

# *Basin Environmental Service Technologies, LLC*

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## **REMEDIATION SUMMARY & SITE CLOSURE REQUEST**

**BOPCO, LP  
SOUTH LOOP 10-INCH SWD MAINLINE  
API 30-015-41554 (Nearest BOPCO Well)  
Eddy County, New Mexico  
Unit Letter "N" (SE/SW), Section 13, Township 25 South, Range 30 East  
Latitude 32.124577° North, Longitude 103.835877° West  
NMOCD Reference #: 2RP-2489**

Prepared For:

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

Prepared By:

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

**April 2015**

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Ben J. Arguijo  
Project Manager

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## **1.0 INTRODUCTION & BACKGROUND INFORMATION**

Basin Environmental Service Technologies, LLC (Basin Environmental), on behalf of BOPCO, LP (BOPCO), has prepared this *Remediation Summary & Site Closure Request* for the release site known as South Loop 10-Inch SWD Mainline. The legal description of the release site is Unit Letter "N" (SE/SW), Section 13, Township 25 South, Range 30 East, in Eddy County, New Mexico. The geographic coordinates of the release site are 32.124577° North latitude and 103.835877° 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 September 6, 2014, BOPCO discovered a produced water release had occurred along the South Loop Salt Water Disposal (SWD) Mainline, which is a ten-inch (10") polyethylene pipeline connected to several nearby SWD systems. The release was attributed to the failure of a weld on the pipeline. During initial response activities, the affected section of pipe was isolated by block valves to the north and south of the release point, and a vacuum truck was utilized to recover free-standing fluid. The section of pipe with was replaced during a follow-up site visit on September 8, 2014, and impacted soil from the pipeline ditch was stockpiled on-site, pending final disposition.

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 three hundred eighty-four barrels (384 bbls) of produced water were released, and approximately ten barrels (10 bbls) were recovered, for a net loss of three hundred seventy-four barrels (374 bbls). The produced water flowed approximately one hundred twenty feet (120') from the point of release and pooled in several areas in a nearby ephemeral lake (playa). Approximately seven hundred twenty square feet (720 ft<sup>2</sup>) of the pipeline right-of-way and approximately fourteen thousand, three hundred ten square feet (14,310 ft<sup>2</sup>) of the adjacent pastureland and playa lake were affected.

The Form C-141 is provided as Appendix A. General photographs of the release site are provided as Appendix B.

Over the course of the two (2) days following the release, approximately three inches (3") of rainwater fell over the site and surrounding area and comingled with the produced water in the saturated soil and the remaining free-standing liquid in the playa lake.

## **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 13, Township 25 South, Range 30 East. A depth to groundwater reference map utilized by the NMOCD indicates groundwater should be encountered at approximately three hundred forty feet (340') to three hundred and forty-five feet (345') below ground surface (bgs). Based on the NMOCD ranking system, zero (0) points will be assigned to the site as a result of this criterion.

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

There is a playa lake less than two hundred feet (200') east of the release. Based on the NMOCD ranking system, twenty (20) points will be assigned to the site as a result of this criterion.

NMOCD guidelines indicate the South Loop 10-Inch SWD Mainline release site has an initial ranking score of twenty (20) points. The soil remediation levels for a site with a ranking score of greater than nineteen (>19) points are as follows:

- Benzene – 10 mg/Kg (ppm)
- Benzene, ethylbenzene, toluene, and xylenes (BTEX) – 50 mg/Kg (ppm)
- Total petroleum hydrocarbons (TPH) – 100 mg/Kg (ppm)

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

### **3.0 SUMMARY OF SOIL REMEDIATION ACTIVITIES**

On September 10, 2014, a preliminary investigation of the release site was conducted. A series of seven (7) hand-augered soil borings were advanced along the flow path of the release and in pooling areas in the nearby playa lake to investigate the horizontal and vertical extent of contaminated soil. The boreholes were advanced in six-inch (6") to one-foot (1') vertical increments and were approximately two feet (2') in depth. Soil samples were field-screened with a chloride test kit, and fourteen (14) confirmation samples (FP #1 @ 0.5', FP #1 @ 2', FP #2 @ 0.5', FP #2 @ 2', FP #3 @ 0.5', FP #3 @ 2', FP #4 @ 0.5', FP #4 @ 2', PA #1 @ 0.5', PA #1 @ 2', PA #2 @ 0.5', PA #2 @ 2', PA #3 @ 0.5', and PA #3 @ 2') were submitted to Cardinal Laboratories in Hobbs, New Mexico, for analysis of chloride concentrations using Environmental Protection Agency (EPA) Method 4500 Cl-B. Soil sample locations are depicted in Figure #2, "Site & Sample Location Map". Laboratory analytical results are summarized in Table 1, "Concentrations of Benzene, BTEX, TPH & Chloride in Soil".

Laboratory analytical results indicated chloride concentrations ranged from 4,880 mg/kg in sample PA #3 @ 2' collected in a pooling area of the release to 30,800 mg/kg in sample FP #3 @ 0.5' collected along the flow path. Review of laboratory analytical results indicated additional delineation of the release was required.

Following advancement of the boreholes, three (3) soil samples (RP @ 5', N. RP 10', and S. RP 10') were collected from the floor of the excavation around the South Loop SWD Mainline, near the point of release. Laboratory analytical results indicated chloride concentrations ranged from 21,600 mg/kg in sample S. RP 10' to 32,800 mg/kg in sample N. RP 10', which were collected approximately ten feet (10') to the south and north of the release point, respectively.

Five (5) soil samples (BG #1 through BG #5) were also collected outside the inferred boundaries of the release to assess background concentrations of chloride in the area. Laboratory analytical results indicated chloride concentrations in the background samples ranged from less than the laboratory maximum detection limit (MDL) in samples BG #2, BG #3, and BG #4 to 80.0 mg/kg in sample BG #5.

On October 9, 2014, following a second rain event in the region, additional soil samples were collected in the areas represented by background samples BG #1 through BG #5 to determine if chloride contamination had spread beyond the previously established zone of impact. The samples were field-screened with a chloride test kit, and field-test results indicated chloride concentrations were less than the recommended remediation action level established for the site by the NMOCD. A confirmation sample [(Post Flood) BG #1] collected in the area of sample BG #1 was submitted to the laboratory for analysis, and analytical results indicated the chloride concentration was less than the laboratory MDL.

From October 15 through 16, 2014, a series of four (4) delineation trenches (TT-1 through TT-4) were advanced in and around the playa lake to further investigate the horizontal and vertical extent of impacted soil. The trenches were advanced in one (1) to three-foot (3') vertical increments, and soil samples were field-screened with a chloride test kit. Confirmation samples were submitted to the laboratory for analysis of chloride concentrations. Soil samples collected from the maximum vertical extent of each trench were also analyzed for concentrations of TPH and BTEX by EPA Methods SW-846 8015M and SW-846 8021b, respectively. The locations of the delineation trenches are depicted in Figure 2.

Trench TT-1 was located approximately two hundred ten feet (210') to the east-northeast of the release point, near a tree in the watershed of the playa lake. The trench was advanced to a total depth of approximately eighteen feet (18') bgs. Fourteen (14) confirmation samples (TT-1 @ 1', TT-1 @ 2', TT-1 @ 3', TT-1 @ 4', TT-1 @ 5', TT-1 @ 6', TT-1 @ 7', TT-1 @ 8', TT-1 @ 10', TT-1 @ 12', TT-1 @ 14', TT-1 @ 16', TT-1 @ 17', and TT-1 @ 18') were submitted to the laboratory for analysis of chloride concentrations. Sample TT-1 @ 18' was also analyzed for TPH and BTEX concentrations. Laboratory analytical results indicated chloride concentrations ranged from less than the laboratory MDL in sample TT-1 @ 1' to 4,040 mg/kg in sample TT-1 @ 14'. TPH and BTEX constituent concentrations in sample TT-1 @ 18' were less than the appropriate laboratory MDL.

Trench TT-2 was located approximately seventy feet (70') to the northeast of trench TT-1 and was advanced to a total depth of approximately thirteen feet (13') bgs. Seven (7) confirmation samples (TT-2 @ 1', TT-2 @ 2', TT-2 @ 4', TT-2 @ 6', TT-2 @ 8', TT-2 @ 11', and TT-2 @ 13') were submitted to the laboratory for analysis of chloride concentrations. Sample TT-2 @ 13' was also analyzed for TPH and BTEX concentrations. Laboratory analytical results indicated chloride concentrations ranged from less than the laboratory MDL in samples TT-2 @ 8' and TT-2 @ 13' to 8,930 mg/kg in sample TT-2 @ 2'. TPH and BTEX constituent concentrations in sample TT-2 @ 13' were less than the appropriate laboratory MDL.

Trench TT-3 was located approximately seventy-five feet (75') to the east-southeast of trench TT-1, near the primary pooling area in the playa lake. The trench was advanced to a total depth of approximately eight feet (8') bgs. Four (4) confirmation samples (TT-3 @ 2', TT-3 @ 4', TT-3 @ 6', and TT-3 @ 8') were submitted to the laboratory for analysis of chloride concentrations. Sample TT-3 @ 8' was also analyzed for TPH and BTEX concentrations. Laboratory analytical results indicated chloride concentrations ranged from less than the laboratory MDL in sample TT-3 @ 8' to 3,360 mg/kg in sample TT-3 @ 2'. TPH and BTEX constituent concentrations in sample TT-3 @ 8' were less than the appropriate laboratory MDL.

Based on field-test results, it was believed that the root system of the tree near trench TT-1 created pockets and pathways in the subsurface clay layer of the playa lake and the underlying caliche bedrock allowing the pooled produced water to migrate to a greater vertical extent in that area than would have otherwise been possible. On October 16, 2014, trench TT-4 was advanced approximately fifteen feet (15') to the southeast of trench TT-1 to investigate this theory. The trench was advanced to a total depth of approximately sixteen feet (16') bgs. Nine (9) confirmation samples (TT-4 @ 1', TT-4 @ 2', TT-4 @ 4', TT-4 @ 6', TT-4 @ 8', TT-4 @ 10', TT-4 @ 12', TT-4 @ 14', and TT-4 @ 16') were submitted to the laboratory for analysis of chloride concentrations. Sample TT-4 @ 16' was also analyzed for TPH and BTEX concentrations. Laboratory analytical results indicated chloride concentrations ranged from less than the laboratory MDL in samples TT-4 @ 14' and TT-4 @ 16' to 11,500 mg/kg in sample TT-4 @ 10'. TPH and BTEX constituent concentrations in sample TT-4 @ 16' were less than the appropriate laboratory MDL.

Laboratory analytical results and field-screens of samples collected from trenches TT-1 and TT-4 confirmed that chloride contamination near the tree extended deeper than in other pooling areas in the playa lake.

On February 18, 2015, a series of six (6) hand-augered soil borings (SP-A through SP-F) were advanced in the subsurface clay layer of the playa lake to investigate the vertical extent of chloride impact following several rain events in the area. The boreholes were advanced in one-foot (1') vertical increments and ranged in depth from approximately three (3) to four feet (4') bgs. Soil samples were field-screened with a chloride test kit, and twenty-six (26) confirmation samples (SP-A @ Surf., SP-A @ 1', SP-A @ 2', SP-A @ 3', SP-B @ Surf., SP-B @ 1', SP-B @ 2', SP-B @ 3', SP-B @ 4', SP-C @ Surf., SP-C @ 1', SP-C @ 2', SP-C @ 3', SP-C @ 4', SP-D @ Surf., SP-D @ 1', SP-D @ 2', SP-D @ 3', SP-E @ Surf., SP-E @ 1', SP-E @ 2', SP-E @ 3', SP-F @ Surf., SP-F @ 1', SP-F @ 2', and SP-F @ 3') were submitted to the laboratory for analysis of chloride concentrations. Soil samples collected from the maximum vertical extent of each borehole (i.e., SP-A @ 3', SP-B @ 4', SP-C @ 4', SP-D @ 3', SP-E @ 3', and SP-F @ 3') were also analyzed for concentrations of TPH and BTEX. Sample locations are depicted in Figure 2.

Laboratory analytical results indicated chloride concentrations in all soil samples collected from soil borings SP-C, SP-E, and SP-F were less than the laboratory MDL. Chloride concentrations in soil boring SP-A ranged from less than the laboratory MDL in samples SP-A @ Surf., SP-A @ 1', and SP-A @ 2' to 64.0 mg/kg in sample SP-A @ 3'. Chloride concentrations in soil boring SP-B ranged from less than the laboratory MDL in samples SP-B @ Surf., SP-B @ 1', SP-B @ 2', and SP-B @ 4' to 112 mg/kg in sample SP-B @ 3'. Chloride concentrations in soil boring SP-D ranged from less than the laboratory MDL in sample SP-D @ Surf. to 1,020 mg/kg in sample SP-D @ 3'. TPH and BTEX constituent concentrations were less than the appropriate laboratory MDL in all submitted samples.

Laboratory analytical results and field-screens indicated chloride contamination had migrated below the subsurface clay layer of the playa lake. However, additional vertical delineation of the underlying caliche bedrock was required.

On February 25, 2015, representatives of BOPCO, Basin Environmental, the NMOCD Artesia District Office, and the BLM Carlsbad Field Office met on-site to review remediation activities conducted to that point and to determine a path forward to an NMOCD- and BLM-approved closure. A delineation trench (TT-5) was advanced in a centrally located pooling area in the playa

lake to investigate the vertical extent of chloride impact to the underlying caliche bedrock. The trench was advanced to approximately twelve feet (12') bgs. Soil samples were collected at one (1) to two-foot (2') vertical increments and field-screened with a chloride test kit. Field-test results confirmed that chloride contamination had migrated below the subsurface clay layer of the playa lake into the underlying caliche and indicated that the zone of contamination in the caliche had not migrated downward appreciably.

A second delineation trench (TT-6) was advanced near the release point to investigate the horizontal extent of impacted soil. The trench was advanced to approximately five feet (5') bgs, and soil samples were field-screened with a chloride test kit. Field-test results indicated horizontal delineation of the release point had been achieved. The locations of the delineation trenches are depicted in Figure 2.

Following advancement of the delineation trenches, three (3) composite soil samples (North Pile, South Pile, and Middle Pile) were collected from the stockpiled material on-site and submitted to the laboratory for analysis of chloride concentrations. Laboratory analytical results indicated chloride concentrations ranged from less than the laboratory MDL in sample South Pile to 3,000 mg/kg in sample Middle Pile. Soil represented by samples North Pile and South Pile was deemed suitable for use as backfill material.

Based on the facts that 1.) any additional excavation in or around the playa lake would irreparably alter the natural drainage of the playa watershed and 2.) field-test results from trench TT-5 and laboratory analytical data from previous soil samples collected at the site indicated the natural clay layer would effectively inhibit vertical migration of contaminants both upward to the vegetative zone and downward to the underlying groundwater, permission to leave impacted soil in-situ along the flow path of the release and in the playa lake was requested. Due to safety and environmental concerns, permission was also requested to leave impacted soil around the ten-inch (10") polyethylene pipeline in-situ. The requests were approved by the NMOCD and BLM representatives on-site, with the understanding that the impacted areas in the pastureland and playa lake would be seeded with a BLM-approved seed mix upon completion of remediation activities to promote revegetation.

On March 11, 2015, soil represented by sample Middle Pile was segregated and prepped for disposal, and the excavation around the pipeline was partially backfilled with the remaining stockpiled material. The impacted areas in the pasture and playa lake were prepped for seeding.

On March 12, 2015, approximately forty cubic yards (40 yd<sup>3</sup>) of impacted soil was transported to Lea Land, Inc. (NMOCD Permit # WM-01-035), for disposal. Approximately forty cubic yards (40 yd<sup>3</sup>) of clean topsoil was hauled to the site and utilized to complete backfilling of the excavation. The final dimensions of the excavation were approximately eighty-five feet (85') in length, approximately ten feet (10') in width, and approximately five feet (5') in depth.

On March 13, 2015, the disturbed areas in the pasture and playa lake were seeded with a BLM-approved seed mix.

## **4.0 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) PROCEDURES**

### **4.1 Soil Sampling**

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

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

### **4.2 Decontamination of Equipment**

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

### **4.3 Laboratory Protocol**

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

## **5.0 SITE CLOSURE REQUEST**

Soil samples collected from the South Loop 10-Inch SWD Mainline release site excavation, flow path, and pooling areas were analyzed by an NMOCD-approved laboratory, and TPH and BTEX constituent concentrations were less than the recommended remediation action levels established for the site by the NMOCD.

In-situ soil around the ten-inch (10”) polyethylene pipeline exhibiting chloride concentrations above the recommended remediation action level will be remediated upon deactivation/decommission of the pipeline. The natural clay layer underlying the playa lake will effectively serve to inhibit vertical migration of contaminants both upward to the vegetative zone and downward to the underlying groundwater.

Basin Environmental recommends BOPCO provide the NMOCD Artesia District Office and the BLM a copy of this *Remediation Summary & Site Closure Request* and request the NMOCD grant site closure to the South Loop 10-Inch SWD Mainline release site.

## 6.0 LIMITATIONS

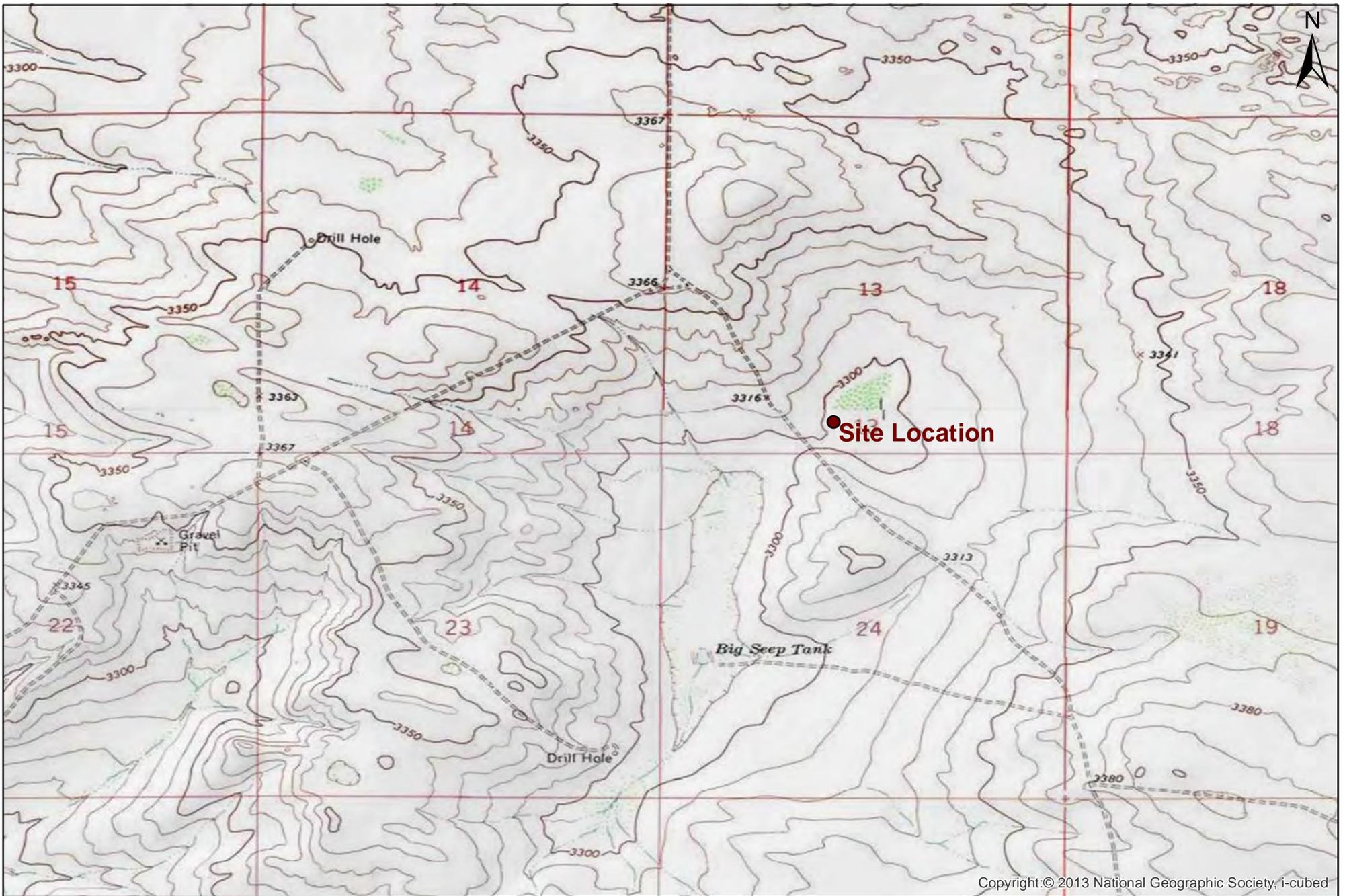
Basin Environmental Service Technologies, LLC, has prepared this *Remediation Summary & Site Closure Request* to the best of its ability. No other warranty, expressed or implied, is made or intended. Basin Environmental has examined and relied upon documents referenced in the report and on oral statements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

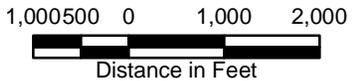
## **7.0 DISTRIBUTION:**

- Copy 1: Mike Bratcher  
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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



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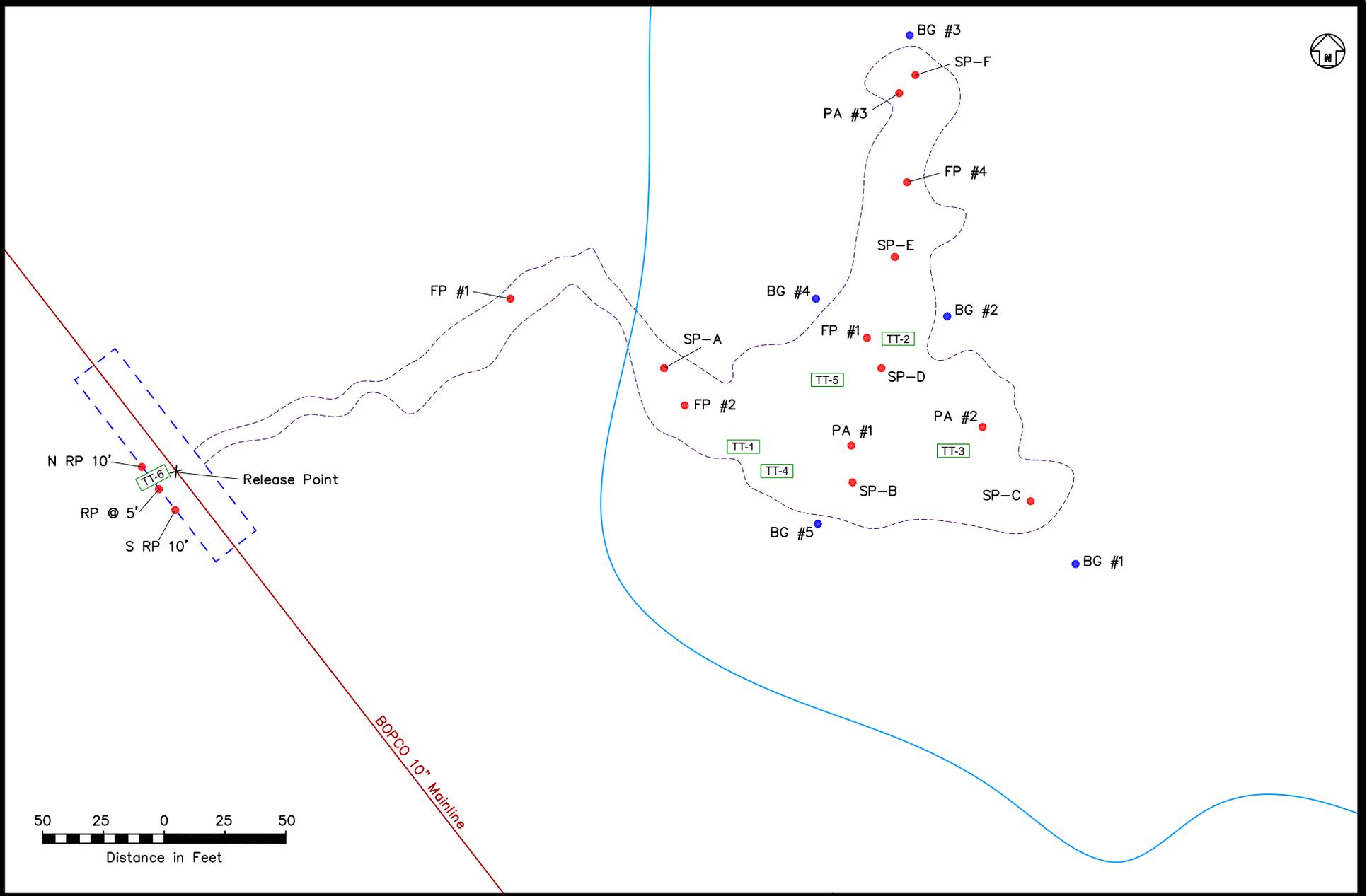


**Figure 1**  
**Site Location Map**  
**BOPCO, LP**  
**South Loop 10-Inch SWD Mainline**  
**Eddy County, New Mexico**  
**NMOCD Reference #: 2RP-2489**



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

Drawn By: BJA	Checked By: BRB
April 2, 2015	Scale: 1" = 2,000'



**Legend:**

----- Inferred Release Margins	— Playa Watershed
- - - - Excavation Extent	• Sample Location
— Delineation Trench	• Background Sample
— Pipeline	

Figure 2  
 Site & Sample Location Map  
 BOPCO, LP  
 South Loop 10-Inch Mainline  
 Eddy County, New Mexico  
 NMOCD Reference #: 2RP-2489



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

Revised By: BJA April 7, 2015	Revised By: SJW Scale: 1" = 50'
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# Tables

**TABLE 1  
CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL**

**BOPCO, LP  
SOUTH LOOP 10-INCH SWD MAINLINE  
EDDY COUNTY, NEW MEXICO  
NMOCD REFERENCE #: 2RP-2489**

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030					METHOD: 8015M			TOTAL TPH C <sub>6</sub> -C <sub>35</sub> (mg/Kg)	4500 Cl-B CHLORIDE (mg/Kg)
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C <sub>6</sub> -C <sub>12</sub> (mg/Kg)	DRO C <sub>12</sub> -C <sub>28</sub> (mg/Kg)	ORO C <sub>28</sub> -C <sub>35</sub> (mg/Kg)		
RP @ 5'	5'	9/10/2014	In-Situ	-	-	-	-	-	-	-	-	-	31,200
N. RP 10'	5'	9/10/2014	In-Situ	-	-	-	-	-	-	-	-	-	32,800
S. RP 10'	5'	9/10/2014	In-Situ	-	-	-	-	-	-	-	-	-	21,600
FP #1 @ 0.5'	0.5'	9/10/2014	In-Situ	-	-	-	-	-	-	-	-	-	5,600
FP #1 @ 2'	2'	9/10/2014	In-Situ	-	-	-	-	-	-	-	-	-	11,700
FP #2 @ 0.5'	0.5'	9/10/2014	In-Situ	-	-	-	-	-	-	-	-	-	8,400
FP #2 @ 2'	2'	9/10/2014	In-Situ	-	-	-	-	-	-	-	-	-	10,900
FP #3 @ 0.5'	0.5'	9/10/2014	In-Situ	-	-	-	-	-	-	-	-	-	30,800
FP #3 @ 2'	2'	9/10/2014	In-Situ	-	-	-	-	-	-	-	-	-	9,400
FP #4 @ 0.5'	0.5'	9/10/2014	In-Situ	-	-	-	-	-	-	-	-	-	13,300
FP #4 @ 2'	2'	9/10/2014	In-Situ	-	-	-	-	-	-	-	-	-	6,930
PA #1 @ 0.5'	0.5'	9/10/2014	In-Situ	-	-	-	-	-	-	-	-	-	19,400
PA #1 @ 2'	2'	9/10/2014	In-Situ	-	-	-	-	-	-	-	-	-	9,330
PA #2 @ 0.5'	0.5'	9/10/2014	In-Situ	-	-	-	-	-	-	-	-	-	20,400
PA #2 @ 2'	2'	9/10/2014	In-Situ	-	-	-	-	-	-	-	-	-	17,200
PA #3 @ 0.5'	0.5'	9/10/2014	In-Situ	-	-	-	-	-	-	-	-	-	15,800
PA #3 @ 2'	2'	9/10/2014	In-Situ	-	-	-	-	-	-	-	-	-	4,880
BG #1	0.5'	9/10/2014	In-Situ	-	-	-	-	-	-	-	-	-	48.0
BG #2	0.5'	9/10/2014	In-Situ	-	-	-	-	-	-	-	-	-	<16.0
BG #3	0.5'	9/10/2014	In-Situ	-	-	-	-	-	-	-	-	-	<16.0
BG #4	0.5'	9/10/2014	In-Situ	-	-	-	-	-	-	-	-	-	<16.0
BG #5	0.5'	9/10/2014	In-Situ	-	-	-	-	-	-	-	-	-	80.0
(Post Flood) BG #1	0.5'	10/9/2014	In-Situ	-	-	-	-	-	-	-	-	-	<16.0
TT-1 @ 1'	1'	10/15/2014	In-Situ	-	-	-	-	-	-	-	-	-	<16.0
TT-1 @ 2'	2'	10/15/2014	In-Situ	-	-	-	-	-	-	-	-	-	144

**TABLE 1**  
**CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL**

BOPCO, LP  
SOUTH LOOP 10-INCH SWD MAINLINE  
EDDY COUNTY, NEW MEXICO  
NMOCD REFERENCE #: 2RP-2489

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030					METHOD: 8015M			TOTAL TPH C <sub>6</sub> -C <sub>35</sub> (mg/Kg)	4500 Cl-B CHLORIDE (mg/Kg)
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C <sub>6</sub> -C <sub>12</sub> (mg/Kg)	DRO C <sub>12</sub> -C <sub>28</sub> (mg/Kg)	ORO C <sub>28</sub> -C <sub>35</sub> (mg/Kg)		
TT-1 @ 3'	3'	10/15/2014	In-Situ	-	-	-	-	-	-	-	-	-	48.0
TT-1 @ 4'	4'	10/15/2014	In-Situ	-	-	-	-	-	-	-	-	-	<b>1,390</b>
TT-1 @ 5'	5'	10/15/2014	In-Situ	-	-	-	-	-	-	-	-	-	416
TT-1 @ 6'	6'	10/15/2014	In-Situ	-	-	-	-	-	-	-	-	-	240
TT-1 @ 7'	7'	10/15/2014	In-Situ	-	-	-	-	-	-	-	-	-	<b>1,920</b>
TT-1 @ 8'	8'	10/15/2014	In-Situ	-	-	-	-	-	-	-	-	-	<b>2,360</b>
TT-1 @ 10'	10'	10/15/2014	In-Situ	-	-	-	-	-	-	-	-	-	<b>2,240</b>
TT-1 @ 12'	12'	10/15/2014	In-Situ	-	-	-	-	-	-	-	-	-	192
TT-1 @ 14'	14'	10/15/2014	In-Situ	-	-	-	-	-	-	-	-	-	<b>4,040</b>
TT-1 @ 16'	16'	10/15/2014	In-Situ	-	-	-	-	-	-	-	-	-	48.0
TT-1 @ 17'	17'	10/15/2014	In-Situ	-	-	-	-	-	-	-	-	-	336
TT-1 @ 18'	18'	10/15/2014	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	784
TT-2 @ 1'	1'	10/15/2014	In-Situ	-	-	-	-	-	-	-	-	-	<b>8,000</b>
TT-2 @ 2'	2'	10/15/2014	In-Situ	-	-	-	-	-	-	-	-	-	<b>8,930</b>
TT-2 @ 4'	4'	10/15/2014	In-Situ	-	-	-	-	-	-	-	-	-	<b>4,800</b>
TT-2 @ 6'	6'	10/15/2014	In-Situ	-	-	-	-	-	-	-	-	-	<b>2,240</b>
TT-2 @ 8'	8'	10/15/2014	In-Situ	-	-	-	-	-	-	-	-	-	<16.0
TT-2 @ 11'	11'	10/15/2014	In-Situ	-	-	-	-	-	-	-	-	-	112
TT-2 @ 13'	13'	10/15/2014	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0
TT-3 @ 2'	2'	10/15/2014	In-Situ	-	-	-	-	-	-	-	-	-	<b>3,360</b>
TT-3 @ 4'	4'	10/15/2014	In-Situ	-	-	-	-	-	-	-	-	-	800
TT-3 @ 6'	6'	10/15/2014	In-Situ	-	-	-	-	-	-	-	-	-	96.0
TT-3 @ 8'	8'	10/15/2014	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0
TT-4 @ 1'	1'	10/16/2014	In-Situ	-	-	-	-	-	-	-	-	-	112
TT-4 @ 2'	2'	10/16/2014	In-Situ	-	-	-	-	-	-	-	-	-	240
TT-4 @ 4'	4'	10/16/2014	In-Situ	-	-	-	-	-	-	-	-	-	<b>3,680</b>
TT-4 @ 6'	6'	10/16/2014	In-Situ	-	-	-	-	-	-	-	-	-	<b>3,560</b>

**TABLE 1**  
**CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL**

BOPCO, LP  
 SOUTH LOOP 10-INCH SWD MAINLINE  
 EDDY COUNTY, NEW MEXICO  
 NMOCD REFERENCE #: 2RP-2489

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030					METHOD: 8015M			TOTAL TPH C <sub>6</sub> -C <sub>35</sub> (mg/Kg)	4500 Cl-B CHLORIDE (mg/Kg)
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C <sub>6</sub> -C <sub>12</sub> (mg/Kg)	DRO C <sub>12</sub> -C <sub>28</sub> (mg/Kg)	ORO C <sub>28</sub> -C <sub>35</sub> (mg/Kg)		
TT-4 @ 8'	8'	10/16/2014	In-Situ	-	-	-	-	-	-	-	-	-	10,700
TT-4 @ 10'	10'	10/16/2014	In-Situ	-	-	-	-	-	-	-	-	-	11,500
TT-4 @ 12'	12'	10/16/2014	In-Situ	-	-	-	-	-	-	-	-	-	1,700
TT-4 @ 14'	14'	10/16/2014	In-Situ	-	-	-	-	-	-	-	-	-	<16.0
TT-4 @ 16'	16'	10/16/2014	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0
SP-A @ Surf.	Surface	2/18/2015	In-Situ	-	-	-	-	-	-	-	-	-	<16.0
SP-A @ 1'	1'	2/18/2015	In-Situ	-	-	-	-	-	-	-	-	-	<16.0
SP-A @ 2'	2'	2/18/2015	In-Situ	-	-	-	-	-	-	-	-	-	<16.0
SP-A @ 3'	3'	2/18/2015	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	64.0
SP-B @ Surf.	Surface	2/18/2015	In-Situ	-	-	-	-	-	-	-	-	-	<16.0
SP-B @ 1'	1'	2/18/2015	In-Situ	-	-	-	-	-	-	-	-	-	<16.0
SP-B @ 2'	2'	2/18/2015	In-Situ	-	-	-	-	-	-	-	-	-	<16.0
SP-B @ 3'	3'	2/18/2015	In-Situ	-	-	-	-	-	-	-	-	-	112
SP-B @ 4'	4'	2/18/2015	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0
SP-C @ Surf.	Surface	2/18/2015	In-Situ	-	-	-	-	-	-	-	-	-	<16.0
SP-C @ 1'	1'	2/18/2015	In-Situ	-	-	-	-	-	-	-	-	-	<16.0
SP-C @ 2'	2'	2/18/2015	In-Situ	-	-	-	-	-	-	-	-	-	<16.0
SP-C @ 3'	3'	2/18/2015	In-Situ	-	-	-	-	-	-	-	-	-	<16.0
SP-C @ 4'	4'	2/18/2015	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0
SP-D @ Surf.	Surface	2/18/2015	In-Situ	-	-	-	-	-	-	-	-	-	<16.0
SP-D @ 1'	1'	2/18/2015	In-Situ	-	-	-	-	-	-	-	-	-	128
SP-D @ 2'	2'	2/18/2015	In-Situ	-	-	-	-	-	-	-	-	-	656
SP-D @ 3'	3'	2/18/2015	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	1,020

**TABLE 1  
CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL**

**BOPCO, LP  
SOUTH LOOP 10-INCH SWD MAINLINE  
EDDY COUNTY, NEW MEXICO  
NMOCD REFERENCE #: 2RP-2489**

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030					METHOD: 8015M			TOTAL TPH C <sub>6</sub> -C <sub>35</sub> (mg/Kg)	4500 Cl-B CHLORIDE (mg/Kg)
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C <sub>6</sub> -C <sub>12</sub> (mg/Kg)	DRO C <sub>12</sub> -C <sub>28</sub> (mg/Kg)	ORO C <sub>28</sub> -C <sub>35</sub> (mg/Kg)		
SP-E @ Surf.	Surface	2/18/2015	In-Situ	-	-	-	-	-	-	-	-	-	<16.0
SP-E @ 1'	1'	2/18/2015	In-Situ	-	-	-	-	-	-	-	-	-	<16.0
SP-E @ 2'	2'	2/18/2015	In-Situ	-	-	-	-	-	-	-	-	-	<16.0
SP-E @ 3'	3'	2/18/2015	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0
SP-F @ Surf.	Surface	2/18/2015	In-Situ	-	-	-	-	-	-	-	-	-	<16.0
SP-F @ 1'	1'	2/18/2015	In-Situ	-	-	-	-	-	-	-	-	-	<16.0
SP-F @ 2'	2'	2/18/2015	In-Situ	-	-	-	-	-	-	-	-	-	<16.0
SP-F @ 3'	3'	2/18/2015	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0
South Pile	N/A	2/25/2015	Stockpiled	-	-	-	-	-	-	-	-	-	<16.0
Middle Pile	N/A	2/25/2015	Stockpiled	-	-	-	-	-	-	-	-	-	3,000
North Pile	N/A	2/25/2015	Stockpiled	-	-	-	-	-	-	-	-	-	144
<b>NMOCD Recommended Remediation Action Level</b>				<b>10</b>				<b>50</b>				<b>5,000</b>	<b>1,000</b>

- = Not analyzed.

# **Appendices**

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

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

**NM OIL CONSERVATION**

ARTESIA DISTRICT

Form C-141  
Revised August 8, 2011

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

SEP 16 2014  
Submit 1 Copy to appropriate District Office in  
accordance with 19.15.29 NMAC.

RECEIVED

**Release Notification and Corrective Action**

*NA1425952396*

**OPERATOR**

Initial Report  Final Report

Name of Company: BOPCO, L.P. <i>260737</i>	Contact: Tony Savoie
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: South Loop 10" SWD Mainline. The spill location was 1,608 ft. east of the PLU-CVX-JV-BS #021H	Facility Type: Exploration and Production

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-41554
------------------------	------------------------	----------------------

**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
N	13	25S	30E					Eddy

Latitude N 32.124577 Longitude W 103.835877

**NATURE OF RELEASE**

Type of Release: Produced water	Volume of Release: 384 bbls.	Volume Recovered: 10 bbls.
Source of Release: 10" Poly pipe	Date and Hour of Occurrence: 9/6/14 time unknown	Date and Hour of Discovery 9/6/13 at 7:30 a.m. <i>9/6/14?</i>
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? NMOCD Emergency #104 and Jim Amos "BLM"	
By Whom? Tony Savoie	Date and Hour: 9/6/14 at 2:17 p.m.	
Was a Watercourse Reached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\* The spill traveled approximately 120 ft. and ponded up in a low lying area consistent with the definition of a playa lake. At the time of review at 3:00 p.m. on 9/6/14 the only water standing in the playa area was produced water from the spill. However over the course of the next 2 days approximately 3 inches of rain fell.

Describe Cause of Problem and Remedial Action Taken.\*  
A weld failed on the poly pipe. The affected portion of pipe was isolated by block valves located to the north and south of the release point. The section of pipe with the failed weld was cut out and replaced on 9/8/14.

Describe Area Affected and Cleanup Action Taken.\*  
Approximately 10 bbls of water was recovered at the release point. The remainder of the fluid soaked into the ground. The release impacted approximately 720 sq.ft. of pipeline right of way and approximately 14,310 sq.ft. of pasture area. Samples were collected on 9/10/14 by Basin Env. From the point of release and the ponded areas. The area impacted by the release will be cleaned up in accordance to the NMOCD and BLM remediation guidelines.

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.

Signature: <i>Tony Savoie</i>	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Tony Savoie	Approved by Environmental Specialist: <i>[Signature]</i>	
Title: Waste Management and Remediation Specialist	Approval Date: <i>9/16/14</i>	Expiration Date: <i>NA</i>
E-mail Address: tasavoie@basspet.com	Attached <input type="checkbox"/>	
Date: <i>9/16/14</i> Phone: 432-556-8730	<b>Conditions of Approval:</b> Remediation per OCD Rule & Guidelines.	

\* Attach Additional Sheets If Necessary

**SUBMIT REMEDIATION PROPOSAL NO  
LATER THAN: 10/16/14**

*2RP-2189*

**Appendix B**  
**Photographs**



South Loop 10-Inch Mainline – Point of Release



South Loop 10-Inch Mainline – Flow Path



South Loop 10-Inch Mainline – Pooling Area in Playa Watershed



South Loop 10-Inch Mainline – Flow Path (Following Initial Rain Event)



South Loop 10-Inch Mainline – Pooling Area in Playa Watershed  
(Following Initial Rain Event)



South Loop 10-Inch SWD Mainline – Pooling Areas in Playa Lake  
(Following Initial Rain Event; Locations of Hand-Augered Soil Borings Flagged in Orange)



South Loop 10-Inch SWD Mainline – Pooling Area Near Tree in Playa Watershed  
(Following Initial Rain Event)



South Loop 10-Inch SWD Mainline – Excavation



South Loop 10-Inch SWD Mainline – Staining Near Point of Release



South Loop 10-Inch SWD Mainline – Excavation (Following Second Rain Event)

**Appendix C**  
**Laboratory Analytical Reports**



September 22, 2014

JOEL LOWRY

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: SOUTH LOOP 10" MAIN LINE

Enclosed are the results of analyses for samples received by the laboratory on 09/15/14 8:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited 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.

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,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	09/15/2014	Sampling Date:	09/10/2014
Reported:	09/22/2014	Sampling Type:	Soil
Project Name:	SOUTH LOOP 10" MAIN LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

**Sample ID: RP @ 5' (H402860-01)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>31200</b>	16.0	09/18/2014	ND	416	104	400	0.00	

**Sample ID: N. RP 10' (H402860-02)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>32800</b>	16.0	09/18/2014	ND	416	104	400	0.00	

**Sample ID: S. RP 10' (H402860-03)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>21600</b>	16.0	09/18/2014	ND	416	104	400	0.00	

**Sample ID: FP #1 @ 6" (H402860-04)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>5600</b>	16.0	09/18/2014	ND	416	104	400	0.00	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	09/15/2014	Sampling Date:	09/10/2014
Reported:	09/22/2014	Sampling Type:	Soil
Project Name:	SOUTH LOOP 10" MAIN LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

**Sample ID: FP #1 @ 2' (H402860-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	11700	16.0	09/18/2014	ND	416	104	400	0.00	

**Sample ID: FP #2 @ 6" (H402860-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8400	16.0	09/18/2014	ND	416	104	400	0.00	

**Sample ID: FP #2 @ 2' (H402860-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	10900	16.0	09/18/2014	ND	416	104	400	0.00	

**Sample ID: FP #3 @ 6" (H402860-08)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	30800	16.0	09/18/2014	ND	416	104	400	0.00	

**Sample ID: FP #3 @ 2' (H402860-09)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9400	16.0	09/18/2014	ND	416	104	400	0.00	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	09/15/2014	Sampling Date:	09/10/2014
Reported:	09/22/2014	Sampling Type:	Soil
Project Name:	SOUTH LOOP 10" MAIN LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

**Sample ID: FP #4 @ 6" (H402860-10)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	13300	16.0	09/18/2014	ND	416	104	400	0.00	

**Sample ID: FP #4 @ 2' (H402860-11)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6930	16.0	09/18/2014	ND	416	104	400	0.00	

**Sample ID: PA #1 @ 6" (H402860-12)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	19400	16.0	09/18/2014	ND	416	104	400	0.00	

**Sample ID: PA #1 @ 2' (H402860-13)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9330	16.0	09/18/2014	ND	384	96.0	400	4.08	

**Sample ID: PA #2 @ 6" (H402860-14)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	20400	16.0	09/18/2014	ND	384	96.0	400	4.08	

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	09/15/2014	Sampling Date:	09/10/2014
Reported:	09/22/2014	Sampling Type:	Soil
Project Name:	SOUTH LOOP 10" MAIN LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

**Sample ID: PA #2 @ 2' (H402860-15)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	17200	16.0	09/18/2014	ND	384	96.0	400	4.08	

**Sample ID: PA #3 @ 6" (H402860-16)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	15800	16.0	09/18/2014	ND	384	96.0	400	4.08	

**Sample ID: PA #3 @ 2' (H402860-17)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4880	16.0	09/18/2014	ND	384	96.0	400	4.08	

**Sample ID: BG #1 (H402860-18)**

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	09/18/2014	ND	384	96.0	400	4.08	

**Sample ID: BG #2 (H402860-19)**

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	09/18/2014	ND	384	96.0	400	4.08	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	09/15/2014	Sampling Date:	09/10/2014
Reported:	09/22/2014	Sampling Type:	Soil
Project Name:	SOUTH LOOP 10" MAIN LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

**Sample ID: BG #3 (H402860-20)**

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	09/18/2014	ND	384	96.0	400	4.08	

**Sample ID: BG #4 (H402860-21)**

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	09/18/2014	ND	384	96.0	400	4.08	

**Sample ID: BG #5 (H402860-22)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>80.0</b>	16.0	09/18/2014	ND	384	96.0	400	4.08	

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager





# CARDINAL LABORATORIES

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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2 of 3

Page 9 of 10

Company Name: Basin Environmental Service Technologies, LLC				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>																			
Project Manager: Joel Lowry				P.O. #:				Chloride	TPH (8015M)	BTEX (8021B)	HOLD FOR TPH																
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. Marland																							
Project #:		Project Owner:		City: Carlsbad																							
Project Name: South Loop 10" Main Line				State: NM								Zip: 88220															
Project Location: Eddy Co., NM				Phone #: (432)556-8730																							
Sampler Name: <i>SOEL LOWRY</i>				Fax #:																							
FOR LAB USE ONLY	Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX					PRESERV.			SAMPLING														
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME												
	<i>H402860</i>																										
	<i>11</i>	<i>FP #4 @ 2'</i>	<i>g</i>	<i>1</i>			<i>x</i>					<i>x</i>		<i>9/10/14</i>	<i>1150</i>	<i>x</i>											
	<i>12</i>	<i>PA #1 @ 6"</i>	<i>g</i>	<i>1</i>			<i>x</i>					<i>x</i>		<i>9/10/14</i>	<i>1200</i>	<i>x</i>											
	<i>13</i>	<i>PA #1 @ 2'</i>	<i>g</i>	<i>1</i>			<i>x</i>					<i>x</i>		<i>9/10/14</i>	<i>1300</i>	<i>x</i>											
	<i>14</i>	<i>PA #2 @ 6"</i>	<i>g</i>	<i>1</i>			<i>x</i>					<i>x</i>		<i>9/10/14</i>	<i>1305</i>	<i>x</i>											
	<i>15</i>	<i>PA #2 @ 2'</i>	<i>g</i>	<i>1</i>			<i>x</i>					<i>x</i>		<i>9/10/14</i>	<i>1310</i>	<i>x</i>											
	<i>16</i>	<i>PA #3 @ 6"</i>	<i>g</i>	<i>1</i>			<i>x</i>					<i>x</i>		<i>9/10/14</i>	<i>1315</i>	<i>x</i>											
	<i>17</i>	<i>PA #3 @ 2'</i>	<i>g</i>	<i>1</i>			<i>x</i>					<i>x</i>		<i>9/10/14</i>	<i>1320</i>	<i>x</i>											
	<i>18</i>	<i>BG #1</i>	<i>g</i>	<i>1</i>			<i>x</i>					<i>x</i>		<i>9/10/14</i>	<i>1325</i>	<i>x</i>											
	<i>19</i>	<i>BG #2</i>	<i>g</i>	<i>1</i>			<i>x</i>					<i>x</i>		<i>9/10/14</i>	<i>1340</i>	<i>x</i>											
	<i>20</i>	<i>BG #3</i>	<i>g</i>	<i>1</i>			<i>x</i>					<i>x</i>		<i>9/10/14</i>	<i>1345</i>	<i>x</i>											

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Relinquished By: <i>Joel Lowry</i>	Date: <i>9/17/14</i>	Received By: <i>Daly Savoie</i>	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
Time: <i>11:45</i>			Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By: <i>Daly Savoie</i>	Date: <i>9-15-14</i>	Received By: <i>Joel Henson</i>	REMARKS:	
Time: <i>8:30</i>			HOLD FOR TPH	
Delivered By: (Circle One)		Sample Condition	Please email results to pm@basinenv.com, TASavoie@BassPet.com & SJWalters@BassPet.com	
Sampler - UPS - Bus - Other:	<i>-5.82</i>	Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No	CHECKED BY: (Initials) <i>JH</i>	

*#54*



# CARDINAL LABORATORIES

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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

5013

Page 10 of 10

Company Name: Basin Environmental Service Technologies, LLC				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>																			
Project Manager: Joel Lowry				P.O. #:				Chloride	TPH (8015M)	BTEX (8021B)	HOLD FOR TPH																
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. Marland																							
Project #:		Project Owner:		City: Carlsbad																							
Project Name: South Loop 10" Main Line				State: NM Zip: 88220																							
Project Location: Eddy Co., NM				Phone #: (432)556-8730																							
Sampler Name: <u>JOEL LOWRY</u>				Fax #:																							
FOR LAB USE ONLY	Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.		SAMPLING														
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME												
	H402860																										
	21	BG #4	g	1			x					x		9/10/14	1350	x											
	22	BG #5	g	1			x					x		9/10/14	1355	x											

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Relinquished By: <u>Joel Lowry</u>	Date: <u>9/12/14</u>	Received By: <u>Daley Spahn</u>	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
Time: <u>11:45</u>			Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By: <u>Daley Spahn</u>	Date: <u>9-15-14</u>	Received By: <u>Jodi Benson</u>	REMARKS:	
Time: <u>8:30</u>			HOLD FOR TPH	
Delivered By: (Circle One)	Sample Condition	Checked By: <u>JW</u>	Please email results to pm@basinenv.com, TASavoie@BassPet.com & SJWalters@BassPet.com	
Sampler - UPS - Bus - Other:	Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>	(Initials)		
	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			

#54



October 15, 2014

JOEL LOWRY

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: SOUTH LOOP 10" MAIN LINE

Enclosed are the results of analyses for samples received by the laboratory on 10/13/14 11:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited 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.

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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, flowing "C" at the beginning.

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	10/13/2014	Sampling Date:	10/09/2014
Reported:	10/15/2014	Sampling Type:	Soil
Project Name:	SOUTH LOOP 10" MAIN LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

**Sample ID: (POST FLOOD) BG #1 (H403134-01)**
**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	10/14/2014	ND	416	104	400	3.92	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report



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Celey D. Keene, Lab Director/Quality Manager



# ARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240

(575) 393-2326 FAX (575) 393-2476

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>																			
Project Manager: Joel Lowry				P.O. #:				Chloride	TCLP BTEX	RCI	TPH 8015																
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:																							
Project #:		Project Owner:		City:																							
Project Name: South Loop 10" Main Line				State: NM								Zip:															
Project Location: Eddy Co., NM				Phone #:																							
Sampler Name: <i>Joel Lowry</i>				Fax #:																							
FOR LAB USE ONLY																											
Lab I.D.		Sample I.D.		(GRAB OR (C)OMP. # CONTAINERS)	MATRIX							PRESERV.		SAMPLING													
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME												
H403134		(Post-Flood) BG #1		g	1		x				x		10/9/14	900	x												

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Relinquished By: <i>Joel Lowry</i>	Date: 10-13 Time: 9:00	Received By: <i>SB Blackwell</i>	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
Relinquished By: <i>SB Blackwell</i>	Date: 10-13 Time: 11:50	Received By:	Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:		Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No	CHECKED BY: (Initials) <i>JA</i>	
REMARKS:  HOLD FOR TPH Please email results to pm@basinenv.com, TASavoie@BassPet.com & SJWalters@BassPet.com				

#54



October 23, 2014

JOEL LOWRY

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: SOUTH LOOP 10" MAIN LINE

Enclosed are the results of analyses for samples received by the laboratory on 10/17/14 15:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited 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.

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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style.

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	10/17/2014	Sampling Date:	10/15/2014
Reported:	10/23/2014	Sampling Type:	Soil
Project Name:	SOUTH LOOP 10" MAIN LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

**Sample ID: TT-1 @ 1' (H403208-01)**

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	10/21/2014	ND	400	100	400	3.92	

**Sample ID: TT-1 @ 2' (H403208-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<b>144</b>	16.0	10/21/2014	ND	400	100	400	3.92	

**Sample ID: TT-1 @ 3' (H403208-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<b>48.0</b>	16.0	10/21/2014	ND	400	100	400	3.92	

**Sample ID: TT-1 @ 4' (H403208-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<b>1390</b>	16.0	10/21/2014	ND	400	100	400	3.92	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	10/17/2014	Sampling Date:	10/15/2014
Reported:	10/23/2014	Sampling Type:	Soil
Project Name:	SOUTH LOOP 10" MAIN LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

**Sample ID: TT-1 @ 5' (H403208-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>416</b>	16.0	10/21/2014	ND	400	100	400	3.92	

**Sample ID: TT-1 @ 6' (H403208-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>240</b>	16.0	10/21/2014	ND	400	100	400	3.92	

**Sample ID: TT-1 @ 7' (H403208-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>1920</b>	16.0	10/21/2014	ND	400	100	400	3.92	

**Sample ID: TT-1 @ 8' (H403208-08)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>2360</b>	16.0	10/21/2014	ND	400	100	400	3.92	

**Sample ID: TT-1 @ 10' (H403208-09)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>2240</b>	16.0	10/21/2014	ND	400	100	400	3.92	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	10/17/2014	Sampling Date:	10/15/2014
Reported:	10/23/2014	Sampling Type:	Soil
Project Name:	SOUTH LOOP 10" MAIN LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

**Sample ID: TT-1 @ 12' (H403208-10)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>192</b>	16.0	10/21/2014	ND	400	100	400	3.92	

**Sample ID: TT-1 @ 14' (H403208-11)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>4040</b>	16.0	10/21/2014	ND	400	100	400	3.92	

**Sample ID: TT-1 @ 16' (H403208-12)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>48.0</b>	16.0	10/21/2014	ND	400	100	400	3.92	

**Sample ID: TT-1 @ 17' (H403208-13)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>336</b>	16.0	10/21/2014	ND	400	100	400	3.92	

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 Basin Environmental Service  
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 Fax To: (575) 396-1429

Received:	10/17/2014	Sampling Date:	10/15/2014
Reported:	10/23/2014	Sampling Type:	Soil
Project Name:	SOUTH LOOP 10" MAIN LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

**Sample ID: TT-1 @ 18' (H403208-14)**

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/21/2014	ND	2.05	103	2.00	8.65	
Toluene*	<0.050	0.050	10/21/2014	ND	1.94	97.1	2.00	9.58	
Ethylbenzene*	<0.050	0.050	10/21/2014	ND	1.85	92.7	2.00	9.35	
Total Xylenes*	<0.150	0.150	10/21/2014	ND	5.56	92.6	6.00	9.47	
Total BTEX	<0.300	0.300	10/21/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 61-154

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>784</b>	16.0	10/21/2014	ND	400	100	400	3.92	

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	10/21/2014	ND	190	95.2	200	1.43	
DRO >C10-C28	<10.0	10.0	10/21/2014	ND	196	98.1	200	2.75	
EXT DRO >C28-C35	<10.0	10.0	10/21/2014	ND					

Surrogate: 1-Chlorooctane 111 % 47.2-157

Surrogate: 1-Chlorooctadecane 117 % 52.1-176

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Received:	10/17/2014	Sampling Date:	10/15/2014
Reported:	10/23/2014	Sampling Type:	Soil
Project Name:	SOUTH LOOP 10" MAIN LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

**Sample ID: TT-2 @ 1' (H403208-15)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8000	16.0	10/21/2014	ND	400	100	400	3.92	

**Sample ID: TT-2 @ 2' (H403208-16)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8930	16.0	10/21/2014	ND	400	100	400	3.92	

**Sample ID: TT-2 @ 4' (H403208-17)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4800	16.0	10/21/2014	ND	400	100	400	3.92	

**Sample ID: TT-2 @ 6' (H403208-18)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2240	16.0	10/21/2014	ND	400	100	400	3.92	

**Sample ID: TT-2 @ 8' (H403208-19)**

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	10/21/2014	ND	400	100	400	3.92	

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Received:	10/17/2014	Sampling Date:	10/15/2014
Reported:	10/23/2014	Sampling Type:	Soil
Project Name:	SOUTH LOOP 10" MAIN LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

**Sample ID: TT-2 @ 11' (H403208-20)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>112</b>	16.0	10/21/2014	ND	400	100	400	3.92	

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Received:	10/17/2014	Sampling Date:	10/15/2014
Reported:	10/23/2014	Sampling Type:	Soil
Project Name:	SOUTH LOOP 10" MAIN LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

**Sample ID: TT-2 @ 13' (H403208-21)**

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/21/2014	ND	2.05	103	2.00	8.65	
Toluene*	<0.050	0.050	10/21/2014	ND	1.94	97.1	2.00	9.58	
Ethylbenzene*	<0.050	0.050	10/21/2014	ND	1.85	92.7	2.00	9.35	
Total Xylenes*	<0.150	0.150	10/21/2014	ND	5.56	92.6	6.00	9.47	
Total BTEX	<0.300	0.300	10/21/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 61-154

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	10/21/2014	ND	400	100	400	3.92	

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	10/21/2014	ND	190	95.2	200	1.43	
DRO >C10-C28	<10.0	10.0	10/21/2014	ND	196	98.1	200	2.75	
EXT DRO >C28-C35	<10.0	10.0	10/21/2014	ND					

Surrogate: 1-Chlorooctane 98.4 % 47.2-157

Surrogate: 1-Chlorooctadecane 107 % 52.1-176

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 Fax To: (575) 396-1429

Received:	10/17/2014	Sampling Date:	10/15/2014
Reported:	10/23/2014	Sampling Type:	Soil
Project Name:	SOUTH LOOP 10" MAIN LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

**Sample ID: TT-3 @ 2' (H403208-22)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>3360</b>	16.0	10/21/2014	ND	400	100	400	3.92	

**Sample ID: TT-3 @ 4' (H403208-23)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>800</b>	16.0	10/21/2014	ND	400	100	400	3.92	

**Sample ID: TT-3 @ 6' (H403208-24)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>96.0</b>	16.0	10/21/2014	ND	400	100	400	3.92	

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 Fax To: (575) 396-1429

Received:	10/17/2014	Sampling Date:	10/15/2014
Reported:	10/23/2014	Sampling Type:	Soil
Project Name:	SOUTH LOOP 10" MAIN LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

**Sample ID: TT-3 @ 8' (H403208-25)**

BTEX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/21/2014	ND	2.05	103	2.00	8.65		
Toluene*	<0.050	0.050	10/21/2014	ND	1.94	97.1	2.00	9.58		
Ethylbenzene*	<0.050	0.050	10/21/2014	ND	1.85	92.7	2.00	9.35		
Total Xylenes*	<0.150	0.150	10/21/2014	ND	5.56	92.6	6.00	9.47		
Total BTEX	<0.300	0.300	10/21/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 61-154

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	10/21/2014	ND	400	100	400	3.92		

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	10/21/2014	ND	190	95.2	200	1.43		
DRO >C10-C28	<10.0	10.0	10/21/2014	ND	196	98.1	200	2.75		
EXT DRO >C28-C35	<10.0	10.0	10/21/2014	ND						

Surrogate: 1-Chlorooctane 107 % 47.2-157

Surrogate: 1-Chlorooctadecane 116 % 52.1-176

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Received:	10/17/2014	Sampling Date:	10/16/2014
Reported:	10/23/2014	Sampling Type:	Soil
Project Name:	SOUTH LOOP 10" MAIN LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

**Sample ID: TT-4 @ 1' (H403208-26)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>112</b>	16.0	10/21/2014	ND	400	100	400	3.92	

**Sample ID: TT-4 @ 2' (H403208-27)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>240</b>	16.0	10/21/2014	ND	400	100	400	3.92	

**Sample ID: TT-4 @ 4' (H403208-28)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>3680</b>	16.0	10/21/2014	ND	400	100	400	3.92	

**Sample ID: TT-4 @ 6' (H403208-29)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>3560</b>	16.0	10/21/2014	ND	400	100	400	3.92	

**Sample ID: TT-4 @ 8' (H403208-30)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>10700</b>	16.0	10/21/2014	ND	400	100	400	3.92	

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 Fax To: (575) 396-1429

Received:	10/17/2014	Sampling Date:	10/16/2014
Reported:	10/23/2014	Sampling Type:	Soil
Project Name:	SOUTH LOOP 10" MAIN LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

**Sample ID: TT-4 @ 10' (H403208-31)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	11500	16.0	10/21/2014	ND	400	100	400	3.92	

**Sample ID: TT-4 @ 12' (H403208-32)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1700	16.0	10/21/2014	ND	400	100	400	3.92	

**Sample ID: TT-4 @ 14' (H403208-33)**

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	10/21/2014	ND	400	100	400	3.92	

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

Received:	10/17/2014	Sampling Date:	10/16/2014
Reported:	10/23/2014	Sampling Type:	Soil
Project Name:	SOUTH LOOP 10" MAIN LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

**Sample ID: TT-4 @ 16' (H403208-34)**

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/21/2014	ND	2.05	103	2.00	8.65	
Toluene*	<0.050	0.050	10/21/2014	ND	1.94	97.1	2.00	9.58	
Ethylbenzene*	<0.050	0.050	10/21/2014	ND	1.85	92.7	2.00	9.35	
Total Xylenes*	<0.150	0.150	10/21/2014	ND	5.56	92.6	6.00	9.47	
Total BTEX	<0.300	0.300	10/21/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 61-154

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	10/21/2014	ND	400	100	400	3.92	

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	10/21/2014	ND	190	95.2	200	1.43	
DRO >C10-C28	<10.0	10.0	10/21/2014	ND	196	98.1	200	2.75	
EXT DRO >C28-C35	<10.0	10.0	10/21/2014	ND					

Surrogate: 1-Chlorooctane 106 % 47.2-157

Surrogate: 1-Chlorooctadecane 117 % 52.1-176

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager









# CARDINAL LABORATORIES

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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

9014

Page 18 of 18

Company Name:				BILL TO				ANALYSIS REQUEST																							
Project Manager: Joel Lowry				P.O. #:				Chloride	TPH (8015M)	BTEX (8021B)	HOLD FOR TPH																				
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:																											
Project #: Project Owner:				City:																											
Project Name: South Loop 10" Mainline				State: NM Zip:																											
Project Location: Eddy Co., NM				Phone #:																											
Sampler Name: Joel Lowry				Fax #:																											
FOR LAB USE ONLY		Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.		SAMPLING																	
						GROUNDWATER	WASTEWATER					SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME											
H403208		31	TT-4 @ 10'	g	1							x					x	10/16/14	1410	x											
		32	TT-4 @ 12'	g	1							x					x	10/16/14	1415	x											
		33	TT-4 @ 14'	g	1			x					x	10/16/14	1420	x															
		34	TT-4 @ 16'	g	1			x					x	10/16/14	1425	x	x	x													

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Relinquished By: <i>Joel Lowry</i>	Date: 10/17/14	Received By: <i>Jodi Benson</i>	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
Relinquished By:	Time: 3:35	Received By:	Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Delivered By: (Circle One)		Sample Condition	REMARKS:	
Sampler - UPS - Bus - Other:		Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>	HOLD FOR TPH	
		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Please email results to pm@basinenv.com, TASavoie@BassPet.com & SJWalters@BassPet.com	
		Checked By: <i>[Signature]</i>		

#54



February 23, 2015

JOEL LOWRY

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: SOUTH LOOP 10" MAIN LINE

Enclosed are the results of analyses for samples received by the laboratory on 02/19/15 10:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited 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.

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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	02/19/2015	Sampling Date:	02/18/2015
Reported:	02/23/2015	Sampling Type:	Soil
Project Name:	SOUTH LOOP 10" MAIN LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

**Sample ID: SP-A @ SURFACE (H500481-01)**

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	02/20/2015	ND	400	100	400	3.92	

**Sample ID: SP-A @ 1' (H500481-02)**

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	02/20/2015	ND	400	100	400	3.92	

**Sample ID: SP-A @ 2' (H500481-03)**

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	02/20/2015	ND	400	100	400	3.92	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	02/19/2015	Sampling Date:	02/18/2015
Reported:	02/23/2015	Sampling Type:	Soil
Project Name:	SOUTH LOOP 10" MAIN LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

**Sample ID: SP-A @ 3' (H500481-04)**

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/21/2015	ND	1.85	92.3	2.00	5.10	
Toluene*	<0.050	0.050	02/21/2015	ND	1.86	92.9	2.00	5.32	
Ethylbenzene*	<0.050	0.050	02/21/2015	ND	1.84	92.0	2.00	5.66	
Total Xylenes*	<0.150	0.150	02/21/2015	ND	5.45	90.8	6.00	4.79	
Total BTEX	<0.300	0.300	02/21/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.4 % 61-154

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>64.0</b>	16.0	02/20/2015	ND	400	100	400	3.92	

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	02/19/2015	ND	194	97.1	200	0.244	
DRO >C10-C28	<10.0	10.0	02/19/2015	ND	192	96.2	200	1.14	
EXT DRO >C28-C35	<10.0	10.0	02/19/2015	ND					

Surrogate: 1-Chlorooctane 87.9 % 47.2-157

Surrogate: 1-Chlorooctadecane 78.5 % 52.1-176

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	02/19/2015	Sampling Date:	02/18/2015
Reported:	02/23/2015	Sampling Type:	Soil
Project Name:	SOUTH LOOP 10" MAIN LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

**Sample ID: SP-B @ SURFACE (H500481-05)**

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	02/20/2015	ND	400	100	400	3.92	

**Sample ID: SP-B @ 1' (H500481-06)**

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	02/20/2015	ND	400	100	400	3.92	

**Sample ID: SP-B @ 2' (H500481-07)**

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	02/20/2015	ND	400	100	400	3.92	

**Sample ID: SP-B @ 3' (H500481-08)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>112</b>	16.0	02/20/2015	ND	400	100	400	3.92	

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**Analytical Results For:**

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

Received:	02/19/2015	Sampling Date:	02/18/2015
Reported:	02/23/2015	Sampling Type:	Soil
Project Name:	SOUTH LOOP 10" MAIN LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

**Sample ID: SP-B @ 4' (H500481-09)**

BTEX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/21/2015	ND	1.85	92.3	2.00	5.10		
Toluene*	<0.050	0.050	02/21/2015	ND	1.86	92.9	2.00	5.32		
Ethylbenzene*	<0.050	0.050	02/21/2015	ND	1.84	92.0	2.00	5.66		
Total Xylenes*	<0.150	0.150	02/21/2015	ND	5.45	90.8	6.00	4.79		
Total BTEX	<0.300	0.300	02/21/2015	ND						

Surrogate: 4-Bromofluorobenzene (PID) 89.2 % 61-154

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	02/20/2015	ND	400	100	400	3.92		

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	02/19/2015	ND	194	97.1	200	0.244		
DRO >C10-C28	<10.0	10.0	02/19/2015	ND	192	96.2	200	1.14		
EXT DRO >C28-C35	<10.0	10.0	02/19/2015	ND						

Surrogate: 1-Chlorooctane 89.6 % 47.2-157

Surrogate: 1-Chlorooctadecane 91.2 % 52.1-176

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	02/19/2015	Sampling Date:	02/18/2015
Reported:	02/23/2015	Sampling Type:	Soil
Project Name:	SOUTH LOOP 10" MAIN LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

**Sample ID: SP-C @ SURFACE (H500481-10)**

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	02/20/2015	ND	400	100	400	3.92	

**Sample ID: SP-C @ 1' (H500481-11)**

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	02/20/2015	ND	400	100	400	3.92	

**Sample ID: SP-C @ 2' (H500481-12)**

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	02/20/2015	ND	400	100	400	3.92	

**Sample ID: SP-C @ 3' (H500481-13)**

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	02/20/2015	ND	400	100	400	3.92	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	02/19/2015	Sampling Date:	02/18/2015
Reported:	02/23/2015	Sampling Type:	Soil
Project Name:	SOUTH LOOP 10" MAIN LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

**Sample ID: SP-C @ 4' (H500481-14)**

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/21/2015	ND	1.85	92.3	2.00	5.10	
Toluene*	<0.050	0.050	02/21/2015	ND	1.86	92.9	2.00	5.32	
Ethylbenzene*	<0.050	0.050	02/21/2015	ND	1.84	92.0	2.00	5.66	
Total Xylenes*	<0.150	0.150	02/21/2015	ND	5.45	90.8	6.00	4.79	
Total BTEX	<0.300	0.300	02/21/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 91.8 % 61-154

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	02/20/2015	ND	400	100	400	3.92	

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	02/19/2015	ND	194	97.1	200	0.244	
DRO >C10-C28	<10.0	10.0	02/19/2015	ND	192	96.2	200	1.14	
EXT DRO >C28-C35	<10.0	10.0	02/19/2015	ND					

Surrogate: 1-Chlorooctane 89.0 % 47.2-157

Surrogate: 1-Chlorooctadecane 88.1 % 52.1-176

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	02/19/2015	Sampling Date:	02/18/2015
Reported:	02/23/2015	Sampling Type:	Soil
Project Name:	SOUTH LOOP 10" MAIN LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

**Sample ID: SP-D @ SURFACE (H500481-15)**

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	02/20/2015	ND	400	100	400	3.92	

**Sample ID: SP-D @ 1' (H500481-16)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>128</b>	16.0	02/20/2015	ND	400	100	400	3.92	

**Sample ID: SP-D @ 2' (H500481-17)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>656</b>	16.0	02/20/2015	ND	400	100	400	3.92	

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	02/19/2015	Sampling Date:	02/18/2015
Reported:	02/23/2015	Sampling Type:	Soil
Project Name:	SOUTH LOOP 10" MAIN LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

**Sample ID: SP-D @ 3' (H500481-18)**

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/21/2015	ND	1.85	92.3	2.00	5.10	
Toluene*	<0.050	0.050	02/21/2015	ND	1.86	92.9	2.00	5.32	
Ethylbenzene*	<0.050	0.050	02/21/2015	ND	1.84	92.0	2.00	5.66	
Total Xylenes*	<0.150	0.150	02/21/2015	ND	5.45	90.8	6.00	4.79	
Total BTEX	<0.300	0.300	02/21/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 91.6 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>1020</b>	16.0	02/20/2015	ND	400	100	400	0.00	

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	02/19/2015	ND	194	97.1	200	0.244	
DRO >C10-C28	<10.0	10.0	02/19/2015	ND	192	96.2	200	1.14	
EXT DRO >C28-C35	<10.0	10.0	02/19/2015	ND					

Surrogate: 1-Chlorooctane 86.6 % 47.2-157

Surrogate: 1-Chlorooctadecane 84.4 % 52.1-176

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	02/19/2015	Sampling Date:	02/18/2015
Reported:	02/23/2015	Sampling Type:	Soil
Project Name:	SOUTH LOOP 10" MAIN LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

**Sample ID: SP-E @ SURFACE (H500481-19)**

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	02/20/2015	ND	400	100	400	0.00	

**Sample ID: SP-E @ 1' (H500481-20)**

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	02/20/2015	ND	400	100	400	0.00	

**Sample ID: SP-E @ 2' (H500481-21)**

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	02/20/2015	ND	400	100	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	02/19/2015	Sampling Date:	02/18/2015
Reported:	02/23/2015	Sampling Type:	Soil
Project Name:	SOUTH LOOP 10" MAIN LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

**Sample ID: SP-E @ 3' (H500481-22)**

BTEX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/21/2015	ND	1.85	92.3	2.00	5.10		
Toluene*	<0.050	0.050	02/21/2015	ND	1.86	92.9	2.00	5.32		
Ethylbenzene*	<0.050	0.050	02/21/2015	ND	1.84	92.0	2.00	5.66		
Total Xylenes*	<0.150	0.150	02/21/2015	ND	5.45	90.8	6.00	4.79		
Total BTEX	<0.300	0.300	02/21/2015	ND						

Surrogate: 4-Bromofluorobenzene (PID) 91.2 % 61-154

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	02/20/2015	ND	400	100	400	0.00		

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	02/19/2015	ND	194	97.1	200	0.244		
DRO >C10-C28	<10.0	10.0	02/19/2015	ND	192	96.2	200	1.14		
EXT DRO >C28-C35	<10.0	10.0	02/19/2015	ND						

Surrogate: 1-Chlorooctane 84.2 % 47.2-157

Surrogate: 1-Chlorooctadecane 84.7 % 52.1-176

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	02/19/2015	Sampling Date:	02/18/2015
Reported:	02/23/2015	Sampling Type:	Soil
Project Name:	SOUTH LOOP 10" MAIN LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

**Sample ID: SP-F @ SURFACE (H500481-23)**

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	02/20/2015	ND	400	100	400	0.00	

**Sample ID: SP-F @ 1' (H500481-24)**

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	02/20/2015	ND	400	100	400	0.00	

**Sample ID: SP-F @ 2' (H500481-25)**

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	02/20/2015	ND	400	100	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	02/19/2015	Sampling Date:	02/18/2015
Reported:	02/23/2015	Sampling Type:	Soil
Project Name:	SOUTH LOOP 10" MAIN LINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

**Sample ID: SP-F @ 3' (H500481-26)**

BTEX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/21/2015	ND	1.85	92.3	2.00	5.10		
Toluene*	<0.050	0.050	02/21/2015	ND	1.86	92.9	2.00	5.32		
Ethylbenzene*	<0.050	0.050	02/21/2015	ND	1.84	92.0	2.00	5.66		
Total Xylenes*	<0.150	0.150	02/21/2015	ND	5.45	90.8	6.00	4.79		
Total BTEX	<0.300	0.300	02/21/2015	ND						

Surrogate: 4-Bromofluorobenzene (PID) 89.3 % 61-154

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	02/20/2015	ND	400	100	400	0.00		

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	02/19/2015	ND	194	97.1	200	0.244		
DRO >C10-C28	<10.0	10.0	02/19/2015	ND	192	96.2	200	1.14		
EXT DRO >C28-C35	<10.0	10.0	02/19/2015	ND						

Surrogate: 1-Chlorooctane 85.0 % 47.2-157

Surrogate: 1-Chlorooctadecane 85.7 % 52.1-176

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report



---

Celey D. Keene, Lab Director/Quality Manager







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

**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

3 of 3

Company Name:		<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>																														
Project Manager: Joel Lowry		P.O. #:				Chloride	TPH (8015M)	BTEX (8021B)	HOLD FOR TPH																											
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:																																		
Project #: Project Owner:		City:																																		
Project Name: South Loop 10" Mainline		State: NM Zip:																																		
Project Location: Eddy Co., NM		Phone #:																																		
Sampler Name: Kyle Humphry		Fax #:																																		
FOR LAB USE ONLY	Lab I.D.	Sample I.D.	(G/RAB OR C/COMP. # CONTAINERS	MATRIX	PRESERV.																	SAMPLING														
				GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER :	ACID/BASE: ICE / COOL OTHER :																	DATE	TIME													
	H500481																																			
	21	SP-E @ 2'	1	x	x	2/18/15		x																												
	22	SP-E @ 3'	1	x	x	2/18/15		x	x	x																										
	23	SP-F @ Surf	1	x	x	2/18/15		x																												
	24	SP-F @ 1'	1	x	x	2/18/15		x																												
	25	SB-F @ 2'	1	x	x	2/18/15		x																												
	26	SP-F @ 3'	1	x	x	2/18/15		x	x	x																										

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Relinquished By: <i>Joel Lowry</i>	Date: 2/19/15 Time: 10:30	Received By: <i>Jodi Henson</i>	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #:
Relinquished By:	Date:	Received By:	Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	1.80	Sample Condition Cool <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	CHECKED BY: <i>[Signature]</i> (Initials)
			REMARKS:  Please email results to pm@basinenv.com, TASavoie@BassPet.com, acruith@basspet.com

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

#54

February 26, 2015

BEN J. ARGUIJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: 10" SOUTH LOOP

Enclosed are the results of analyses for samples received by the laboratory on 02/25/15 14:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited 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.

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:	02/25/2015	Sampling Date:	02/25/2015
Reported:	02/26/2015	Sampling Type:	Soil
Project Name:	10" SOUTH LOOP	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: SOUTH PILE (H500536-01)**

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	02/26/2015	ND	400	100	400	0.00	

**Sample ID: MIDDLE PILE (H500536-02)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>3000</b>	16.0	02/26/2015	ND	400	100	400	0.00	

**Sample ID: NORTH PILE (H500536-03)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>144</b>	16.0	02/26/2015	ND	400	100	400	0.00	

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report



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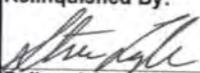
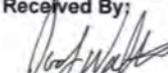
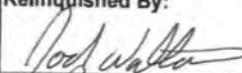
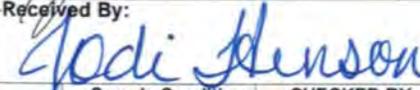
Celey D. Keene, Lab Director/Quality Manager

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

<b>Company Name:</b> Basin Environmental Service Technologies, LLC <b>Project Manager:</b> Ben J. Arquiyo <b>Address:</b> P.O. Box 301 <b>City:</b> Lovington <b>State:</b> NM <b>Zip:</b> 88260 <b>Phone #:</b> (575) 396-2378 <b>Fax #:</b> (575) 396-1429 <b>Project #:</b> <b>Project Owner:</b> BOPCO, LP <b>Project Name:</b> <b>Project Location:</b> 10" South Loop <b>Sampler Name:</b> Steve Taylor		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>																						
		<b>P.O. #:</b> <b>Company:</b> BOPCO, LP <b>Attn:</b> Tony Savoie <b>Address:</b> 522 W. Mermod <b>City:</b> Carlsbad <b>State:</b> NM <b>Zip:</b> 88220 <b>Phone #:</b> (432) 556-8730 <b>Fax #:</b>		Chloride																						
FOR LAB USE ONLY	Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE	ICE / COOL	OTHER :	DATE	TIME											
	H500536	1 South Pile	G	1			X					X		2/25/15	11:30	X										
		2 Middle Pile	G	1			X					X		2/25/15	11:45	X										
		3 North Pile	G	1			X					X		2/25/15	12:00	X										

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<b>Relinquished By:</b> 	<b>Date:</b> 2/25/15 <b>Time:</b> 13:51	<b>Received By:</b> 	<b>Phone Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Fax Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	<b>Add'l Phone #:</b> <b>Add'l Fax #:</b>	<b>REMARKS:</b>  Please email results to pm@basinenv.com & TAsavoie@BassPet.com
<b>Relinquished By:</b> 	<b>Date:</b> 2-25-15 <b>Time:</b> 17:55	<b>Received By:</b> 			
<b>Delivered By: (Circle One)</b> Sampler - UPS - Bus - Other:			<b>Sample Condition</b> Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No		