Basin Environmental Service Technologies, LLC

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

Office: (575) 396-2378

Fax: (575) 396-1429



REMEDIATION SUMMARY & RISK-BASED SITE CLOSURE REQUEST

BOPCO, LP
BASS 3 FEDERAL WELL #4 SPILL SITE "A"
Eddy County, New Mexico
Unit Letter "O" (SW/SE), Section 3, Township 22 South, Range 28 East
Latitude 32.416059° North, Longitude 104.070738° West
NMOCD Reference #: 2RP-980

Prepared For:

BOPCO, LP 522 W. Mermod, Suite 704 Carlsbad, New Mexico 88220 JAN 23 2014

NMOCD ARTESIA

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

August 2013

Ben J. Arguijo Project Manager

TABLE OF CONTENTS

1.0	INTRODUCTION & BACKGROUND INFORMATION	1
2.0	NMOCD SITE CLASSIFICATION	1
3.0	SUMMARY OF SOIL REMEDIATION ACTIVITIES	2
4.0	QA/QC PROCEDURES	5
	4.1 Soil Sampling	5
	4.2 Decontamination of Equipment	5
	4.3 Laboratory Protocol	6
5.0	SITE CLOSURE REQUEST	6
6.0	LIMITATIONS	6
7.0	DISTRIBUTION	7

FIGURES

Figure 1 – Site Location Map

Figure 2 – Site & Sample Location Map

TABLES

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

Table 2 - Concentrations of Benzene, BTEX & Chloride in Groundwater

APPENDICES

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

Appendix B – Photographs

Appendix C – Soil Boring Logs

Appendix D – Laboratory Analytical Reports (Soil)

Appendix E – Laboratory Analytical Reports (Groundwater)

1.0 INTRODUCTION & 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 Bass 3 Federal Well #4 Spill Site "A". The legal description of the release site is Unit Letter "O" (SW/SE), Section 3, Township 22 South, Range 28 East, in Eddy County, New Mexico. The geographic coordinates of the release site are 32.416059° North latitude and 104.070738° West longitude. The property affected by the release is owned by The United States Department of the Interior - Bureau of Land Management (BLM). Please reference Figure 1 for a "Site Location Map".

On December 13, 2011, during site assessments associated with nearby releases, BOPCO discovered a release had occurred near the Bass 3 Federal Well #4 site. The two and seveneighths inch (2 7/8") steel flow line delivering produced fluid from the well to the nearby Bass Federal #1 tank battery developed a leak, resulting in a release of produced water and crude oil. During initial response activities, the well was shut in, and a temporary clamp was installed to mitigate the release. The steel flow line was replaced with polyurethane pipe during the course of remediation activities.

The release was immediately reported to the New Mexico Oil Conservation Division (NMOCD) Artesia District Office. The "Release Notification and Corrective Action" (Form C-141) indicated approximately twenty-five barrels (25 bbls) of produced water and approximately five barrels (5 bbls) of crude oil were released, with no recovery. The release affected an area of pastureland measuring approximately two thousand, seven hundred square feet (2,700 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 3, Township 22 South, Range 28 East. A depth to groundwater reference map utilized by the NMOCD indicates groundwater should be encountered at approximately one hundred and fifteen feet (115') to one hundred and twenty feet (120') below ground surface (bgs). Gauging data collected from a nearby monitor well indicates the depth to groundwater is approximately one hundred and nine feet (109') 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') 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 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 Bass 3 Federal Well #4 Spill Site "A" 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

Following initial response activities, on December 16, 2011, delineation of the release site commenced. A series of three (3) delineation trenches (Trench 1, Trench 2, and Trench 3) were advanced at the site to investigate the vertical and horizontal extent of impacted soil. Trench 1 was advanced to a total depth of approximately twelve feet (12') bgs. Trench 2 was advanced to a total depth of approximately four feet (4') bgs. Trench 3 was advanced to a total depth of approximately four and one-half feet (4.5') bgs. Soil samples from the delineation trenches were field-screened using a chloride test kit and/or Photo-Ionization Detector (PID), and three (3) confirmation soil samples (Trench 1 @ 12', Trench 2 @ 4', and Trench 3 @ 4.5') were submitted to Cardinal Laboratories in Hobbs, New Mexico, for analysis of TPH and chloride concentrations using Environmental Protection Agency (EPA) Methods 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. Laboratory analytical reports are provided as Appendix D.

Laboratory analytical results indicated TPH concentrations were less than the laboratory method detection limit (MDL) in all submitted soil samples. Chloride concentrations ranged from less than the laboratory MDL in soil sample Trench 3 @ 4.5' to 6,530 mg/kg in soil sample Trench 1 @ 12'.

On January 23, 2012, excavation of impacted soil commenced at the site. A chloride field test kit was used to field-screen the horizontal extent of impacted soil and to guide the excavation. From January 23 through January 25, 2012, excavated soil was stockpiled on-site, pending final disposition.

On January 12, 2012, one (1) soil boring (SB-1) was advanced at the site to further investigate the vertical extent of impacted soil. The soil boring was located near the release point and was advanced to a total depth of approximately fifty-five feet (55') bgs. Soil samples were collected at five-foot (5') drilling intervals and field-screened with a chloride test kit. Confirmation soil samples collected at drilling depths of five feet (5'), ten feet (10'), and fifty-five feet (55') bgs were submitted to the laboratory for analysis of TPH and/or chloride concentrations. Soil sample SB-1 @ 10' was also analyzed for concentrations of BTEX using EPA Method SW-846 8021b. During advancement of the soil boring, moisture was encountered at approximately forty-eight feet (48') bgs, and the soil boring was allowed to remain undisturbed overnight to determine whether or not groundwater had been reached. The location of the soil boring is depicted in Figure 2. Soil boring logs are provided as Appendix C.

Laboratory analytical results indicated TPH concentrations were less than the laboratory MDL in all submitted soil samples. Chloride concentrations ranged from less than the laboratory MDL in soil sample SB-1 @ 55' to 5,120 mg/kg in soil sample SB-1 @ 10'. BTEX constituent concentrations in soil sample SB-1 @ 25' were less than the appropriate laboratory MDL.

On January 13, 2012, soil boring SB-1 was gauged, and water was encountered at approximately forty-eight feet (48') bgs. A water sample was collected from the soil boring and submitted to the laboratory for analysis of chloride concentrations. Laboratory analytical results indicated the chloride concentration was 81,000 mg/L. Soil boring SB-1 was fitted with a two-inch (2") diameter, screened PVC riser and converted into Temporary Monitor Well #1 (TMW-1). Table 2 summarizes the "Concentrations of Benzene, BTEX & Chloride in Groundwater". Laboratory analytical reports are provided in Appendix E.

Gauging data from a monitor well approximately five hundred feet (500') to the west-northwest of TMW-1 indicates groundwater at the site should be encountered at approximately one hundred and nine feet (109') bgs. Based on this gauging data, it was determined that the water encountered in TMW-1 was most likely one of the many naturally occurring salt water deposits in the area. From January 17 through January 20, 2012, a series of seven (7) soil borings were advanced at the site to investigate the boundaries of the salt water deposit.

Soil boring SB-2 was located up-gradient of temporary monitor well TMW-1, approximately sixty-five feet (65') to the northwest. The soil boring was advanced to a total depth of approximately sixty feet (60') bgs and was allowed to remain undisturbed for several hours to determine whether or not groundwater had been reached. The soil boring was then gauged, determined to be dry, plugged, and abandoned pursuant to NMOCD and NMOSE standards.

Soil boring SB-3 was located cross-gradient of temporary monitor well TMW-1, approximately sixty-five feet (65') to the west. The soil boring was advanced to a total depth of approximately fifty-five feet (55') bgs and was allowed to remain undisturbed for several hours to determine whether or not groundwater had been reached. The soil boring was then gauged, and water was encountered at approximately forty-nine feet (49') bgs. Soil boring SB-3 was fitted with a two-inch (2") diameter, screened PVC riser and converted into Temporary Monitor Well #2 (TMW-2). A water sample was collected from TMW-2 and submitted to the laboratory for analysis of chloride concentrations. Laboratory analytical results indicated the chloride concentration was 74,000 mg/L.

Soil boring SB-4 was located down-gradient of temporary monitor well TMW-1, approximately one hundred and fifty feet (150') to the south-southwest. The soil boring was advanced to a total depth of approximately fifty-five feet (55') bgs and was allowed to remain undisturbed for several hours to determine whether or not groundwater had been reached. The soil boring was then gauged, and water was encountered at approximately forty-eight feet (48') bgs. Soil boring SB-4 was fitted with a two-inch (2") diameter, screened PVC riser and converted into Temporary Monitor Well #3 (TMW-3). A water sample was collected from TMW-3 and submitted to the laboratory for analysis of chloride concentrations. Laboratory analytical results indicated the chloride concentration was 70,000 mg/L.

Soil boring SB-5 was located down-gradient of temporary monitor well TMW-3, approximately seventy feet (70') to the south-southwest. The soil boring was advanced to a total depth of

approximately fifty-five feet (55') bgs. Soil boring SB-4 was fitted with a two-inch (2") diameter, screened PVC riser, converted into Temporary Monitor Well #4 (TMW-4), and allowed to remain undisturbed overnight to determine whether or not groundwater had been reached. The following day, temporary monitor well TMW-4 was gauged, determined to be dry, plugged, and abandoned pursuant to NMOCD and NMOSE standards.

Soil boring SB-6 was located cross-gradient of temporary monitor well TMW-1, approximately one hundred and twenty-five feet (125') to the west-southwest. The soil boring was advanced to a total depth of approximately fifty-five feet (55') bgs and was allowed to remain undisturbed for several hours to determine whether or not groundwater had been reached. The soil boring was then gauged, determined to be dry, plugged, and abandoned pursuant to NMOCD and NMOSE standards.

Soil boring SB-7 was located down-gradient of temporary monitor well TMW-4, approximately forty-five feet (45') to the south-southwest. The soil boring was advanced to a total depth of approximately fifty-five feet (55') bgs. The soil boring was allowed to remain undisturbed for several hours to determine whether or not groundwater had been reached. The soil boring was then gauged, determined to be dry, plugged, and abandoned pursuant to NMOCD and NMOSE standards.

Soil boring SB-8 was located down-gradient of temporary monitor well TMW-1, approximately two hundred feet (200') to the southwest. The soil boring was advanced to a total depth of approximately fifty-five feet (55') bgs and was allowed to remain undisturbed for several hours to determine whether or not groundwater had been reached. The soil boring was then gauged, and water was encountered at approximately fifty-three feet (53') bgs. Soil boring SB-8 was fitted with a two-inch (2") diameter, screened PVC riser and converted into Temporary Monitor Well #5 (TMW-5). A water sample was collected from TMW-5 and submitted to the laboratory for analysis of chloride concentrations. Laboratory analytical results indicated the chloride concentration was 316 mg/L.

From January 18 through February 2, 2012, the water in temporary monitor wells TMW-1, TMW-2, TMW-3, and TMW-5 was gauged and purged on a semi-weekly basis. Gauging data from this time period indicated that the water level in the temporary monitor wells diminished by an average of approximately two feet (2').

On January 25, 2012, one (1) water sample was collected from temporary monitor well TMW-1 and submitted to the laboratory for analysis of chloride and BTEX concentrations. Laboratory analytical results indicated benzene, ethylbenzene, and total xylene concentrations were less than the appropriate laboratory MDL. The toluene concentration was 0.001 mg/L, and the chloride concentration was 72,000 mg/L.

From January 31 through February 14, 2012, approximately one thousand, two hundred and forty cubic yards (1,240 yd³) of impacted soil was transported to Lea Land, Inc. (NMOCD Permit # WM-01-035), for disposal.

On February 1, 2012, three (3) soil samples (Sample #1, Sample #2, and Sample #3) were collected from the sidewalls of the excavation and submitted to the laboratory for analysis of TPH and chloride concentrations. Laboratory analytical results indicated TPH concentrations

ranged from less than the laboratory MDL in Sample #3 to 35.2 mg/kg in Sample #1. Chloride concentrations were less than the laboratory MDL in all submitted soil samples.

On February 8, 2012, a representative of Basin Environmental contacted a representative of the NMOCD Artesia District Office via telephone to discuss the laboratory analytical results from the water samples and the findings from the semi-weekly gauging events at temporary monitor wells TMW-1, TMW-2, TMW-3, and TMW-5. Based on the gauging data and the absence of significant BTEX concentrations in TMW-1, which was adjacent to the release point, the NMOCD representative agreed with the assessment that the water in the temporary monitor wells was most likely one of the many naturally occurring salt water deposits in the area. Permission was requested to plug and abandon the four (4) temporary monitor wells. The request was approved by the NMOCD representative.

On February 8, 2012, a twenty (20) mil polyurethane liner was installed on the floor of the excavation. A cushion of non-impacted pad sand was installed approximately one foot (1') both above and below the liner to protect the liner from damage during installation and backfilling activities.

Based on laboratory analytical results and field-screens, on February 14, 2012, the excavation was backfilled in eighteen-inch (18") lifts with locally purchased, non-impacted material. Final dimensions of the excavation were approximately eighty-eight feet (88') in length, approximately sixty-five feet (65') in width, and approximately five feet (5') in depth. Following backfill, the excavation was water-packed and contoured to fit the surrounding topography.

On March 6, 2012, with NMOCD approval, temporary monitor wells TMW-1, TMW-2, TMW-3, and TMW-5 were plugged and abandoned pursuant to NMOCD and NMOSE standards.

On July 11, 2012, the disturbed area was seeded with a BLM-approved seed mixture.

4.0 QA/QC PROCEDURES

4.1 Soil Sampling

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

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

4.2 Decontamination of Equipment

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

4.3 Laboratory Protocol

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

5.0 SITE CLOSURE REQUEST

Soil samples collected from the sidewalls of the Bass 3 Federal Well #4 Spill Site "A" excavation were analyzed by an NMOCD-approved laboratory, and concentrations of BTEX and TPH were below the regulatory remediation action levels established for the site by the NMOCD.

An impermeable, twenty (20) mil polyurethane liner was installed on the floor of the excavation prior to backfilling. This engineered control will inhibit vertical migration of contaminants from below the liner to the surface, protecting the vegetative zone. In addition, the polyurethane liner will shed moisture to the edge of the liner and beyond the maximum horizontal extent of underlying impacted soil, effectively inhibiting vertical migration of contaminants to groundwater.

Basin Environmental 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 soil closure status to the Bass 3 Federal Well #4 Spill Site "A" 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, NM 88210

Copy 2: James Amos

Bureau of Land Management

602 E. Greene Street Carlsbad, NM 88220

Copy 3: Tony Savoie

BOPCO, LP

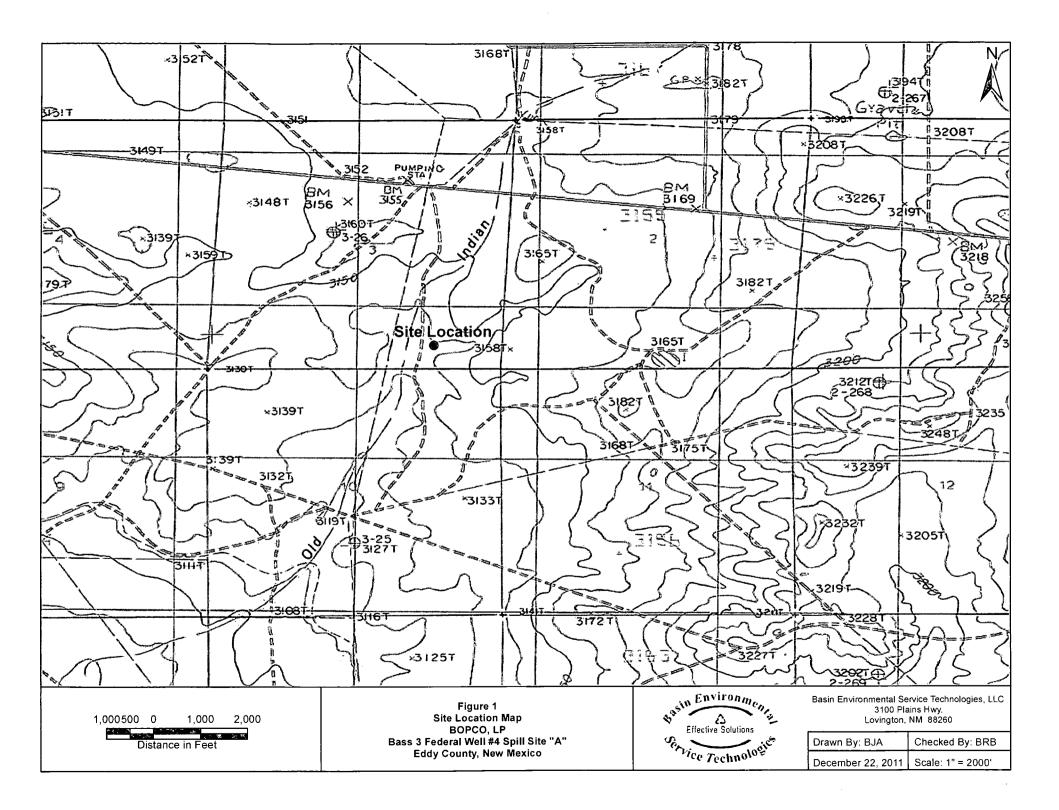
522 W. Mermod, Suite 704 Carlsbad, NM 88220

Copy 4: Basin Environmental Service Technologies, LLC

P.O. Box 301

Lovington, NM 88260

Figures



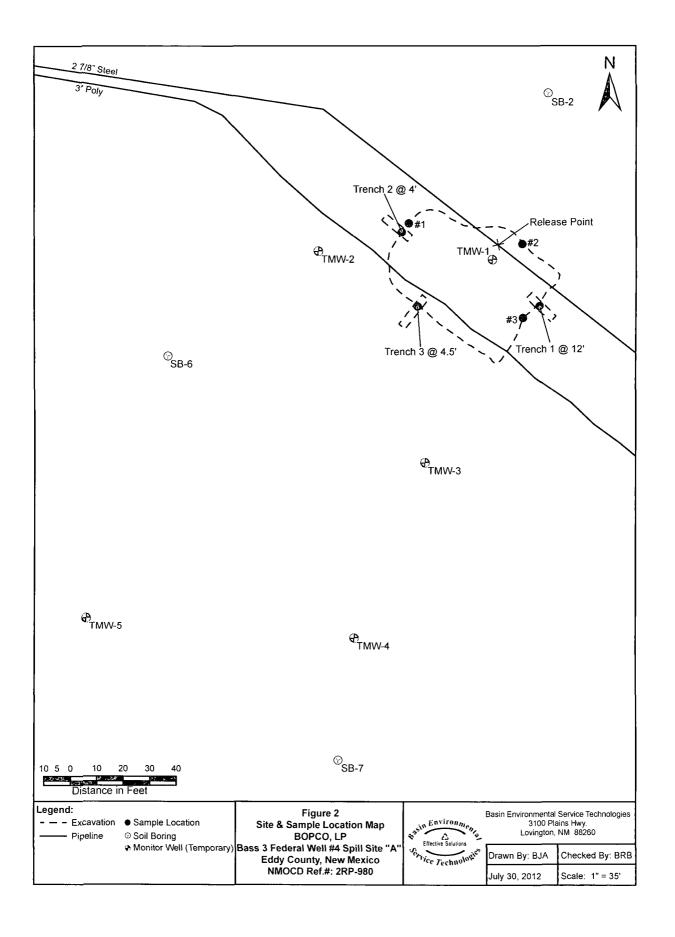




TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL

BOPCO, LP BASS 3 FEDERAL WELL #4 SPILL SITE "A" EDDY COUNTY, NEW MEXICO NMOCD REFERENCE #: 2RP-980

CAMPLE					METHOD: E	PA SW 846	-8021B, 503	30	METHOD: 8015M			TOTAL	4500 CI-B
SAMPLE LOCATION	SAMPLE DEPTH (BGS)	TH SAMPLE	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)
Trench 1 @ 12'	12'	12/16/2011	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	6,530
Trench 2 @ 4'	4'	12/16/2011	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	48.0
Trench 3 @ 4.5'	4.5'	12/16/2011	In-Situ	-	-	-	•	-	<10.0	<10.0	<10.0	<10.0	<16.0
SB-1 @ 5'	5'	1/12/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	2,800
SB-1 @ 10'	10'	1/12/2012	In-Situ	< 0.050	<0.050	< 0.050	< 0.150	<0.150	<10.0	<10.0	<10.0	<10.0	5,120
SB-1 @ 55'	55'	1/12/2012	In-Situ	-	-	-	-	-	-	-	-	-	<16.0
Sample #1	N/A	2/1/2012	In-Situ	-	-	-	-	-	<10.0	14.5	20.7	35.2	<16.0
Sample #2	N/A	2/1/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	12.3	12.3	<16.0
Sample #3	N/A	2/1/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	<16.0
NMOCD Criteria				10				50				5,000	1,000

^{- =} Not analyzed.

TABLE 2

CONCENTRATIONS OF BENZENE, BTEX & CHLORIDE IN GROUNDWATER

BOPCO, LP BASS 3 FEDERAL WELL #4 SPILL SITE "A" EDDY COUNTY, NEW MEXICO NMOCD REFERENCE #: 2RP-980

SAMPLE LOCATION	SAMPLE DATE	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL- BENZENE (mg/L)	TOTAL XYLENES (mg/L)	TOTAL BTEX (mg/L)	CHLORIDE (mg/L)
SB-1	01/13/2012	-	-	-	-	-	81,000
Heater Treater	01/17/2012	<u>-</u>	<u>-</u>	-	-	-	79,000
TMW-2	01/17/2012	-	-	-	-	-	74,000
TMW-3	01/17/2012	-	-	-	-	-	70,000
TMW-5	01/23/2012	-	-	-	-	-	316
TMW-1	01/25/2012	<0.001	0.001	<0.001	<0.003	0.001	72,000
NMOCD CRITERIA		0.01	0.75	0.75	0.62		250

Appendices

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

District I 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District [II 1000 Rio Brazos Road, Aztec, NM 87410 District IV

Attach Additional Sheets If Necessary

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

Oil Conservation Division 1220 South St. Francis Dr. Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back

Form C-141

Revised October 10, 2003

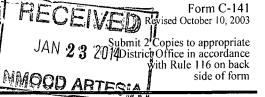
side of form 1220 S. St. Francis Dr., Santa Fe, NM 87505 Santa Fe, NM 87505 30-015-28736 **Release Notification and Corrective Action OPERATOR** Initial Report Final Report nMLB1135446814 Name of Company BOPCO, L.P. Contact Tony Savoie 260737 Address 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220 Telephone No. 432-556-8730 Facility Name Bass 3 Federal Well #4 Spill Site "A" Facility Type E&P Surface Owner Federal Mineral Owner Federal Lease No. LOCATION OF RELEASE Feet from the North/South Line Feet from the East/West Line County Unit Letter Section Township Range **22S** 28E Eddy 0 3 Latitude N 32.416059 Longitude W 104.070738 NATURE OF RELEASE Type of Release: Produced water and crude oil Volume of Release: 25 Bbls of Volume Recovered: none Produced water and 5 Bbls of Crude oil Source of Release: Above ground 2 7/8" flow line Date and Hour of Occurrence Date and Hour of Discovery Unknown 12/13/11 11:36 a.m. Was Immediate Notice Given? If YES. To Whom? Mike Bratcher NMOCD and Jim Amos BLM By Whom? Tony Savoie Date and Hour 12/13/11 12:12 p.m. Was a Watercourse Reached? If YES, Volume Impacting the Watercourse. ☐ Yes ☒ No If a Watercourse was Impacted, Describe Fully.* DEC 15 2011 NMOCD ARTESIA Describe Cause of Problem and Remedial Action Taken.* The flow line delivering produced fluid from the well to the tank battery developed a leak, the well was shut in and a temporary repair clamp was placed on the affected area. The well will remain shut in until the entire flow line can be replaced with poly pipe. Describe Area Affected and Cleanup Action Taken.*The released fluid affected an area of approximately 2700 sq. ft of pasture land. All of the fluid had soaked into the ground. The spill is in area previously impacted with produced water and crude oil spills. An air rotary rig has been scheduled for 12/19/11 to determine the vertical and horizontal extent of the release sites. The Site remediation for the produced water and crude oil spill will follow the NMOCD guidelines for leaks and spills. 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 Supervises: Printed Name: Tony Savoie Approval Dat DEC 20 Title: Waste Mgmt.& Remediation Specialist **Expiration Date:** E-mail Address: TASavoie@BassPet.com Conditions of Approval: Remediation per OCD Rules & Attached **Guidelines. SUBMIT REMEDIATION** Date: 12/15/11 Phone: 432-556-8730

PROPOSAL NOT LATER THAN:

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

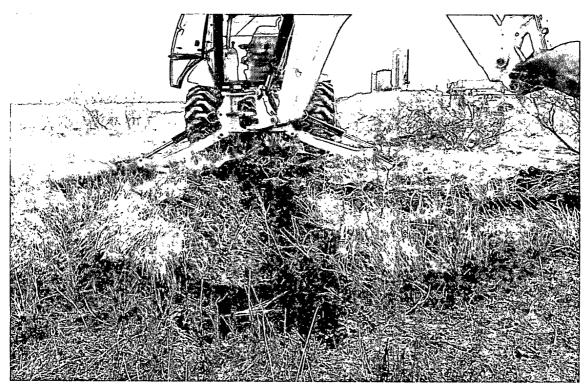


Release Notification and Corrective Action

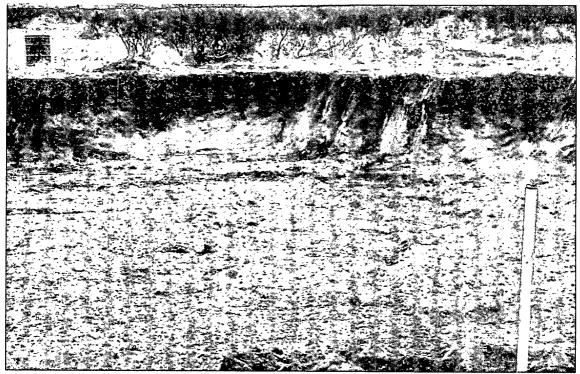
				(PEF	RATOR			Initial R	eport	X Final Report
Name of Co	mpany	BOPCO, LF	> 7	260737		Contact To	ny Savoie				
Address 5	22 W. Me	rmod, Suite	704, Carl	sbad, NM 88220) [Telephone No. (432)556-8730					
Facility Nan	ne Bass 3	Federal We	ll #4 Spil	l Site "A"	1	Facility Typ	e E&P		API		
Surface Our	nor Fodor	<u></u>		Mineral Ov	vnor	Federal				- 30	016 20121
Surface Owner Federal Mineral Owner Federal Lease No. 30-015-28736									-015-28156		
						OF REI	LEASE				
Unit Letter O	Section 3	Township 22S	Range 28E	Feet from the	North/	South Line	Feet from the	East/W	Vest Line	County Eddy	
			<u>Latit</u>	ude 32.416059°	North		Longitude 104	4.07073	88° West		
	NATURE OF RELEASE										
Type of Relea	se Produc	ed water and o	crude oil				Release 25 bbls	of	Volume R	ecovered	None
, , , , , , , , , , , , , , , , , , ,							vater and 5 bbls o				
						crude oil					
Source of Rel	ease Abo	ve ground 2 7/	8" flow li	ne		Date and H Unknown	our of Occurrenc	e	Date and 12/13/11		
Was Immedia	te Notice (Given?				If YES, To	Whom?				·
		XΥ	es No	Not Required		Mike Brate	her NMOCD and	Jim An	nos BLM		
By Whom?	Tony Savo	ie			_	Date and H	lour 12/13/11 12:	12 p.m.			
Was a Watero		ched?					lume Impacting t		rcourse.		
		_] Yes >	K No							
If a Watercou	rse was Im	pacted, Descri	be Fully.*	:		1					
		•	•								
						·-·					
Describe Cau	se of Probl	em and Reme	dial Actio	n Taken:* The flow	w line o	delivering pro	oduced fluid from	the wel	ll to the tan	k battery	developed a leak. The was replaced with poly
pipe.	-in and a te	emporary repa	ir cianip v	vas piaced on the a	nectea	area. The we	ii remained snut-	ın untii	the entire i	iow line v	was replaced with poly
	a Affected	and Cleanup	Action Ta	ken.* The released	fluid	affected an a	rea of approxima	tely 2.7	$00 \text{ ft}^2 \text{ of p}$	asture lan	d. All of the fluid had
soaked into tl	ne ground.	The spill was	in an are	a previously impac	cted wi	th produced	water and crude	oil spills	s. Followin	g initial	response activities, the
			OCD reco	ommended guideli	nes. Pl	ease referenc	e the attached R	emediat	ion Summ	ary & Ri	sk-Based Site Closure
Request for re			iven abov	e is true and com	nlete to	the best of	my knowlodgo or	nd under	etand that	nurcuant	to NMOCD rules and
regulations al	l operators	are required	to report	and/or file certain	release	notifications	and perform co	rrective	actions for	releases	, which may endanger
public health	or the env	ironment. The	e acceptar	ice of a C-141 rep	ort by	the NMOCD	marked as "Fina	l Report	t" does not	relieve th	he operator of liability
should their o	perations l	nave failed to	adequately	investigate and re	emedia	te contaminat	ion that pose a th	reat to g	ground wat	er, surfac	e water, human health
or the environ				eptance of a C-14	I repor	t does not re	lieve the operato	or of resp	ponsibility	for comp	oliance with any other
rederal, state,	or local lav	ws and/or regu	iations.				OIL CONS	SEDV	ATION	DIVIS	ION
_	. 	<u>a</u>	,				OIL CON	SLIC V.	AHON	DIVIS	ion
Signature:	1 One	Dam	سفه								
Printed Name	: Tony Sav) voi <u>e </u>			_ /	Approved by	District Superviso	or:			
Title: Waste	Mgmt. & R	Lemediation S ₁	oecialist			Approval Dat	e:	E	Expiration I	Date:	
E-mail Addre	ss: TASav	oie@BassPet.	com			Conditions of	Approval:				
Date: 1/2:	2/14	Ph	one:#38	1-556-873							

2RP- 980

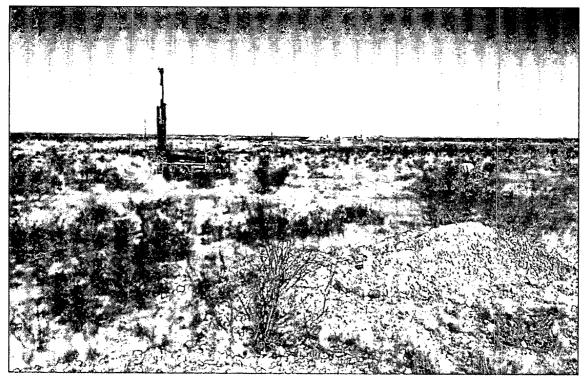
Appendix B Photographs



Bass 3 Federal Well #4 Spill Site "A" - Release Site & Delineation Trench



Bass 3 Federal Well #4 Spill Site "A" - Excavation (Temporary Monitor Well TMW-1 Visible in Foreground)



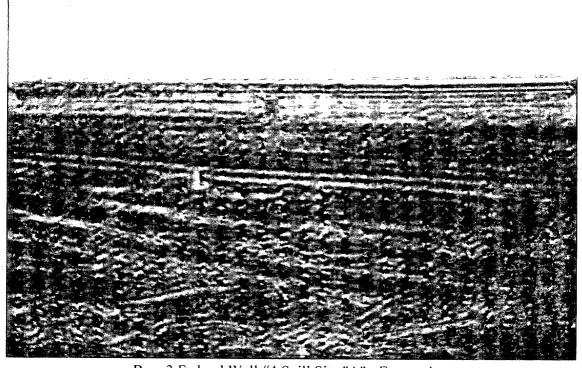
Bass 3 Federal Well #4 Spill Site "A" - Advancement of Temporary Monitor Wells



Bass 3 Federal Well #4 Spill Site "A" - Liner Installation



Bass 3 Federal Well #4 Spill Site "A" - Liner Installation (Temporary Monitor Well Visible in Background)



Bass 3 Federal Well #4 Spill Site "A" - Excavation (Following Backfilling; Temporary Monitor Well Visible in Middle-Ground)

Appendix C Soil Boring & Monitor Well Logs

Soil Boring SB-1/Temporary Monitor Well TMW-1

Depth						
Below		Chloride				
Ground	Soil	Field	PID	Petroleum	Petroleum	0.115
Surface	Column	Test	Reading	<u>Odor</u>	Stain	Soil Description
r∘	डिल्ड	3,614				
E	155			None	Moderate	0' - 6' - Tan very fine sand with clay
E,	327		(14.7)	110110	modorato	
ļ.	177			None	None	6' - 9' - Tan fine sand - sandstone
E 10			(1.3)	None	None	
E"			(1.3)			
ŧ				None	None	
F"			1.7			9' - 26' - Red fine sand - sandstone
E				None	None	
20		7,224	7.0			
F				None	None	
25						
E				None	None	26' - 30' - Tan fine sand - sandstone
30						
F				None	None	
E 35	23.6			140110	110110	
ξ				N	Alama	
F.,		2.464		None	None	
-40	10.10	3,164				30' - 55' Red fine sand - sandstone
Ŀ				None	None	30 - 33 Red line saild - saildstone
-45						
				None	None	
50	自安					
Ŀ				None	None	
L ₅₅	freta	(5,232)				

Date Drilled	January 12, 2012
Thickness of Bentonite Se	eal55 Ft
Depth of Exploratory Borli	ng 55 Ft bgs
Depth to Groundwater	48 Ft bgs
Ground Water Elevation_	

▼ Indicates the PSH level measured

Indicates the groundwater level measured on January 19, 2012
 Indicates samples selected for Laboratory Analysis.
PID Head-space reading in ppm obtained with a photo-ionization detector.

Sand Pack

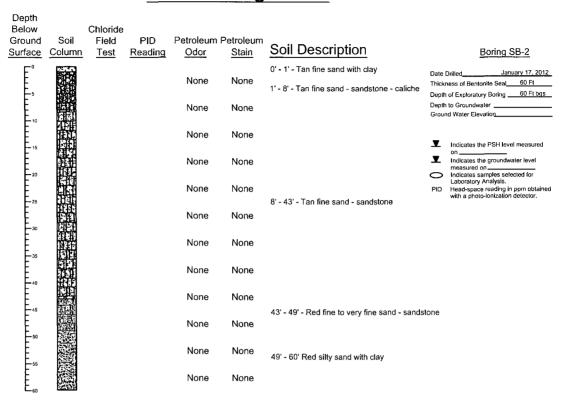
Completion Notes

- The temporary monitor well was advanced on date using air rotary drilling techniques.
 The well was constructed with 2* ID, 0.020 inch factory slotted, threaded joint, schedule 40 PVC pipe.
- 40 PVC pipe.
 3.) The well is protected with a compresson cap.
 4.) The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
- The depths indicated are referenced from ground surface.

63cin Environmente Effective Sciusions The Technologic

Prep By: BJA Checked By: BRB May 10, 2012

Soil Boring SB-2



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

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Prep By: BJA Checked By: BRB May 11, 2012

BOPCO, LP Bass 3 Federal Well #4 Spill Site "A" **Eddy County, New Mexico**

Soil Boring SB-3/Temporary Monitor Well TMW-2

Depth Below		Chloride					
Ground	Soil	Field	PID	Petroleum P	etroleum		
Surface	Column	Test	Reading	<u>Odor</u>	Stain	Soil Description	
ʰ				None	None	0' - 2' - Tan silty sand with clay	2
E 10				None	None	2' - 11' - Tan fine sand; sandstone; caliche	227.1.3
Ē				None	None		1
- 15 -				None	None	11' - 20' - Tan fine sand - sandstone	A 8 200
E 20				None	None	20' - 23' - Red fine sand	
E 25				None	None		
30				None	None	23' - 48' - Red silty sand	
E 33				None	None		70.00
Ę*				None	None		2007
F ▼				None	None		1000
50 E E 55		>2,428		None	None	48' - 55' Red silty sand - silty clay	

Date Drilled	January 17, 2012
Thickness of Bentonite S	eal55 Ft
Depth of Exploratory Bori	ng 55 Ft bgs
Depth to Groundwater	49 Ft bgs
Ground Water Elevation	

Indicates the PSH level measured

on Indicates the groundwater level measured on January 19, 2012
Indicates samples selected for Laboratory Analysis.
PID Head-Space reading in ppm obtained with a photo-ionization detector.

Sand Pack

Completion Notes

- The temporary monitor well was advanced on date using air rotary drilling techniques.
 The well was constructed with 2° ID, 0,020 inch factory slotted, threaded joint, schedule 40 PVC pipe.
- 3.) The well is protected with a compresson cap.
 4.) The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
- The depths indicated are referenced from ground surface.

Soil Boring SB-3/ **Temporary Monitor Well TMW-2**

BOPCO, LP Bass 3 Federal Well #4 Spill Site "A" **Eddy County, New Mexico**



Basin Environmental Service Technologies, LLC 3100 Plains Hwy. Lovington, NM 88260

Prep By: BJA	Checked By: BRB
May 10, 2012	

Soil Boring SB-4/Temporary Monitor Well TMW-3

Depth Below Ground Surface	Soil Column	Chloride Field <u>Test</u>	PID <u>Reading</u>	Petroleum Po	etroleum <u>Stain</u>	Soil Description
E°				None	None	0' - 6' - Tan silty sand with silty clay
E 10				None	None	6' - 13' - Tan fine sand - sandstone - caliche
15				None	None	0 - 13 - Tan fine sand - Sandstone - Canone
E 20	212			None	None	13' - 18' - Tan fine sand - sandstone
25				None	None	
E 30				None	None	
E ₃₅				None	None	18' - 50' - Red fine sand - sandstone
E 40				None	None	
45				None	None	
				None	None	
E 55				None	None	50' - 55' Red silty sand - silty clay

Date Drilled	January 17, 2012
Thickness of Bentonite S	Seal55.Ft
Depth of Exploratory Bor	ng 55 Ft bgs
Depth to Groundwater _	-

- Indicates the PSH level measured

Sand Pack

Completion Notes

- The temporary monitor well was advanced on date using air rotary drilling techniques.
 The well was constructed with 2" ID, 0,020 inch factory slotted, threaded joint, schedule 40 PVC pipe.
 The well is protected with a compresson cap.
- The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
- The depths indicated are referenced from ground surface.

Soil Boring SB-4/ **Temporary Monitor Well TMW-3**

BOPCO, LP Bass 3 Federal Well #4 Spill Site "A" **Eddy County, New Mexico**



Basin Environmental Service Technologies, LLC 3100 Plains Hwy. Lovington, NM 88260

Checked By: BRB Prep By: BJA May 11, 2012

Soil Boring SB-5/Temporary Monitor Well TMW-4

Depth						
Below		Chloride				
Ground	Soil	Field	PID	Petroleum Pe	etroleum	
Surface	Column	Test	Reading	Odor	Stain	Soil Description
				None	None	0' - 3' - Tan fine sand with clay
10				None	None	3' - 11' - Tan fine sand - sandstone
15				None	None	
-20				None	None	
- 25				None	None	
E 30				None	None	11' - 47' - Red fine sand - sandstone
35				None	None	
E 40				None	None	
- - - - 45				None	None	
E 50				None	None	47' - 50' - Red silty sand - silty clay
E 55				None	None	50' - 55' Red silty sand - sandstone

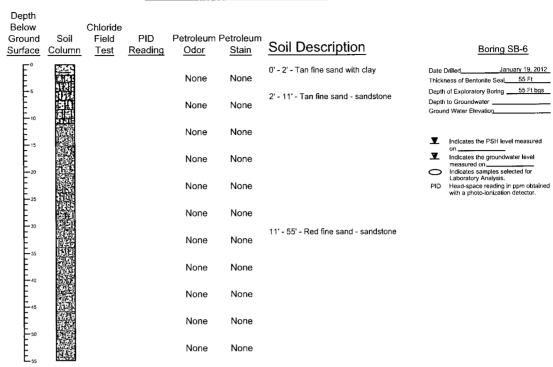
January 19, 2012 Thickness of Bentonite Seal_ 55 Ft Depth of Exploratory Boring 55 Ft bgs Depth to Groundwater . Ground Water Elevation Indicates the PSH level measured Indicates the groundwater level Sand Pack

Completion Notes

- The temporary monitor well was advanced on date using air rotary drilling techniques.
 The well was constructed with 2" ID, 0.020 inch factory slotted, threaded joint, schedule 40 PVC pipe.
- 3.) The well is protected with a compresson cap.
- The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
- 5.) The depths indicated are referenced from ground surface.

Basin Environmental Service Technologies, LLC Basin Environmente 3100 Plains Hwy. Lovington, NM 88260 Prep By: BJA Checked By: BRB Fire Technologies May 11, 2012

Soil Boring SB-6



Completion Notes

55 Ft bgs

- The soil boring was advanced on date using air rotary drilling techniques.

Basin Environmental Service Technologies, LLC 3100 Plains Hwy. Lovington, NM 88260

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Prep By: BJA Checked By: BRB May 11, 2012

Soil Boring SB-7

Depth							
Below		Chloride					
Ground	Soil	Field	PID	Petroleum P		Call Danadation	
<u>Surface</u>	Column	<u>Test</u>	Reading	<u>Odor</u>	<u>Stain</u>	Soil Description	Boring SB-7
E 5				None	None	0' - 1' - Tan silty sand with clay	Date Drilled January 19, 2012 Thickness of Bentonite Seal 55 Ft Depth of Exploratory Boring 55 Ft bgs Depth to Groundwater 55 Ft bgs
E				None	None	1' - 17' - Tan fine sand - sandstone	Ground Water Elevation
10 - - - 15				None	None		■ Indicates the PSH level measured
E				None	None		Indicates the groundwater level
20 - - - - - - - - - - - - - - - - - - -				None	None		measured on
E 30				None	None		
F				None	None		
E ₃₅	150			110110	740110	17' - 55' - Red fine sand - sandstone	
E 40				None	None	17 - 33 - Ned line sand - sandstone	
45				None	None		
50				None	None		
				None	None		

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

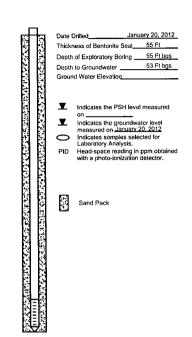
Prep By; BJA Checked By: BRB May 11, 2012

Elective Solutions

Confice Technologies

Soil Boring SB-8/Temporary Monitor Well TMW-5

Depth Below Ground Surface	Soil <u>Column</u>	Chloride Field <u>Test</u>	PID Reading	Petroleum Po	etroleum <u>Stain</u>	Soil Description
ʰ				None	None	0' - 1' - Tan silty sand with silty clay
E				None	None	41 401 Tag 5aa aand aandahaa
				None	None	1' - 19' - Tan fine sand - sandstone
- 15 - 15				None	None	
20 -				None	None	
-25 - - -				None	None	
-30 - -				None	None	19' - 49' - Red fine sand - sandstone
-35 - -				None	None	
-40 - -				None	None	
-45 -				None	None	
50	4			None	None	49' - 55' Red silty sand - silty clay



Completion Notes

- The temporary monitor well was advanced on date using air rotary drilling techniques.
- The well was constructed with 2" ID, 0.020 inch factory slotted, threaded joint, schedule 40 PVC pipe.
- 3.) The well is protected with a compresson cap.
- The depths indicated are referenced from ground surface.

BOPCO, LP Bass 3 Federal Well #4 Spill Site "A" **Eddy County, New Mexico**



Basin Environmental Service Technologies, LLC 3100 Plains Hwy. Lovington, NM 88260

Prep By: BJA Checked By: BRB May 11, 2012

Appendix D Laboratory Analytical Reports (Soil)



December 22, 2011

BEN J. ARGUIJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: BASS 3 FEDERAL WELL #4 SPILL A

Enclosed are the results of analyses for samples received by the laboratory on 12/19/11 8:10.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab accredited certif.html.

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

Method EPA 552.2

Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

Method EPA 524.4

Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celeg 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



Analytical Results For:

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

Received:

12/19/2011

Sampling Date:

12/16/2011

Reported:

12/22/2011

Sampling Type:

Soil

Project Name:

BASS 3 FEDERAL WELL #4 SPILL A

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Jodi Henson

Project Location:

EDDY COUNTY, NM

Sample ID: TRENCH 1 @ 12' (H102725-01)

Chloride, SM4500CI-B	mg/kg		Analyze	Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6530	16.0	12/20/2011	ND	416	104	400	3.77	
TPH 8015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/21/2011	ND	216	108	200	1.74	
DRO >C10-C28	<10.0	10.0	12/21/2011	ND	197	98.7	200	12.2	
EXT DRO >C28-C35	<10.0	10.0	12/21/2011	ND					
Surrogate: 1-Chlorooctane	109	% 55.5-15	4						
Surrogate: 1-Chlorooctadecane	103	% 57.6-15	8						

Sample ID: TRENCH 2 @ 4' (H102725-02)

Chloride, SM4500CI-B	mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	12/20/2011	ND	416	104	400	3.77	
TPH 8015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/21/2011	ND	216	108	200	1.74	
DRO >C10-C28	<10.0	10.0	12/21/2011	ND	197	98.7	200	12.2	
EXT DRO >C28-C35	<10.0	10.0	12/21/2011	ND					
Surrogate: 1-Chlorooctane	109	% 55.5-15	4						
Surrogate: 1-Chlorooctadecane	108	% 57.6-15	8						

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*=Accredited Analyte

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

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

Fax To:

Sampling Date:

12/16/2011

Received: Reported: 12/19/2011 12/22/2011

Sampling Type:

Soil

Project Name:

BASS 3 FEDERAL WELL #4 SPILL A

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Project Location:

EDDY COUNTY, NM

Sample Received By:

Jodi Henson

Sample ID: TRENCH 3 @ 4.5' (H102725-03)

Chloride, SM4500Cl-B	mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	12/20/2011	ND	416	104	400	3.77	
TPH 8015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/21/2011	ND	216	108	200	1.74	
DRO >C10-C28	<10.0	10.0	12/21/2011	ND	197	98.7	200	12.2	
EXT DRO >C28-C35	<10.0	10.0	12/21/2011	ND					
Surrogate: 1-Chlorooctane	107	% 55.5-15	4						
Surrogate: 1-Chlorooctadecane	117	% 57.6-15	8						

Sample ID: TRENCH 4 @ 4' (H102725-04)

Chloride, SM4500CI-B	mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	12/20/2011	ND	416	104	400	3.77	
TPH 8015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/21/2011	ND	216	108	200	1.74	
DRO >C10-C28	<10.0	10.0	12/21/2011	ND	197	98.7	200	12.2	
EXT DRO >C28-C35	<10.0	10.0	12/21/2011	ND					
Surrogate: 1-Chlorooctane	116	% 55.5-15	4		-			, ,	
Surrogate: 1-Chlorooctadecane	116	% 57.6-15	8						

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*=Accredited Analyte

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Celey D. Keene

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:

12/19/2011

Sampling Date:

12/16/2011

Reported:

12/22/2011

Sampling Type:

Soil

Project Name:

BASS 3 FEDERAL WELL #4 SPILL A

Sampling Type: Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Jodi Henson

Project Location:

EDDY COUNTY, NM

Sample ID: TRENCH 5 @ 4' (H102725-05)

Chloride, SM4500CI-B	mg	/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	12/21/2011	ND	432	108	400	3.64	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/21/2011	ND	216	108	200	1.74	4
DRO >C10-C28	<10.0	10.0	12/21/2011	ND	197	98.7	200	12.2	
EXT DRO >C28-C35	<10.0	10.0	12/21/2011	ND					
Surrogate: 1-Chlorooctane	99.4	% 55.5-15	4						
Surrogate: 1-Chlorooctadecane	106	% 57.6-15	8						

Sample ID: TRENCH 6 @ 4.5' (H102725-06)

Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	12/21/2011	ND	432	108	400	3.64	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/21/2011	ND	216	108	200	1.74	
DRO >C10-C28	<10.0	10.0	12/21/2011	ND	197	98.7	200	12.2	
EXT DRO >C28-C35	<10.0	10.0	12/21/2011	ND					
Surrogate: 1-Chlorooctane	110	% 55.5-15	4						
Surrogate: 1-Chlorooctadecane	108	% 57.6-15	8						

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*=Accredited Analyte

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Celeg & Keene



Notes and Definitions

QM-4X The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or

greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance

limits.

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



represent verbal changes. Please fax written changes to 505-393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

	101 East Marland, Hobbs, NM 882 (575) 393-2326 FAX (575) 393-2474				—
Company Name	Basin Environmental Service	Cachnolanian II.	BILL TO	ANALYSIS REQUEST	
Project Manager	C Ben J. Arouijo	ecumoragres, and	P.O. #:		
Address: P.O.	. Box 301	•	Company: BCPCO, LP		1 1
City: Lovingto	on State: NM	Zip: .88260	Attn: Tony Savole		b 1
Phone #: (575)) 396-2378 Fax #: (575) 39		Address: 522 W. Nerma	i	7 1
Project #:	Project Owner		City: Carlsbad		
Project Name:	Bass 3 Federal Well #4 Spill /	**************************************	State: NM Zip: 88220		
	n: Eddy Co., NM		Phone #: (432) 556-873		
Sampler Name:	Bobby Blackwood	The section of the se	Fax #:		
Lab I.D.	Sample I.D. Irench I @ 12' Trench 2 @ 4' Trench 3 @ 4.5' Trench 4 @ 4' Trench 5 @ 4' Trench 6 & 4:5'			TIME 1)0 X X 12 00 12 95 1330 1 4/5 1500	
All charms include	and Damages, Cordinat's Labrity and client's exclusive remedy for a ing those for negligence and any other cause whatsoever shall be	deamen without unless reading within a	ed received by Carrieral within 23 days ofto:	completion of the approprie	1
officient or recomment and	Cardinal be liable for incidental or consequental damages, including	s without Emitation, minimage intermedians	the salvey at less at profits progred by a	ent. its subsidiaries. Lans at otherwise.	
Relinquished B	y: Date:	Received By:	12/17/11 7 2 6700	Phone Result:	
Delivered By Toler - UPS	(Circle One) 12/16 (Bus Lopper Chillian 3:	Sample Cond Cool - Intact Sign No 1	es (Intrals)	& & TAsavoie@BassPet.com	



January 19, 2012

BEN J. ARGUIJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: BASS 3 FEDERAL WELL #4 SPILL A

Enclosed are the results of analyses for samples received by the laboratory on 01/16/12 8:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab accredited certif.html.

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

Method EPA 552.2 Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celeg & 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



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

Fax To:

Received: Reported: 01/16/2012

01/19/2012

Project Name: Project Number: BASS 3 FEDERAL WELL #4 SPILL A NONE GIVEN

Project Location:

EDDY COUNTY, NM

Sampling Date:

01/12/2012

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By: Jodi Henson

Sample ID: SB-1 @ 5' (H200090-01)

Chloride, SM4500CI-B	mg,	'kg	Analyze	d By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Chloride	2800	16.0	01/17/2012	ND	432	108	400	3.64			
TPH 8015M	015M mg/kg Analyzed				zed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
GRO C6-C10	<10.0	10.0	01/17/2012	ND	219	109	200	6.11			
DRO >C10-C28	<10.0	10.0	01/17/2012	ND	203	101	200	10.3			
EXT DRO >C28-C35	<10.0	10.0	01/17/2012	ND							
Surrogate: 1-Chlorooctane	115	% 55.5-15	4								
Surrogate: 1-Chlorooctadecane	132	% 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.

Celeg Di Keena



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

Fax To:

01/16/2012

01/19/2012

BASS 3 FEDERAL WELL #4 SPILL A NONE GIVEN

Project Number: Project Location:

Project Name:

Received:

Reported:

EDDY COUNTY, NM

Sampling Date:

Sampling Type:

Sampling Condition:

Sample Received By:

Cool & Intact

01/12/2012

Soil

Jodi Henson

Sample ID: SB-1 @ 10' (H200090-02)

BTEX 8021B	mg/kg Analyzed By: AP								
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/17/2012	ND	1.93	96.5	2.00	3.48	
Toluene*	<0.050	0.050	01/17/2012	ND	2.05	102	2.00	2.56	
Ethylbenzene*	<0.050	0.050	01/17/2012	ND	2.05	103	2.00	2.92	
Total Xylenes*	<0.150	0.150	01/17/2012	ND	6.38	106	6.00	2.08	
Surrogate: 4-Bromofluorobenzene (PIL	107	% 64.4-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5120	16.0	01/17/2012	ND	432	108	400	3.64	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/16/2012	ND	219	109	200	6.11	
DRO >C10-C28	<10.0	10.0	01/16/2012	ND	203	101	200	10.3	
EXT DRO >C28-C35	<10.0	10.0	01/16/2012	ND					
Surrogate: 1-Chlorooctane	139	% 55.5-15	4						
Surrogate: 1-Chlorooctadecane	161	% 57.6-15	8						

Sample ID: SB-1 @ 55' (H200090-03)

Chloride, SM4500Cl-B	mg	/kg	Analyzed By: AP			_			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	11300	16.0	01/17/2012	ND	432	108	400	3.64	

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liabidity and Damages. Cardinal's liability and dient'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 fliable 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 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



Notes and Definitions

A-01 1 Surrogate failed QC limits (high). No target compounds detected.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

** Samples not received at proper temperature of 6°C or below.

*** Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be determed 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 subcidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg to Keena



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name	Buoth Environent octive	Technologies, LLC				
Project Manager	Ben J. Arquijo		P.O. #:			7
Address: P.O.			Company: BOPCO, LP			
City: Lovingto	in State: NM	Zip: 88260	Attn: Tony Savoie			
Phone #: (575)	396-2378 Fax #:(575) 3	96-1429	Addréss: 522 W. Merm	od		
Project#:	Project Owne	r: BOPCO, LP	City: Cárlsbad			
Project Name:	Bass 3 Federal Well #4 Spill :	Site "A"	State: NM Zip: 88220			
Project Location	n: Eddy Co., NM	<u> </u>	Phone #: (432)556-873	.0		
Sampler Name:	Ben J. Arguis		Fax #:			
FOR LAB USE OMLY		MATRIX	PRESERV SAMPLIN			
		ERS: ATER TER		Maride TPH STEX		
Lab I.D.	Sample I.D.	(G)RAB OR, (C)OMP # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE	OTHER: ACIDIBASE: OTHER:	B. 7		
412.00090		(G)RA # COI GROL SOIL OIL	OTHER ICE / CC OTHER	TIME		
1	98-10.5'	61 1	X 1/12/12	1415 X X		
之	58-1@10'			1420 XX		
3	58.1855'	111111111111111111111111111111111111111		1400 1		
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analyses All dams includi	nd Domages, Cardinats liability and clerifs endusive remotified in ing those for negligence and any other cause whatsoever shall be around be liable for indicental or consequental damages, indicating	deamed waived unless made in miting at	nd teceived by Cardinal webfin 30 days after o	completion of the applicable		
affiliates or successors arisi	ng gut of or related to the performance of services necessaries by	Cardinal recordess of whether such dain Received By:	is based upon any of the above stoled reas	ons or otherwise Phone Result: Yes No	Add'l Phone i	2
Relinquished B	1/19/18	1 7	4.1	Fax Result: 🔲 Yes 🗓 No		
	Time: 08/55		Menson	REMARKS:		
Relinquished B	y: Date:	Réceived By:	· .			
	Time: .		·	Please email resu	ilts to om@ba	asinenv.com
Delivered By: (Circle One) Sample Condition			♠ & TAsavoie@Bass	7		
Sampler - UPS	: Bus - Other:	Cool Intact	es (Infujals)			
harmony and the same of the sa			···			



February 03, 2012

BEN J. ARGUIJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: BASS 3 FEDERAL WELL #4 SPILL A

Enclosed are the results of analyses for samples received by the laboratory on 02/01/12 16:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab accredited certif.html.

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

Method EPA 552.2

Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

Method EPA 524.4

Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celeg & 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



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

(575) 396-1429

Fax To:

Received: Reported: 02/01/2012

02/03/2012

BASS 3 FEDERAL WELL #4 SPILL A

Project Name: Project Number:

NONE GIVEN

Project Location:

EDDY COUNTY, NM

Sampling Date:

02/01/2012

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: SAMPLE #1 (H200251-01)

Chloride, SM4500CI-B	mg.	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/02/2012	ND	432	108	400	3.77	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/02/2012	ND	192	96.0	200	5.21	
DRO >C10-C28	14.5	10.0	02/02/2012	ND	221	111	200	5.39	
EXT DRO >C28-C35	20.7	10.0	02/02/2012	ND					
Surrogate: 1-Chlorooctane	96.5	% 55.5-15	14						
Surrogate: 1-Chlorooctadecane	121	% 57.6-15	8						

Sample ID: SAMPLE #2 (H200251-02)

Chloride, SM4500CI-B	mg	/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/02/2012	ND	432	108	400	3.77	
TPH 8015M	mg	/kg	Analyze	d By: MS				_	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/03/2012	ND	192	96.0	200	5.21	
DRO >C10-C28	<10.0	10.0	02/03/2012	ND	221	111	200	5.39	
EXT DRO >C28-C35	12.3	10.0	02/03/2012	ND					
Surrogate: 1-Chlorooctane	101	% 55.5-15	4	· · · · · · · · · · · · · · · · · · ·		<u></u>	-	···········	
Surrogate: 1-Chlorooctadecane	114	% 57.6-15	8						

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keena



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

Fax To:

(575) 396-1429

Received:

02/01/2012

Sampling Date:

02/01/2012

Reported:

02/03/2012

Sampling Type:

Soil

Project Name:

BASS 3 FEDERAL WELL #4 SPILL A

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Jodi Henson

Project Location:

EDDY COUNTY, NM

Sample ID: SAMPLE #3 (H200251-03)

Chloride, SM4500CI-B	· mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/02/2012	ND	432	108	400	3.77	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/03/2012	ND	192	96.0	200	5.21	
DRO >C10-C28	<10.0	10.0	02/03/2012	ND	221	111	200	5.39	
EXT DRO >C28-C35	<10.0	10.0	02/03/2012	ND					
Surrogate: 1-Chlorooctane	104	% 55.5-15	4						
Surrogate: 1-Chlorooctadecane	129	% 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 profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples Identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg & Keene



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

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

Celey & Keine



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

(575) 393-2326 FAX (575) 393-2476																			
Company Name	: Basin Environmental Service	Tech	nol	ogies, LLC		BI	LL TO					1	ANAL	YSIS	RE	QUE:	ST"		
Project Manage	Ben J. Arquijo				P.	O. #:													
Address: P=0.					C	Company: BOPCO, LP													
City: Lovings	סת State: אוא	Zip	: 88:	260	AI	tn: Tony	Savoie											ł	
Phone #: (575)	396-2378 Fax #: (575) 3	96-1	429		Ad	ldress: 522	W. Mer	med											
Project#:	Project Owne	r) 50	PCO.	LP	Ci	ty: Carlsb	ad												
Project Náme: j	BASS 3 FEDY SIte A			· · · · · · · · · · · · · · · · · · ·	St	ate: NM	Zip: 8822	3										- 1	
Project Location	EDDY WHI				P.I	none,#: (43:	21556-87	3,0										1	
Sampler Name:	Jody Walters	neceso	generaliya Tarakan		Fa	x #:	SAMPL											1	
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER WASTEWATER SOIL OIL X	SLUDGE OTHER:	ACID/BASE: 2 ICE / COOL 0 OTHER : 2		TIME	BOISM	Chloridas	Hold FOR BTEX					,			
١.	Sample #1	G	1.	¹		lX.	2-1-12	9.00	·Х	٨	X .				ì		,		
2	Sample #2	C	i	1	_ļ_	<u> } </u>	2-1-12			X	X								
3	SAMPLE #13	G	<u> </u>		- -	_ x	2-1-12	9:20	×	×	<u>X</u>								
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	ng Damages, Cartinal's batidry and client's exclusive remedy for									i.l.a		-	-						

PLEASE NOTE: Littlely and Damages. Commark babby and cleart is a cluster remony for any clean airling whether based or contract or lost, unall be harbed to the amount paid by the ovent to take analysis. As claim including these to neighbors and can be controlled in the controlled any other completion of the applicable sense. In no event shall Cardinal be labele or increment or consequently damages, including without lamation, business interrotions, loss or use, or loss of profits incurred by tiert, or subticipates, and oney increases interrotions, loss or use, or loss of profits incurred by tiert, or subticipates, and oney increases interrotions, loss or use, or loss of profits incurred by tiert, or subticipates, and oney in successors arrange out or or related to the performance of services necessary arrange out or or related to the performance of services necessary arrange out or or related to the performance of services necessary arrange out or or related to the performance of services necessary arrange out or or related to the performance of services necessary arrange out or or related to the performance of services necessary arrange out or or related to the performance of services necessary arrange out or or related to the performance of services necessary arrange out or or related to the performance of services are related to the

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1/ 0 1	2-1-12 111	Fax Result:
	Time: 3.20 Mayal Mun	REMARKS:
1 per live		
Relinduished By:	Daty / 12 Received By:	
- Man Him	Time - 20 MM JAMA 1911	
I Jun france	1 - 4. 20 Call Callotte	Please email results to pm@basinenv.com
Delivered By: (Circle One)	Sample Condition CHECKED BY:	& TAsavole@BassPet.com
	Cool Intact, (iffitals)	The state of the first and the following the second as the contract of the second of t
Sampler - UPS - Bus - Other:	にり、日Yes 日-Yes し万六	
	No. 1 No.	

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

Appendix E Laboratory Analytical Reports (Groundwater)



January 04, 2012

BEN J. ARGUIJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: BASS 3 FEDERAL 4 'C'

Enclosed are the results of analyses for samples received by the laboratory on 12/30/11 15:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab accredited certif.html.

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

Method EPA 552.2

Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

Method EPA 524.4

Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

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



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

Received:

12/30/2011

Reported:

01/04/2012

Project Name:

BASS 3 FEDERAL 4 'C'

Project Number:

NONE GIVEN

Project Location:

EDDY COUNTY, NM

Sampling Date:

12/30/2011

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

lodi He

Sample Received By:

Jodi Henson

Sample ID: EAST WALL (H102799-03)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	01/03/2012	ND	416	104	400	0.00	
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	01/04/2012	ND	206	103	200	4.54	
DRO >C10-C28	<10.0	10.0	01/04/2012	ND	177	88.4	200	3.61	
EXT DRO >C28-C35	<10.0	10.0	01/04/2012	ND					
Surrogate: 1-Chlorooctane	99.1	% 55.5-15	4						
Surrogate: 1-Chlorooctadecane	122	% 57.6-15	8						

Sample ID: WATER WELL (H102799-04)

Chloride, SM4500CI-B	mg	/L	Analyze	d By: HM			-		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	336	4.00	01/03/2012	ND	100	100	100	3.92	
TDS 160.1	mg	/L	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	2420	5.00	01/03/2012	ND	243	101	240	0.260	

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*=Accredited Analyte

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Celeg & Keena



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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Celeny D. Keene

Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name	Basin Environmental Service	Technologies, LLC	BILL TO	f. ANALYSIS REQUEST
Project Manage	E Ben J. Arguijo		P.O. #:	
Address: P.O.	Box 301	ا المعادد الم	Company: BOPCO, LP	
City: Lovingto	State: NM	Zip: 88260	Attn: Tony Savoie	
Phone #: (575)	396-2378 Fax #: (575) 3	96-1429	Address: 522 w. Mermod	
Project #:	Project Owne	r: BOPCO, LP	City: Carlabad	_
Project Name:	BASS 3 Federal 4	<u>"e"</u>	State: NM Zip: 88220	
Project Location			Phone #: (432) 556-8730	8015m 8015m
Såmpler Name:	Troy Halin		Eax #:	
FOR LAB USE ONLY	0	MATRIX	PRESERV SAMPLING	
		AH H		
1		(C)		3/28/31
Lab I.D.	Sample I.D.	S OF	S S S S S S S S S S S S S S S S S S S	8,39911111
11.000000		(G)RAB OR (C)OMP # CONTAINERS GROUNDWATER WASTEWATER SOIL	OTHER: ACID/BASE: OTHER: ALDO OTHER: ALD OTHER: ALDO OTHER: ALDO OTHER: ALDO OTHER: ALDO OTHER: ALD OTHER: ALDO OTHER: ALDO OTHER: ALDO OTHER: ALDO OTHER: ALD OTHER: ALDO OTHER: ALDO OTHER: ALDO OTHER: ALDO OTHER: ALD OTHER: ALDO OTHER: ALD OT	
H102199		GO) (G)RAB OR (C)OMF # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL		
1	West Wall		13/30/11 101	
	South Wall	G	12/30/11 1030	
7	East Wall	G / /	2/36/11 //05	
	waterwen		12/3/11/20	

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service. In no event shall C	ardinal be liable for incidental or consequently damages, including our of or inflated to the performance of seniors beganning by	y without limitation, takiness interruption	s, has all use, or lass of profits incurred by cheal, its s	eutraid a ries
Relinquished B		Received By:	Phon	ne Result: 🛘 Yes 🗘 No Add'l Phone #:
100 m	Haring Times 17	1/1/0/1/		Result: ☐ Yes ☐ No Add'l Fax #: ARKS:
Relinquished B	v: Date:	Received By:	The state of the s	
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				Please email results to pm@basinenv.com
1	: (Circle One)	Sample Cond	/ (Initials)	& TAsavoie@BassPet.com
Sampler - UPS	- Bus - Other:	Yes No I	es / TAT	
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#26

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



January 17, 2012

BEN J. ARGUIJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: BASS 3 FEDERAL WELL #4 SPILL A

Enclosed are the results of analyses for samples received by the laboratory on 01/16/12 8:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab accredited certif.html.

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

Method EPA 552.2

Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

Method EPA 524.4

Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celey D. 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



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

Fax To:

(575) 396-1429

Received:

01/16/2012

Sampling Date:

01/13/2012

Reported:

01/17/2012

Sampling Type:

Water

True Value QC

Project Name:

BASS 3 FEDERAL WELL #4 SPILL A

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Project Location:

EDDY COUNTY, NM

Sample Received By:

% Recovery

Jodi Henson

RPD

Qualifier

Sample ID: SB-1 (H200084-01)

Chloride, SM4500Cl-B Analyzed By: HM mg/L Analyte Result Reporting Limit Analyzed Method Blank BS

Chloride* 81000 4.00 01/16/2012 ND 104 3.77 104 100

Cardinal Laboratories

*=Accredited Analyte

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

Celeg Di Keene



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, shell be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such 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. Keine



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

ANALYSIS REQUEST

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

Company Name: Basin Environmental Service Technologies, LLC

Project Manager: Ben J. Arguijo		P.O. #:				1 1		
Address: P.O. Box 301		Company: BOPCO, LP						
City: Lovington State: NM	Zip: 88260	Attn: Tony Savole						
Phone #: (575) 396-2378 Fax #:(575) 39	5-1429	Address: 522 W. Memmod	1					
Project #: Project Öwner:	207CO, LP	City: Carlsbad						
Project Name: Bass 3 Federal Well #4 Spill S	ite "A"	State: জ Zip: 83220						
Project Location: Eddy Co., NM		Phone #: (432) 556 - 6730						
Sampler Name: Ben J. Argin;		Fax #:						
FOR LAB USE ONLY	MATRIX	PRESERV SAMPLING						
Lab I.D. Sample I.D.	(G)RAB OR (C)OMP # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL	OTHER: ACID/BASE: ICE / COOL OTHER.	Ala: de					
1 58-/	GIX	X. 1/18/12 0	835 K					
							 	
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PLEASE NOTE: Nativity and Damages. Cardinal's liability and dismits endutive tempory for an growyees. All claims including those for regisjence and any other cause unassecure shall be all service. In no event shall Cardinal be liabile for incidenal or consequence dismages, including alkantes or successors also go out of or jetage to the portomating of services increased by:	emen waived unless made in witing a Athorit lemission, clushess internumbin	nd received by Caromal within 30 days after con Litoss of use, or lose of profits incurred by creft	as subsidishes,	trie				
Relinquished By: Date: //6//a	Received By:	Ph	one Result:	☐ Yes ☐ I	No Add'l Phoi			
Time: nOs.	Modi A		MARKS:		11.001144			
Relinguished By: Date:	Received By:							
Time:								
Delivered By: (Circle One)	Sample Cond	tion CHECKED BY:			sults to pms	abasinenv.c	on	
Sampler - UPS - Bus - Other:	Cool Intact PYes DY	(Initials)	& & ?	FAsavoie⊕Ba	esPet.com			

BILL TO

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



January 20, 2012

BEN J. ARGUIJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: BASS 3 FEDERAL WELL #4 SPILL A

Enclosed are the results of analyses for samples received by the laboratory on 01/19/12 11:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab accredited certif.html.

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

Method EPA 552.2

Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

Method EPA 524.4

Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celeg & 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



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

Fax To:

(575) 396-1429

Received:

01/19/2012

Sampling Date:

01/17/2012

Reported:

Sampling Type:

Water

Project Name:

01/20/2012

Project Number:

NONE GIVEN

Sampling Condition:

Cool & Intact

Project Location:

EDDY COUNTY, NM

BASS 3 FEDERAL WELL #4 SPILL A

Sample Received By:

Jodi Henson

Sample ID: HEATER TREATER (H200128-01)

Chloride, SM4500Cl-B	mg/	<u>'L</u>	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	79000	4.00	01/19/2012	ND	104	104	100	3.77	
Sample ID: TMW - 2 (H20	0128-02)								
Chloride, SM4500CI-B	mg,	'L	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	74000	4.00	01/19/2012	ND	104	104	100	3.77	
Sample ID: TMW - 3 (H20	0128-03)								
Chloride, SM4500CI-B	mg,	/L	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	70000	4.00	01/19/2012	ND	104	104	100	3.77	

*=Accredited Analyte Cardinal Laboratories

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Celeg E. Keine



Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

** Samples not received at proper temperature of 6°C or below.

*** Insufficient time to reach temperature.

Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

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Celey & Keene



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Basin Environment	al Service	Tech	no]	Log	ies	LL	.C			8	IL	4 70							ANA	LYS	IS R	<u>EQL</u>	<u>JES</u>	T			
Project Manager	Bén J. Arguijo								P.	0. #.					T	T								\top				
Address: P.O.									Co	mp	any:	ВО	PCO, LF	•														
City: Lovingto	on	State: NM	Zip	: 81	826	50			At	t'n:	Ton	ıy. !	Savoi∈			- 1		l				İ	-		ł			
Phone #: (575)	396-2378	Fax #: (575) 3	96-1	1429)				Αc	ldre	ss: 5	522	W. Mer	mod		-	-											
Project #:		Project Owne	r: BC	PCC), L	,P			Ci	ty:	Carl	sba	ıd			ı												
Project Name:	Bass 3 Federal Wel	11 #4 Spill	Site	3 " j	ž 11				St	ate:	NM	Z	ip: 8822	0			1	Ì							•			i
Project Location	: Eddy Co., NM								Ph	one	#: (:	432) 556-87	30							İ							
Sämpler Name:	Troy Hahn								Fa	x#:																		
FOR LAB USE ONLY				Γ	_		ATR	ΙΙΧ		PRI	ESER	<u> </u>	SAMPLI	NG	7										1			
Lab I.D.	Sample I.	D.	(G)RAB OR (C)OMP	# CONTAINERS.	GROUNDWATER	WASTEWATER	SOIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE.	TIME	• 117	Chlor.de												
1	Heater Trea	fer	Co	1	X						X	\prod_{i}	1/12/12	1300		X												
2	TMV-	<u> </u>		1									1/18/10	08/5			·		·							<u> </u>		<u> </u>
3	TMW	<u> </u>	11/2	14	V	41	\perp		1		14	1	1/18/12	1100	1	U	.			<u> </u>			_ _					<u> </u>
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analyses All claims including service in ne event shall Co	d Damages. Carolina's trability and die og those for regdigence and any other of atdinal be flable for Indidental or conse- ng out of or related to the performance.	ause whatsoever shall be quental damages, includin	deems	ed vodiv ud limit	ed u atlen	ntess ma Libusmet	ace in w sa maen	riting or ruptions	nd rec i, loss :	eived to of use,	y Cardin or loss (nei With Cra to	hin 30 days after this incurred by	er completion of cheek, its subsk	dithe ar dianes	policab	ie.				- A							
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Dakiten with Cardinal cannot accept verbal changes, please fax written changes to 505-393-2476



January 25, 2012

BEN J. ARGUIJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: BASS 3 FEDERAL WELL #4 SPILL A

Enclosed are the results of analyses for samples received by the laboratory on 01/25/12 12:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab accredited certif.html.

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

Method EPA 552.2

Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

Method EPA 524.4

Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celeg & 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



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

Fax To:

(575) 396-1429

Received:

01/25/2012

Sampling Date:

01/23/2012

Reported:

01/25/2012

Sampling Type:

Water

Project Name:

BASS 3 FEDERAL WELL #4 SPILL A

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Jodi Henson

Project Location:

EDDY COUNTY, NM

Sample ID: TMW-5 (H200181-01)

Chloride, SM4500Cl-B	mg,	/L	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	316	4.00	01/25/2012	ND	104	104	100	7.41	

Cardinal Laboratories

*=Accredited Analyte

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

Celeg Di 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 & Keene



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

ANALYSIS REQUEST Project Manager: Ben J. Arguijo Address: P.O. 80x 301 Company: BOPCO, LP City: Lovington: Project Name: Basis 3 Rederal Well #4 \$pill \$jile *A" Project Name: Basis 3 Rederal Well #4 \$pill \$jile *A" State: NM Zip: 88220 Project Location: Eddy Co NM Project Location: Eddy Co NM Lab I.D. Sample I.D. Sample I.D. Sample I.D. Sample I.D. Sample I.D. ANALYSIS REQUEST ANALYSIS REQUEST P.O. #: ANALYSIS REQUEST ANALYSIS REQUEST P.O. #: Anth: Tony Savoie Address: \$22 \tilde{M}. Nermod City: Carlsbad State: NM Zip: 89220 Phone #: (432) \$56-8730 Fax #: For LAB USE ONLY Lab I.D. Sample I.D. Sample I.D. Sample I.D. ANALYSIS REQUEST ANALYSIS REQUEST ANALYSIS REQUEST D. #I D.	
Address: P.O. Box 301 Company: BOPCO, LP City: Lovington State: NM Zip: 88260 Attn: Tony Savoie Phone #: (575) 396-2378 Fax #: (575) 396-1429 Address: 522 W. Mermod Project Wame: Bass 3 Federal Well #4 Spill Sile M ' State: NM Zip: 88220 Project Location: Eddy Co., NM Phone #: (432) 556-8730 Sampler Name: M. Ram; 72 & Fax #: FOR LAB USE ONLY Lab I.D. Sample I.D. Sample I.D. Company: BOPCO, LP Address: 522 W. Mermod City: Carlsbad State: NM Zip: 88220 Project Location: Eddy Co., NM Phone #: (432) 556-8730 Fax #: FOR LAB USE ONLY Lab I.D. Sample I.D. DATE TIME	
Phone #: (575) 396-2378	
Project #: Project Owner: BOPCO, I.P City: Carlsbad Project Name: Bass 3 Federal Well #4 Spill Sife A" State: NM Zip: 88220 Project Location: Eddy Co., NM Phone #: (432)556-8730 Sampler Name: M. Ram, re 2 For LAB USE ONLY Lab I.D. Sample I.D. Sample I.D. Sample I.D. Project Owner: BOPCO, I.P City: Carlsbad Project Name: Bass 3 Federal Well #4 Spill Sife A" State: NM Zip: 88220 Project Location: Eddy Co., NM Phone #: (432)556-8730 Fax #: For LAB USE ONLY Lab I.D. Sample I.D. DATE TIME	
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PLEASE NOTE: Unbitly and Damages. Coronatia liability and charts exclusive remoty for any claim aroung whether based is contract or lone, shall be finited to the amount good by the clein for the analysis, All claims including those for ingigenous and any other cause whatsoever shall be deemed walved universe misted in writing and received by Continual within 30 days after completion of (the applicable).	
service. In no evert shall Cardinal be liable for industrial or industrial or industrial damages, including without femblation, business intervertions, loss of use, or loss of profes incurred by chem, as abbardance, alliances or successors affairing out of or related to the performance of services personal reporteds by Cardinal reporteds of which or such datin is based upon any of the activity stated respons or otherwise:	
Relinquished By: Date: Received By: Phone Result: Yes No Add'l Phone #:	·
Relinquished By: Date: Received By: Received	
Delivered By: (Circle One) / Sample Condition CHECKED BY:	
Sampler · UPS - Bus - Other: Cool Intact (Initials)	



January 31, 2012

BEN J. ARGUIJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: BASS 3 FEDERAL WELL #4 SPILL A

Enclosed are the results of analyses for samples received by the laboratory on 01/25/12 16:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab accredited certif.html.

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

Method EPA 552.2

Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

Method EPA 524.4

Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celeg 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



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

Fax To:

(575) 396-1429

Received:

01/25/2012

Sampling Date:

01/25/2012

Reported:

01/31/2012

Sampling Type:

Water

BASS 3 FEDERAL WELL #4 SPILL A

Sampling Condition:

Cool & Intact

Project Name: Project Number:

NONE GIVEN

Sample Received By:

Jodi Henson

Project Location:

EDDY COUNTY, NM

Sample ID: TMW-1 (H200189-01)

BTEX 8260B	mg/	<u>'L</u>	Analyze	d By: CMS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.001	0.001	01/25/2012	ND	0.022	110	0.0200	10.1	
Toluene*	0.001	0.001	01/25/2012	ND	0.019	97.0	0.0200	10.4	
Ethylbenzene*	< 0.001	0.001	01/25/2012	ND	0.020	100	0.0200	10.1	
Total Xylenes*	<0.003	0.003	01/25/2012	ND	0.060	100	0.0600	10.7	
Surrogate: Dibromofluoromethane	124 9	% 59.8-16	1						
Surrogate: Toluene-d8	88.8	% 75.2-11	5						
Surrogate: 4-Bromofluorobenzene	101 5	% 53.7-12	0						
Chloride, SM4500Cl-B	mg/L		Analyze	d By: HM					
· Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	72000	4.00	01/27/2012	ND	104	104	100	0.00	

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 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

Celuy Di 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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Celey & Keene

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

ARDINAL LABORATORIES 101 East Marland, Hobbs, NM 88240

(505) 393-2326 FAX (505) 393-2476

Company Name	Basin Environmenta	ì			B	ILLTO					ANA	LYSIS	RE	QUE	ST			
Project Manager	Ben Arginio			P.O.	#:			ľ			Ī							
Address: P.O	Box 301			Com	pany:	BOPCO	LP			İ								į
city: Lovi	naton State: NM	Zip: 883	ĹO	Attn:	Ton	y Savo	ie		1			1						
Phone #: 575	-341.2378 Fax#: 575	-396-142	9			27 W. 1						l						1
Project #:	Project Owner	BUPCO;	10			Shad					1	1						
Project Name:	Bass 3 Federal Well#4	Spill Sit	e ``A″	State	· NI	M Zip: EZ.	220				1	1						
Project Location	: Eddy County, NM	/ ·				132-556					1							1
Sampler Name:	Eddy County, NM Migdel Ramirez			Fax f						i		1						
FOR LAB USE ONLY	,		MATRIX _	P	RESER	V. SAMPL	ING				1							
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pervice. In no event shall C	ng those for negligence and any other cause whatsoover shall be of ordinal to liable for incidental or consequental damages, including	without fimitation, busi	nesa intanupilana,	loca of us	a, or lose :	of profits incurred by	client, its eubald's	urios.	elo.									
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† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476