporting Limit Analyte Analyzed <16.0 16.0 05/24/2011 Method Blank ND

BS 448 % Recovery 112

True Value QC 400

RPD

Qualifier

3.51

Cardinal Laboratories

*=Accredited Analyte

All claims, including those for negligence and any other cause whatsoever shall be deemed waired unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be limble for incidental or consequential domages, beckuding, without limitation, business interruptions, loss of use, or loss of use, or loss of profits incident, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such

Celley to Kenne

Celey D. Keene, Lab Director/Quality Manager

Page 6 of 8



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 ofter cause wholescere shall be deemed wated 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 substitutes, 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 aboratories.

alex & Kenne

Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

	(575) 393-2326 FAX (575) 393-247														2115				
Company Name	Basin Environmental Service	[ec]	mo	logies, LLC		BI	LL TO					ANA	LYSIS	S KE	プロド ラ) I			
Project Manage	n Ben J. Arguijo				P.0	P.O. #:				1				1	.	- 1		1	
	i de la companya de				Co	mpany: B	OPCO, LP												1
City: Lovingto	on State: NM	Zip): <u>9</u>	8260	Ati	tn: Tony	Savoie												- 1
Phone #: (575)	396-2378 Fax #: (575) 3	96-1	142	3	Ad	ldress: 52	2 w. Mest	od.			}					i		1	1
Project#: 🎉	Project Owner	; B0)PC	O. LP	Cit	ty: Carleb	ad				- 1								l
Project Name:	PLU 39 MARTELA	: J	1	KA 29	Sta	ate: NH	Z ip: 58220)			1								- 1
Project Location	ect Location: Eddy (a. NIII)				Ph	one #: (43	2)556-97.	3.0								1 1		ľ	1
Sampler Name:	.m. /s /					x #:		- L			-						1	- 1	
FOR LABIUSE ONLY	A STATE OF THE STA		Γ	MATRIX		PRESERV.	SAMPLI	NG		J. S.		İ					-		
Lab I.D. H101049 -	Sample I.D.	MO(0) RAB OR (C)OM	# CONTAINERS	GROUNDWATER WASTEWATER SOIL	SLUDGE OTHER:	ACIU/BASE: (CE / COOL OTHER:	DATE	TIME	1/5/01		BIEN								
9	5B1 60 SW FACE	X	1	X		X.	5/19/11		X						 				
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역	BACKAPOUTAR Id Demages Cardipd's kability and client's exclusive remedy for	W					V	1300	<u>L_</u>	K									

PLEASE NOTE: Liability and Demages. Cardipilis kability and client's exclusive remedy for any claim arising whether based in contrast or tort, shall be limited to the amount paid by the disent for me analyses. All claims including those for negligence and any other cause whatseever shall be deamed waived unless made in whiting and received by Cardinal within 30 days ofter completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental dismages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiances.

affiliates or successors among out of or related to the performance	of services hereunder by Cardinal regardess of whether such claim is based upon any of the above stated fi	easons or otherwise
Relinquished By:	Dater / Received By:	Phone Result: Yes No Add'l Phone #:
and the second	5/23/1/ // 4: 1	Fax Result: Yes No Add'l Fax #:
	Time: 15 LOCA SILLADON.	REMARKS:
Réfinquished By:	Date: Received By:	
* 62	V	
	Time:	Please email results to pm@basinenv.Com
		Prease email results to purposation to
Delivered By: (Circle One)	Sample Condition (CHECKED BY:	& TAsavoie@BassPot.com
Sampler - UPS - Bus - Other:	Cool Intact (Injitials) O O O No No	



June 28, 2011

BEN J. ARGUIJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: POKER LAKE UNIT #89

Enclosed are the results of analyses for samples received by the laboratory on 06/23/11 9:10.

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.

aleg & Kune

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:

06/20/2011

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

06/23/2011

06/28/2011

Project Number:

Project Name:

Received:

Reported:

PLU 89

Project Location:

EDDY CO., NM

POKER LAKE UNIT #89

Jodi Henson

Sample ID: HA 1 2' BGS (H101295-01)

Chloride, SM4500CI-B	mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	06/23/2011	ND	464	116	400	7.14	
TPH 8015M	mg/kg		Analyzed By: ab						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/25/2011	ND	171	85.4	200	5.18	
DRO >C10-C28	<10.0	10.0	06/25/2011	ND	170	85.1	200	5.11	
EXT DRO >C28-C35	<10.0	10.0	06/25/2011	ND					
Surrogate: 1-Chlorooctane	104 9	% 70-130	ı						
Surrogate: 1-Chlorooctadecane	1199	% 70-130	ı						

Sample ID: HA 2 SURFACE (H101295-02)

Chloride, SM4500CI-B	mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7440	16.0	06/23/2011	ND	464	116	400	7.14	
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	<100	100	06/25/2011	ND	171	85.4	200	5.18	
DRO >C10-C28	7520	100	06/25/2011	ND	170	85.1	200	5.11	
EXT DRO >C28-C35	688	100	06/25/2011	ND					
Surrogate: 1-Chlorooctane	112	% 70-130)				are in	·-	
Surrogate: 1-Chlorooctadecane	105	% 70-130	•						

Cardinal Laboratories

*=Accredited Analyte

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Celeng D. Keine



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

Fax To:

(575) 396-1429

06/20/2011

Sampling Date: Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact Jodi Henson

Reported: Project Name:

Received:

POKER LAKE UNIT #89

Project Number:

PLU 89

Project Location:

EDDY CO., NM

06/23/2011

06/28/2011

Sample ID: HA2 2' BGS (H101295-03)

Chloride, SM4500Cl-B	mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2800	16.0	06/23/2011	ND	464	116	400	0.00	
TPH 8015M	mg/	'kg	Analyzed By: ab						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/25/2011	ND	171	85.4	200	5.18	
DRO >C10-C28	<10.0	10.0	06/25/2011	ND	170	85.1	200	5.11	
EXT DRO >C28-C35	<10.0	10.0	06/25/2011	ND					
Surrogate: 1-Chlorooctane	77.1	% 70-130)						
Surrogate: 1-Chlorooctadecane	80.9	% 70-130)						

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Celeg D. Keine



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

Fax To:

(575) 396-1429

Received:

06/23/2011

Sampling Date:

06/20/2011

Reported:

Sampling Type:

Soil

06/28/2011

Project Name:

POKER LAKE UNIT #89

Sampling Condition:

Cool & Intact

Project Number:

PLU 89

Sample Received By:

Jodi Henson

Project Location:

EDDY CO., NM

Sample ID: HA 2 4' BGS (H101295-04)

BTEX 8260B	mg/kg		Analyzed By: CMS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/24/2011	ND	2.10	105	2.00	21.9	
Toluene*	<0.050	0.050	06/24/2011	ND	2.01	101	2.00	20.1	
Ethylbenzene*	<0.050	0.050	06/24/2011	ND	1.94	97.2	2.00	23.2	
Total Xylenes*	<0.150	0.150	06/24/2011	ND	5.84	97.4	6.00	24.8	
Surrogate: Dibromofluoromethane	85.8	% 80-120)					_	
Surrogate: Toluene-d8	104	% 80-120)						
Surrogate: 4-Bromofluorobenzene	108	% 80-120	•						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: HM					_	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	624	16.0	06/23/2011	ND	464	116	400	0.00	
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	<10.0	10.0	06/25/2011	ND	171	85.4	200	5.18	
DRO >C10-C28	<10.0	10.0	06/25/2011	ND	170	85.1	200	5.11	
EXT DRO >C28-C35	<10.0	10.0	06/25/2011	ND					
Surrogate: 1-Chlorooctane	49.0	% 70-130)						
Surrogate: 1-Chlorooctadecane	69.4	% 70-130)						

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Celego to Keene



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Fax To:

(575) 396-1429

Received:

06/23/2011

Sampling Date:

06/20/2011

Reported:

06/28/2011

Sampling Type:

Soil

Project Name:

POKER LAKE UNIT #89

Sampling Condition: Sample Received By: Cool & Intact Jodi Henson

Project Number: Project Location: **PLU 89**

EDDY CO., NM

Sample ID: HA 3 SURFACE (H101295-05)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8320	16.0	06/23/2011	ND	464	116	400	0.00	
TPH 8015M	mg/kg		Analyzed By: ab			<u> </u>	<u></u>		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<100	100	06/25/2011	ND	171	85.4	200	5.18	
DRO >C10-C28	23900	100	06/25/2011	ND	170	85.1	200	5.11	
EXT DRQ >C28-C35	1970	100	06/25/2011	ND					
Surrogate: 1-Chlorooctane	89.4	% 70-130)						

Surrogate: 1-Chlorooctadecane

74.8 %

70-130

Sample ID: HA 3 2' BGS (H101295-06)

Chloride, SM4500CI-B	mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6080	16.0	06/23/2011	ND	464	116	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: ab					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	85	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	06/25/2011	ND	171	85.4	200	5.18	
DRO >C10-C28	1070	50.0	06/25/2011	ND	170	85.1	200	5.11	
EXT DRO >C28-C35	<50.0	50.0	06/25/2011	ND					
Surrogate: 1-Chlorooctane	55.1	% 70-130							
Surrogate: 1-Chlorooctadecane	69.6	% 70-130							

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Celen B. Keine



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

Fax To:

(575) 396-1429

Sampling Date:

06/20/2011

Received: Reported: 06/23/2011

Sampling Type:

Soil

Project Name:

06/28/2011

Cool & Intact

POKER LAKE UNIT #89 **PLU 89**

Sampling Condition: Sample Received By:

Jodi Henson

Project Number:

Project Location:

EDDY CO., NM

Sample ID: HA 3 4' BGS (H101295-07)

BTEX 8260B	mg/kg		Analyze	Analyzed By: CMS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/24/2011	ND	2.10	105	2.00	21.9	
Toluene*	<0.050	0.050	06/24/2011	ND	2.01	101	2.00	20.1	
Ethylbenzene*	0.080	0.050	06/24/2011	ND	1.94	97.2	2.00	23.2	
Total Xylenes*	0.291	0.150	06/24/2011	ND	5.84	97.4	6.00	24.8	
Surrogate: Dibromofluoromethane	101	% 80-120)						
Surrogate: Toluene-d8	95.2	% 80-120)						
Surrogate: 4-Bromofluorobenzene	110	% 80-120)						
Chloride, SM4500CI-B	mg,	/kg	Analyze	Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6800	16.0	06/23/2011	ND	464	116	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: ab					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	06/25/2011	ND	171	85.4	200	5.18	
DRO >C10-C28	1020	50.0	06/25/2011	ND	170	85.1	200	5.11	
EXT DRO >C28-C35	<50.0	50.0	06/25/2011	ND					
Surrogate: 1-Chlorooctane	112	% 70-130)						
Surrogate: 1-Chlorooctadecane	133	% 70-130	9						

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Calley Di Keine



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

Fax To:

(575) 396-1429

Received:

06/23/2011

Sampling Date:

06/20/2011

Reported:

06/28/2011

Sampling Type:

Soil

Project Name:

POKER LAKE UNIT #89

Sampling Condition:

Cool & Intact

Project Number:

PLU 89

Sample Received By:

Jodi Henson

Project Location:

EDDY CO., NM

Sample ID: HA 5 SURFACE (H101295-08)

Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7360	16.0	06/23/2011	ND	464	116	400	0.00	
TPH 8015M	mg/kg		Analyzed By: ab						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	138	100	06/25/2011	ND	171	85.4	200	5.18	
DRO >C10-C28	8710	100	06/25/2011	ND	170	85.1	200	5.11	
EXT DRO >C28-C35	585	100	06/25/2011	ND					
Surrogate: 1-Chlorooctane	101	% 70-130	1			-			
Surrogate: 1-Chlorooctadecane	107	% 70-130)						

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Celegat trains



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

Received: Reported: 06/23/2011

06/28/2011

Project Name: Project Number: POKER LAKE UNIT #89

74.6%

70-130

Project Location:

PLU 89 EDDY CO., NM Sampling Date:

06/20/2011

Sampling Type:

Soil

Sampling Condition:

Cool & Intact Jodi Henson

Sample Received By:

Sample ID: HA 5 4' BGS (H101295-09)

BTEX 8260B	mg/kg		Analyzed By: CMS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/24/2011	ND	2.10	105	2.00	21.9	
Toluene*	<0.050	0.050	06/24/2011	ND	2.01	101	2.00	20.1	
Ethylbenzene*	<0.050	0.050	06/24/2011	ND	1.94	97.2	2.00	23.2	
Total Xylenes*	<0.150	0.150	06/24/2011	ND	5.84	97.4	6.00	24.8	
Surrogate: Dibromofluoromethane	90.8 9	% 80-120)						
Surrogate: Toluene-d8	97.0 9	% 80-120)						
Surrogate: 4-Bromofluorobenzene	106 %	6 80-120)						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5200	16.0	06/23/2011	ND	464	116	400	0.00	
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	<10.0	10.0	06/25/2011	ND	184	91.8	200	2.31	
DRO >C10-C28	12.3	10.0	06/25/2011	ND	183	91.6	200	3.55	
EXT DRO >C28-C35	<10.0	10.0	06/25/2011	ND					
Surrogate: 1-Chlorooctane	53.8 9	% 70-130)						

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Surrogate: 1-Chlorooctadecane

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Celeg & Keine



Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
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-8 does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celen Litrema



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Basin Environmental Service Technologics, LLC							BILL TO						ANALYSIS REQUEST												
Project Manager: Ben J. Arquijo							P.O. #:						1	303		BOUNEY:	-			LEST MONEY			MAN PROPERTY.		
Address: P.O. Box 301								Company: BOPCO, LP													Ì	İ			
City: Lovington State: NM Zip: 88260							Attn: Tony Savoie															1			
Phone #: (575)396-2378							Address: 522 w. Mermod														1				
Project #: Project Owner: BOPCO, LP							City: Carlsbad																		
Project Name: Poker Lake Unit #89							State: NM Zip: 88220											ļ							
Project Location: Elly (0, MM)							Phone #: (432) 556-8739																		
Sampler Name: Josy Walters								Fax #:					j		1										
FOR LAB USE ONLY MATRIX					TRIX	PRESERV. SAMPLIN				NG]									1					
Lab I.D. H101295	Sample I.I	D.	(G)RAB OR (C)OMP	# CONTAINERS	GROUND!WATER WASTEWATER SOIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL OTHER		DATE	TIME	(Alorides	, , , , , , , , , , , , , , , , , , ,	1015/11	BTEK									Action about the second displacement of the seco
.1	HAI	2' 695	X	Ī	χ			3		10/	20/11	0910	X	-	X										
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3	<i>If A</i> a	2' 695										0930													
ij	HA 2	4 645								<u> </u>	_	0935			\perp	X									
5	5 HA 3 Sympos									ļ		0940						<u>.</u>	1.			_			
10	HA 3	2'bss								ļ	_	0945	11_	_	Ш				_			_	_		
7	HA 3	4 25	Щ.	<u> </u>		<u> </u>				L		1000		L	Ш	X									
3	HA 5	Sw face	Ш	Щ	1	i.				<u> </u>		1035		\perp			<u> </u>	1							<u> </u>
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Relinquished By: Date: / Received By:								Pho				Phone Re	Result: ☐ Yes ☐ No Add'l Phone #:												
100 We Time: 1730												Fax Resu REMARK													
Relinquished By: Date: /2/// Received By:								To constant																	
Politic For Par (Circle One) A Children M. M. A. A. Sample Condition								***************************************					Please email results to pm@basinenv.com												
Delivered By: (Circle One)								on CHECKED BY: (Initials)						& TAsavoie@BassPet.com											
Sampler - UPS - Bus - Other 1/2/11 9 10 BYes BYes A									1	-															

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476