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## **REMEDIATION SUMMARY & RISK-BASED SITE CLOSURE REQUEST**

**BOPCO, LP**  
**POKER LAKE UNIT #78 SWD TANK BATTERY**  
**Eddy County, New Mexico**  
**Unit Letter "A" (NE/NE), Section 25, Township 24 South, Range 30 East**  
**Latitude 32.194069° North, Longitude 103.827614° West**  
**NMOCD Reference #'s: 2RP-1190 & 2RP-1234**

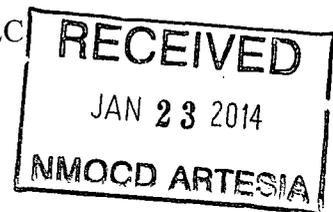
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**January 2014**



A handwritten signature in black ink, appearing to read "Ben J. Arguijo".

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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 & Risk-Based Site Closure Request* for the release site known as Poker Lake Unit (PLU) #78 Salt Water Disposal (SWD) Tank Battery. The legal description of the release site is Unit Letter "A" (NE/NE), Section 25, Township 24 South, Range 30 East, in Eddy County, New Mexico. The geographic coordinates of the release site are 32.194069° North latitude and 103.827614° West longitude. The property affected by the release is owned by The United States Department of the Interior, Bureau of Land Management (BLM). A "Site Location Map" is provided as Figure 1.

On May 26, 2012, BOPCO discovered a release (Release #1) had occurred at the PLU #78 SWD Tank Battery. Lightning struck two (2) one thousand-barrel (1,000 bbl) fiberglass gun barrel tanks and caused immediate, catastrophic damage to the tanks and the adjacent storage tanks inside the containment area, including a five hundred-barrel (500 bbl) steel oil skim tank and a third one thousand-barrel (1,000 bbl) fiberglass tank. The lightning strike and subsequent fire also damaged piping and the catwalk system inside the containment area. Falling pipe damaged three (3) areas of the steel-walled containment, causing crude oil and produced water to breach the containment and overflow into the adjacent pastureland.

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 four thousand barrels (4,000 bbls) of produced water and approximately twenty barrels (20 bbls) of crude oil were released. A vacuum truck was utilized to recover approximately one thousand, eight hundred and twenty barrels (1,820 bbls) of the free-standing fluid in the containment area. The release affected an area of pastureland measuring approximately twenty-one thousand, six hundred and eighty square feet (21,680 ft<sup>2</sup>).

On July 11, 2012, BOPCO discovered a second release (Release #2) had occurred at the PLU #78 SWD Tank Battery. The SWD was without power when the tanks overflowed, resulting in a release of crude oil and produced water. Electricians were on-site and vacuum trucks were on course to the facility when a section of the containment wall separated at a seam, causing crude oil and produced water to breach the containment and overflow into the adjacent pastureland, where it pooled in the floor of an ongoing excavation and commingled with rain water from a recent storm.

The release was immediately reported to the NMOCD Artesia District Office. The Form C-141 indicated approximately six hundred barrels (600 bbls) of produced water and approximately ten barrels (10 bbls) of crude oil were released. A vacuum truck was utilized to recover a total of approximately one thousand and fifty barrels (1,050 bbls) of free-standing liquid (including rain water, crude oil, and produced water) from the containment area and the floor of the excavation.

The two (2) releases were remediated concurrently. The Forms C-141 are provided in Appendix A. General photographs of the release sites are provided in Appendix B.

## 2.0 NMOCD SITE CLASSIFICATION

A search of the New Mexico Water Rights Reporting System (NMWRRS) database maintained by the New Mexico Office of the State Engineer (NMOSE) indicated information was unavailable for Section 25, Township 24 South, Range 30 East. A depth-to-groundwater reference map utilized by the NMOCD indicates groundwater should be encountered at approximately three hundred and sixty feet (360') to three hundred and sixty-five feet (365') below ground surface (bgs). Based on the NMOCD ranking system, zero (0) points will be assigned to the site as a result of this criterion.

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

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

NMOCD guidelines indicate the PLU #78 SWD Tank Battery release site has an initial ranking score of zero (0) points. The soil remediation levels for a site with a ranking score of zero (0) points are as follows:

- Benzene – 10 mg/kg (ppm)
- Benzene, toluene, ethylbenzene and xylenes (BTEX) – 50 mg/kg (ppm)
- Total petroleum hydrocarbons (TPH) – 5,000 mg/kg (ppm)

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

## 3.0 SUMMARY OF SOIL REMEDIATION ACTIVITIES

On May 31, 2012, following initial response activities, delineation of Release #1 commenced. A series of four (4) delineation trenches (Sample #1 through Sample #4) were advanced in the pastureland adjacent to the PLU #78 SWD Tank Battery to investigate the horizontal and vertical extent of impacted soil. Delineation trenches Sample #1, Sample #2, and Sample #4 were each advanced to a total depth of approximately five feet (5') bgs. Delineation trench Sample #3 was advanced to a total depth of approximately ten feet (10') bgs. Soil samples were collected at four-foot (4') to five-foot (5') intervals and field-screened with a chloride test kit. A total of nine (9) confirmation soil samples (Sample #1 @ 1', Sample #1 @ 5', Sample #2 @ 1', Sample #2 @ 5', Sample #3 @ 1', Sample #3 @ 5', Sample #3 @ 10', Sample #4 @ 1', and Sample #4 @ 5') were submitted to Cardinal Laboratories in Hobbs, New Mexico, for analysis of TPH and chloride concentrations using Environmental Protection Agency (EPA) Methods SW-846 8015M and 4500 Cl-B, respectively. Sample #1 @ 5' and Sample #3 @ 10' were also analyzed for concentrations of BTEX using EPA Method SW-846 8021b. Table 1 summarizes the "Concentrations of Benzene, BTEX, TPH & Chloride in Soil". Soil sample locations are depicted in Figure 3 through Figure 5. Laboratory analytical reports are provided as Appendix D.

Laboratory analytical results indicated TPH concentrations ranged from less than the laboratory method detection limit (MDL) in Sample #1 @ 5', Sample #3 @ 5', Sample #3 @ 10', and Sample #4 @ 5' to 14,770 mg/kg in Sample #1 @ 1'. Chloride concentrations ranged from 160 mg/kg in Sample #2 @ 5' to 30,000 mg/kg in Sample #4 @ 1'. BTEX constituent concentrations in Sample #1 @ 5' and Sample #3 @ 10' were less than the appropriate laboratory MDL.

On June 4, 2012, five (5) additional delineation trenches were advanced at the site to investigate the horizontal and vertical extent of impacted soil in pooling areas in the pastureland adjacent to the PLU #78 SWD Tank Battery. Soil samples collected from the delineation trenches were field-screened with a chloride test kit. Field-test results indicated further delineation would be required along the flow path of the release.

To facilitate remediation activities, the release site was divided into two (2) sections: Pasture Excavation and Pad Excavation. The Pasture Excavation was located in the pastureland adjacent to the PLU #78 SWD Tank Battery, and the Pad Excavation was located on the tank battery pad. Due to time, budget, and operational concerns, it was determined that the Pasture Excavation would be completed first, and the Pad Excavation would be completed at a later date.

On June 5, 2012, remediation of Release #1 commenced at the site. A chloride test kit was used to field-screen the horizontal and vertical extent of impacted soil and to guide the excavation (Pasture Excavation). Excavated soil was stockpiled on-site, pending final disposition.

On July 11, 2012, following initial response activities, remediation of Release #2 commenced in conjunction with the ongoing remediation activities associated with Release #1.

On July 26, 2012, thirty-six (36) soil samples (Sample #1 through Sample #11, Sample #13 through Sample #26, and Sample #29 through Sample #39) were collected from the floor and sidewalls of the Pasture Excavation and submitted to the laboratory for analysis of TPH and chloride concentrations. Laboratory analytical results indicated TPH concentrations ranged from less than the laboratory MDL in Sample #2 through Sample #11, Sample #13 through Sample #20, Sample #22, Sample #23, Sample #25, Sample #26, and Sample #32 through Sample #39 to 110 mg/kg in Sample #24. Chloride concentrations ranged from less than the laboratory MDL in Sample #20 and Sample #22 through Sample #24 to 58,400 mg/kg in Sample #38.

One (1) soil sample (East Pooling Area) was collected from the floor of the Pasture Excavation in a pooling area associated with Release #2. The soil sample was submitted to the laboratory for analysis of TPH and chloride concentrations. Laboratory analytical results indicated the TPH concentration was 7,765 mg/kg, and the chloride concentration was 48.0 mg/kg.

Review of laboratory analytical results indicated further vertical delineation would be required in the area represented by soil sample East Pooling Area. Further excavation in the areas represented by Sample #26, Sample #30, Sample #32, Sample #37, and Sample #38 was deemed impracticable due to the presence of the active PLU #78 SWD Tank Battery adjacent to the Pasture Excavation.

On July 31, 2012, two (2) soil samples (Manifold Floor 6' and Manifold Floor 8') were collected from the floor of the Pasture Excavation and submitted to the laboratory for analysis of TPH and chloride concentrations. Laboratory analytical results indicated TPH concentrations ranged from

20,570 mg/kg in soil sample Manifold Floor 6' to 48,040 mg/kg in soil sample Manifold Floor 8'. The chloride concentration was 176 mg/kg in both Manifold Floor 6' and Manifold Floor 8'.

Review of laboratory analytical results indicated further excavation would be required in the area represented by soil samples Manifold Floor 6' and Manifold Floor 8'.

On August 1, 2012, five (5) soil borings (SB-1 through SB-5) were advanced at the site to further investigate the vertical extent of impacted soil. Soil samples were collected at five-foot (5') drilling intervals and field-screened using a Photo-Ionization Detector (PID) and/or chloride test kit. Selected soil samples were submitted to the laboratory for analysis of BTEX, TPH, and/or chloride concentrations. The locations of the soil borings are depicted in Figure 2, "Sample Location Map (Overview)". Soil boring logs are provided as Appendix C.

Soil boring SB-1 was advanced in the northwest floor of the Pasture Excavation, at approximately five feet (5') bgs, near the terminus of the flow path of the release. The soil boring was advanced to a total depth of approximately twenty-five feet (25') bgs. Soil samples collected at drilling depths of five feet (5'), ten feet (10'), fifteen feet (15'), and twenty feet (20') were submitted to the laboratory for analysis of BTEX, TPH, and/or chloride concentrations. Laboratory analytical results indicated BTEX constituent concentrations were less than the appropriate laboratory MDL in all submitted soil samples. TPH concentrations ranged from less than the laboratory MDL in the soil samples collected at 10' bgs (SB-1 @ 5') and 25' bgs (SB-1 @ 20') to 10.5 mg/kg in the soil sample collected at 15' bgs (SB-1 @ 10'). Chloride concentrations ranged from 32.0 mg/kg in the soil sample collected at 25' bgs (SB-1 @ 20') to 1,300 mg/kg in the soil sample collected at 15' bgs (SB-1 @ 10').

Soil boring SB-2 was advanced in the floor of the Pasture Excavation, at approximately five feet (5') bgs, in the area represented by soil sample East Pooling Area. The soil boring was advanced to a total depth of approximately twenty-five feet (25') bgs. Soil samples collected at drilling depths of five feet (5'), ten feet (10'), fifteen feet (15'), and twenty feet (20') were submitted to the laboratory for analysis of BTEX, TPH, and/or chloride concentrations. Laboratory analytical results indicated TPH and BTEX constituent concentrations were less than the appropriate laboratory MDL in all submitted soil samples. Chloride concentrations ranged from 864 mg/kg in the soil sample collected at 10' bgs (SB-2 @ 5') to 3,560 mg/kg in the soil sample collected at 20' bgs (SB-2 @ 15').

Soil boring SB-3 was advanced in the west floor of the Pasture Excavation, at approximately five feet (5') bgs. The soil boring was advanced to a total depth of approximately thirty feet (30') bgs. Soil samples collected at drilling depths of five feet (5'), ten feet (10'), fifteen feet (15'), twenty feet (20'), and twenty-five feet (25') were submitted to the laboratory for analysis of BTEX, TPH, and/or chloride concentrations. Laboratory analytical results indicated BTEX constituent concentrations were less than the appropriate laboratory MDL in all submitted soil samples. TPH concentrations ranged from less than the laboratory MDL in the soil samples collected at 10' bgs (SB-3 @ 5') and 15' bgs (SB-3 @ 10') to 596 mg/kg in the soil sample collected at 30' bgs (SB-3 @ 25'). Chloride concentrations ranged from 128 mg/kg in the soil sample collected at 30' bgs (SB-3 @ 25') to 1,470 mg/kg in the soil sample collected at 15' bgs (SB-3 @ 10').

Soil boring SB-4 was advanced in the floor of the Pasture Excavation, at approximately five feet (5') bgs, and approximately fifty feet (50') to the west of the PLU #78 SWD Tank Battery. The

soil boring was advanced to a total depth of approximately thirty feet (30') bgs. Soil samples collected at drilling depths of five feet (5'), ten feet (10'), fifteen feet (15'), twenty feet (20'), and twenty-five feet (25') were submitted to the laboratory for analysis of BTEX, TPH, and/or chloride concentrations. Laboratory analytical results indicated BTEX constituent concentrations were less than the appropriate laboratory MDL in all submitted soil samples. TPH concentrations ranged from 10.3 mg/kg in the soil sample collected at 30' bgs (SB-4 @ 25') to 119 mg/kg in the soil sample collected at 10' bgs (SB-4 @ 5'). Chloride concentrations ranged from 112 mg/kg in the soil sample collected at 30' bgs (SB-4 @ 25') to 1,360 mg/kg in the soil sample collected at 10' bgs (SB-4 @ 5').

Soil boring SB-5 was located on the caliche pad adjacent to the PLU #78 SWD Tank Battery and was advanced to a total depth of approximately twenty-five feet (25') bgs. Soil samples collected at drilling depths of five feet (5'), ten feet (10'), fifteen feet (15'), twenty feet (20'), and twenty-five feet (25') were submitted to the laboratory for analysis of BTEX, TPH, and/or chloride concentrations. Laboratory analytical results indicated BTEX constituent concentrations were less than the appropriate laboratory MDL in all submitted soil samples. TPH concentrations ranged from less than the laboratory MDL in soil samples SB-5 @ 10' and SB-5 @ 25' to 37.5 mg/kg in soil sample SB-5 @ 5'. Chloride concentrations ranged from 176 mg/kg in soil sample SB-5 @ 25' to 2,520 mg/kg in soil sample SB-5 @ 10'.

Due to the presence of a layer of pad sand in the floor of the Pasture Excavation on the day of drilling, soil samples could not be collected from the drilling surface (i.e., the floor of the excavation) of soil borings SB-1 through SB-4. On August 3, 2012, heavy equipment was utilized to remove the layer of pad sand in order to collect four (4) samples (SB #1 Surface, SB #2 Surface/East Pooling Area 8', SB #3 Surface, and SB #4 Surface) of native, in-situ soil from the floor of the excavation. Twelve (12) additional soil samples (Sample #12, Sample #40 through Sample #44, Manifold Floor 12', Power Pole North, Power Pole South, Power Pole East, Power Pole West, and Lines) were collected from the floor and sidewalls of the Pasture Excavation. The soil samples were submitted to the laboratory for analysis of TPH and chloride concentrations. Laboratory analytical results indicated TPH concentrations ranged from less than the laboratory MDL in soil samples Sample #12, Sample #40 through Sample #44, and Power Pole West to 18,880 mg/kg in soil sample Lines. Chloride concentrations ranged from 96.0 mg/kg in soil sample Manifold Floor 12' to 61,600 mg/kg in soil sample SB #3 Surface.

Due to safety considerations and to preserve the structural integrity of the utility pole supplying electricity to the PLU #78 SWD Tank Battery, soil represented by soil samples Power Pole North, Power Pole South, Power Pole East, and Power Pole West was left in-situ. Further excavation in the area represented by soil sample Lines was deemed impracticable due to the presence of active pipelines adjacent to the Pasture Excavation.

On August 8, 2012, representatives of Basin Environmental and BOPCO met with a representative of the NMOCD Artesia District Office to request permission to leave soil represented by soil samples Power Pole North, Power Pole South, Power Pole East, Power Pole West, Lines, Sample #30, Sample #32, Sample #37, and Sample #38 in-situ. Due to the depth to water at the site and the lack of surface water or supply wells in the area, a modified chloride closure level of 3,000 to 5,000 mg/kg was requested for the site. In order to achieve vertical delineation for the entire Pasture Excavation based on the new closure standard, it was proposed that the floor of the excavation would be divided into a series of grids. Delineation trenches

would be advanced inside the grids, and soil samples would be collected until field-test results indicated chloride concentrations were below the revised closure standard. The requests were approved by the NMOCD representative.

Based on laboratory analytical results, the Pasture Excavation was advanced in the areas represented by Sample #12 and Sample #44. Two (2) confirmation samples (Sample #12A and Sample #44A) and four (4) additional soil samples (Sample #27, Sample #28, Sample #45, and Sample #46) were collected from the sidewalls of the excavation and submitted to the laboratory for analysis of TPH and chloride concentrations. Sample #27 was also analyzed for concentrations of BTEX. Laboratory analytical results indicated TPH concentrations ranged from less than the laboratory MDL in Sample #12A and Sample #44A to 1,216 mg/kg in Sample #27. Chloride concentrations ranged from 32.0 mg/kg in Sample #12A to 22,000 mg/kg in Sample #28. BTEX constituent concentrations in Sample #27 were below the appropriate laboratory MDL.

Review of laboratory analytical results indicated further excavation would be required in the area represented by Sample #27. Further excavation in the area represented by Sample #28 was deemed impracticable due to the presence of the active PLU #78 SWD Tank Battery adjacent to the Pasture Excavation.

From August 13 through August 14, 2012, the floor of the Pasture Excavation was divided from north-to-south at fifty-foot (50') intervals into eight (8) grids (Grid 1 through Grid 8). A series of delineation trenches were advanced east-to-west in the gridded areas to evaluate the horizontal and vertical extent of contaminated soil. Due to the variable width of the Pasture Excavation, the number of delineation trenches and their orientation (i.e., north-to-south, east-to-west, or diagonal) varied from grid to grid. The delineation trenches were evenly distributed horizontally within each grid to ensure adequate coverage of the excavation floor. Soil samples were collected at two-foot (2') to five-foot (5') intervals and field-screened with a chloride test kit, and selected confirmation soil samples were submitted the laboratory for analysis of chloride concentrations. The locations of the grids and delineation trenches are depicted in Figures 2 through 6. Laboratory analytical results are summarized in Table 1. Field-test results are summarized in Table 2.

Grid 1 was located in the northern portion of the Pasture Excavation, near the area defined by soil boring SB-1. A series of three (3) delineation trenches (S #1, S #2, and S #3) were advanced in Grid 1, with total depths ranging from approximately five feet (5') in trench S #1 to approximately seven feet (7') in trenches S #2 and S #3. Soil samples were collected at two-foot (2') to three-foot (3') intervals and field-screened with a chloride test kit. A total of three (3) confirmation soil samples (G #1 S #2 2', G #1 S #2 7', and G #1 S #2 10') were submitted to the laboratory for analysis of chloride concentrations. Laboratory analytical results indicated chloride concentrations ranged from 256 mg/kg in soil sample G #1 S #2 10' to 19,000 mg/kg in soil sample G #1 S #2 2'.

Grid 2 was located approximately fifty feet (50') south of Grid 1, near the area defined by soil boring SB-1. A series of three (3) delineation trenches (S #1, S #2, and S #3) were advanced in Grid 2, each with a total depth of approximately ten feet (10'). Soil samples were collected at two-foot (2') to three-foot (3') intervals and field-screened with a chloride test kit. A total of three (3) confirmation soil samples (G #2 S #2 5', G #2 S #2 7', and G #2 S #2 10') were submitted to

the laboratory for analysis of chloride concentrations. Laboratory analytical results indicated chloride concentrations ranged from 400 mg/kg in soil sample G #2 S #2 10' to 14,600 mg/kg in soil sample G #2 S #2 5'.

Grid 3 was located approximately fifty feet (50') south of Grid 2. A series of four (4) delineation trenches (S #1, S #2, S #3, and S#4) were advanced in Grid 3, with total depths ranging from approximately five feet (5') in trench S #3 to seven feet (7') in trenches S #1, S #2, and S #4. Soil samples were collected at two-foot (2') to three-foot (3') intervals and field-screened with a chloride test kit. A total of three (3) confirmation soil samples (G #3 S #2 2', G #3 S #2 5', and G #3 S #2 7') were submitted to the laboratory for analysis of chloride concentrations. Laboratory analytical results indicated chloride concentrations ranged from 1,620 mg/kg in soil sample G #3 S #2 7' to 20,600 mg/kg in soil sample G #3 S #2 2'.

Grid 4 was located approximately fifty feet (50') south of Grid 3, in the approximate center of the Pasture Excavation. A series of three (3) delineation trenches (S #1, S #2, and S #3) were advanced in Grid 4, with total depths ranging from approximately five feet (5') in trench S #3 to ten feet (10') in trench S #1. Soil samples were collected at two-foot (2') to three-foot (3') intervals and field-screened with a chloride test kit. A total of three (3) confirmation soil samples (G #4 S #2 2', G #4 S #2 5', and G #4 S #2 7') were submitted to the laboratory for analysis of chloride concentrations. Laboratory analytical results indicated chloride concentrations ranged from 4,000 mg/kg in soil sample G #4 S #2 7' to 42,800 mg/kg in soil sample G #4 S #2 2'.

Grid 5 was located approximately fifty feet (50') south of Grid 4, in the area represented by soil boring SB-3, and adjacent to a soil "island" (represented by soil samples Power Pole North, Power Pole South, Power Pole East, and Power Pole West) left in-situ inside the excavation to support the utility pole supplying electricity to the PLU #78 SWD Tank Battery. Two (2) delineation trenches (S #1 and S #3) were advanced in Grid 5, each with a total depth of approximately ten feet (10'). Soil samples were collected at two-foot (2') to three-foot (3') intervals and field-screened with a chloride test kit. Two (2) confirmation soil samples (G #5 S #3 5' and G #5 S #3 10') were submitted to the laboratory for analysis of chloride concentrations. Laboratory analytical results indicated chloride concentrations ranged from 1,170 mg/kg in soil sample G #5 S #3 10' to 14,600 mg/kg in soil sample G #5 S #3 5'.

Grid 6 was located approximately fifty feet (50') south of Grid 5, adjacent to, and to the south of the soil "island" represented by soil samples Power Pole North, Power Pole South, Power Pole East, and Power Pole West. A series of three (3) delineation trenches (S #1, S #2, and S #3) were advanced in Grid 6, with total depths ranging from approximately five feet (5') in trench S #1 to twenty feet (20') in trench S #3. Soil samples were collected at two-foot (2') to five-foot (5') intervals and field-screened with a chloride test kit. A total of three (3) confirmation soil samples (G #6 S #3 5', G #6 S #3 10', and G #6 S #3 15') were submitted to the laboratory for analysis of chloride concentrations. Laboratory analytical results indicated chloride concentrations ranged from 4,400 mg/kg in soil sample G #6 S #3 15' to 17,400 mg/kg in soil sample G #6 S #3 5'.

Grid 7 was located approximately fifty feet (50') south of Grid 6, near the area represented by soil boring SB-4 and to the west of the PLU #78 SWD Tank Battery. Two (2) delineation trenches (S #1 and S #2) were advanced in Grid 7, each with a total depth of approximately five feet (5'). Soil samples were collected at two-foot (2') to three-foot (3') intervals and field-screened with a chloride test kit. Two (2) confirmation soil samples (G #7 S #2 2' and G #7 S #2

5') were submitted to the laboratory for analysis of chloride concentrations. Laboratory analytical results indicated chloride concentrations ranged from 4,480 mg/kg in soil sample G #7 S #2 5' to 6,640 mg/kg in soil sample G #7 S #2 2'.

Grid 8 was located in the southern portion of the excavation, approximately fifty feet (50') south of Grid 7 and to the west of the PLU #78 SWD Tank Battery. A series of three (3) delineation trenches (S #1, S #2, and S #3) were advanced in Grid 8, with total depths ranging from approximately five feet (5') in trench S #1 to fifteen feet (15') in trench S #3. Soil samples were collected at two-foot (2') to five-foot (5') intervals and field-screened with a chloride test kit. A total of three (3) confirmation soil samples (G #8 S #2 2', G #8 S #2 7', and G #8 S #2 10') were submitted to the laboratory for analysis of chloride concentrations. Laboratory analytical results indicated chloride concentrations ranged from 688 mg/kg in soil sample G #8 S #2 10' to 26,000 mg/kg in soil sample G #8 S #2 2'.

On August 30, 2012, representatives of Basin Environmental and BOPCO met with a representative of the NMOCD Artesia District Office to discuss the findings of the delineation event and to request permission to install an impermeable polyurethane liner in the floor of the Pasture Excavation. The request was denied by the NMOCD representative. Basin Environmental and BOPCO were instructed to advance the floor of the excavation until field screens indicated chloride concentrations were within the 3,000 to 5,000 mg/kg closure standard agreed to on August 8, 2012.

On September 12, 2012, the Pasture Excavation was advanced in the areas represented by Sample #26 and Sample #27. Two (2) confirmation soil samples (Sample #26A and Sample #27A) and two (2) additional soil samples (Sample #47 and Sample #48) were collected from the sidewalls of the excavation and submitted to the laboratory for analysis of BTEX, TPH, and chloride concentrations. Laboratory analytical results indicated TPH and BTEX constituent concentrations were less than the appropriate laboratory MDL in all submitted soil samples. Chloride concentrations ranged from 576 mg/kg in Sample #27A to 1,090 mg/kg in Sample #47.

From June 6 through September 27, 2012, approximately twenty-six thousand, three hundred cubic yards (26,300 yd<sup>3</sup>) of impacted soil was transported to Lea Land, Inc. (NMOCD Permit # WM-01-035), for disposal.

On October 8, 2012, after excavation of the Pasture Excavation had been completed, nine (9) soil samples (Grid 1 Floor, Grid 2 Floor, Grid 3 Floor, Grid 4 Floor, Grid 5 Floor, Grid 6 Floor, Grid 7 Floor, Grid 8 Floor, and Header Floor) were collected from the final excavation floor and submitted to the laboratory for analysis of chloride concentrations. Laboratory analytical results indicated chloride concentrations ranged from 2,200 mg/kg in soil sample Grid 2 Floor to 5,040 mg/kg in soil sample Grid 4 Floor.

Based on laboratory analytical results, from September 28 to November 8, 2012, the Pasture Excavation was backfilled with non-impacted material, compacted, and contoured to fit the surrounding topography. Final dimensions of the excavation were approximately four hundred and eighty feet (480') in length, ranging in width from approximately twenty-five feet (25') to approximately three hundred and sixty feet (360'), and ranging in depth from approximately five feet (5') to approximately eighteen feet (18').

On December 3, 2012, delineation of the Pad Excavation commenced. Twelve (12) soil samples (Pad 1-S, Pad 1-B, Pad 2-S, Pad 2-B, Pad 3-S, Pad 3-B, Pad 4-S, Pad 4-B, Pad 5-S, Pad 5-B, Pad 6-S, and Pad 6-B) were collected from the floor and sidewalls of a trench that had been advanced at the tank battery for the installation of electrical conduit to power an on-site security system. The soil samples were submitted to the laboratory for analysis of TPH and chloride concentrations. Soil sample Pad 6-B was also analyzed for concentrations of BTEX. Soil sample locations are depicted in Figure 7, "Sample Location Map (Pad Excavation)".

Laboratory analytical results indicated TPH concentrations were less than the laboratory MDL in all submitted soil samples. Chloride concentrations ranged from 96.0 mg/kg in soil sample Pad 6-S to 2,240 mg/kg in soil sample Pad 1-B. BTEX constituent concentrations in soil sample Pad 6-S were less than the appropriate laboratory MDL.

On October 23, 2013, remediation of the PLU #78 SWD Tank Battery pad (i.e., Pad Excavation) commenced. A chloride test kit was used to field-screen the horizontal extent of impacted soil and to guide the excavation. In order to prevent excavation activities from hindering trucking operations at the tank battery, the excavation was limited to a total depth of approximately six inches (6") to one foot (1') bgs. Excavated soil was stockpiled on-site, pending final disposition.

From October 28 through October 31, 2013, approximately four hundred and twenty cubic yards (420 yd<sup>3</sup>) of impacted soil was transported to Lea Land, Inc., for disposal.

On October 30, 2013, four (4) soil samples (Floor A, Floor B, Floor C, and Floor D) were collected from the floor of the Pad Excavation and submitted to the laboratory for analysis of chloride concentrations. Laboratory analytical results indicated chloride concentrations ranged from 992 mg/kg in soil sample Floor D to 4,040 mg/kg in soil sample Floor B.

Based on field tests and laboratory analytical results, from October 31 through November 4, 2013, the excavation was backfilled, compacted, and contoured to fit the surrounding grade. Prior to backfilling, the final dimensions of the Pad Excavation were approximately two hundred and fifteen feet (215') in length, varying in width from approximately sixty feet (60') to approximately one hundred and twenty eight feet (128'), and approximately six inches (6") to one foot (1') in depth.

On November 5, 2013, the backfilled Pasture Excavation was covered with a layer of hay to inhibit surface erosion. The site will be seeded with a BLM-approved seed mixture during the 2014 calendar year.

## **4.0 QA/QC PROCEDURES**

### **4.1 Soil Sampling**

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

- BTEX concentrations in accordance with EPA Method SW-846 8021b
- TPH concentrations in accordance with modified EPA Method SW-846 8015M

- Chloride concentrations in accordance with EPA Method SM 4500 Cl-B

#### **4.2 Decontamination of Equipment**

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

#### **4.3 Laboratory Protocol**

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

### **5.0 SITE CLOSURE REQUEST**

Contaminated soil at the PLU #78 SWD Tank Battery release site was excavated to the extent practicable. Soil samples collected from the floors and sidewalls of the PLU #78 SWD Tank Battery Pasture and Pad Excavations were analyzed by an NMOCD-approved laboratory, and TPH and BTEX constituent concentrations were less than the regulatory remediation action levels (RRAL's) established for the site by the NMOCD (with the exception of soil sample Lines, which exhibited a TPH concentration of 18,800 mg/kg). In-situ soil exhibiting TPH and/or chloride contamination above RRAL's will be remediated upon decommissioning and/or abandonment of the currently active SWD and tank battery.

Basin Environmental recommends BOPCO provide the NMOCD Artesia District Office and the BLM a copy of this *Remediation Summary & Risk-Based Site Closure Request* and request the NMOCD grant site closure to the PLU #78 SWD Tank Battery release site.

### **6.0 LIMITATIONS**

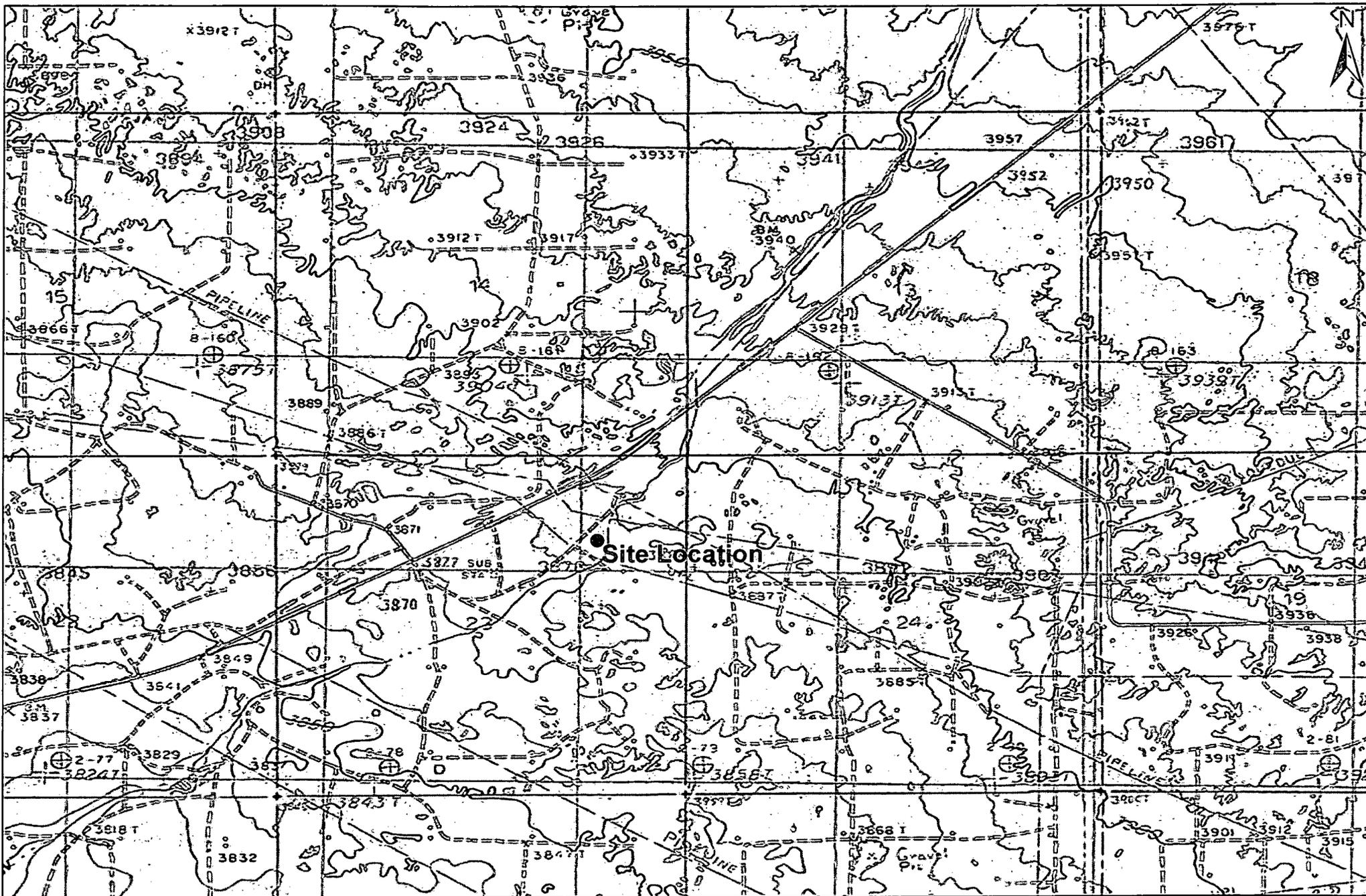
Basin Environmental Service Technologies, LLC, has prepared this *Remediation Summary & Risk-Based Site Closure Request* to the best of its ability. No other warranty, expressed or implied, is made or intended. Basin Environmental has examined and relied upon documents referenced in the report and on 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  
New Mexico Energy, Minerals and Natural Resources Department  
Oil Conservation Division (District 2)  
1301 E. Grand Avenue  
Artesia, New Mexico 88210
- Copy 2: James Amos  
Bureau of Land Management  
602 E. Greene Street  
Carlsbad, New Mexico 88220
- Copy 3: Tony Savoie  
BOPCO, LP  
522 W. Mermod, Ste. 704  
Carlsbad, New Mexico 88220
- Copy 4: Basin Environmental Service Technologies, LLC  
P.O. Box 301  
Lovington, New Mexico 88260

# Figures



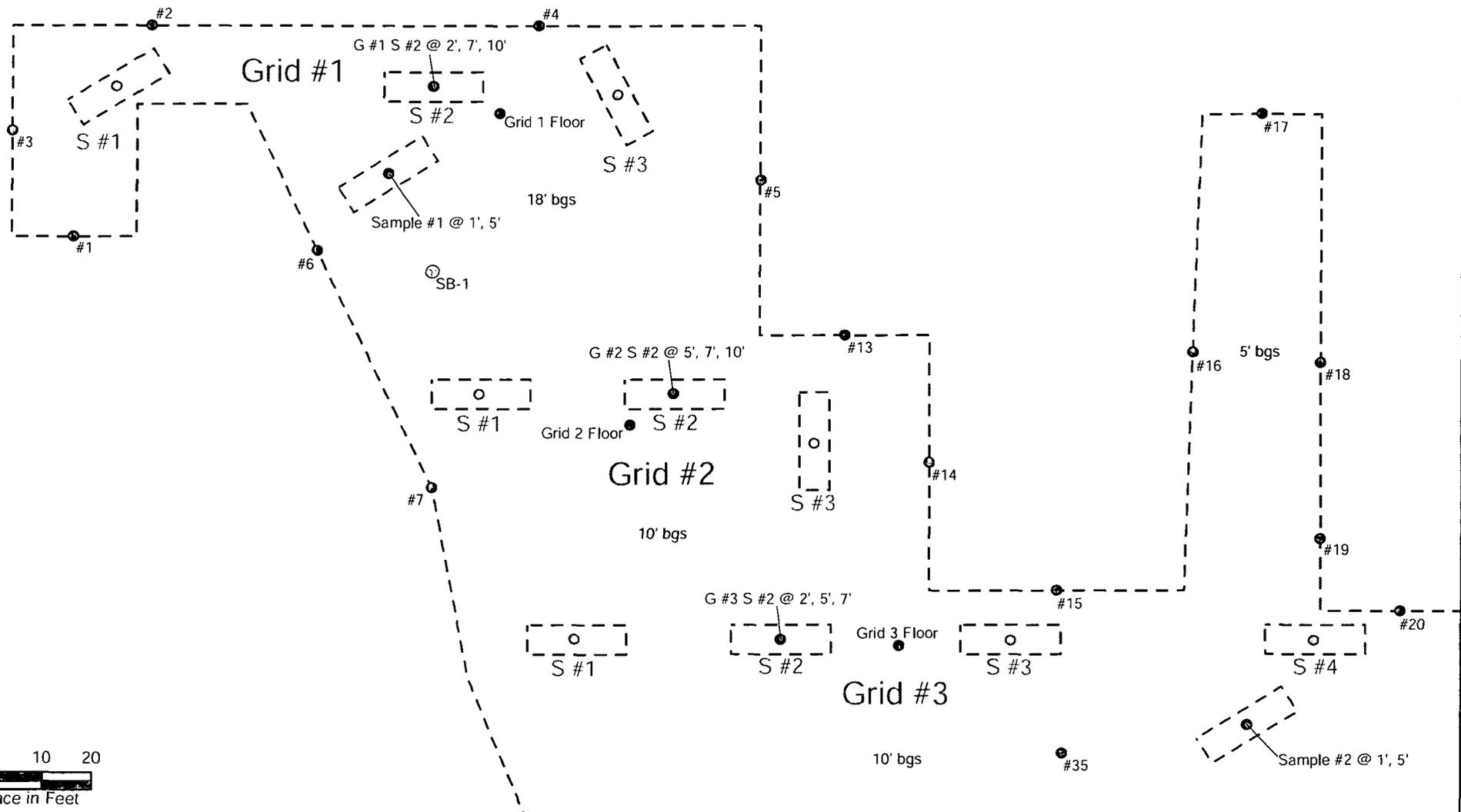
1,000 500 0 1,000 2,000  
 Distance in Feet

Figure 1  
 Site Location Map  
 BOPCO, LP  
 Poker Lake Unit #78 SWD Tank Battery  
 Eddy County, New Mexico  
 NMOCD Reference #: 2RP-1190 & 2RP-1234



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

Drawn By: BJA	Checked By: BRB
December 31, 2013	Scale: 1" = 2000'



**Legend:**

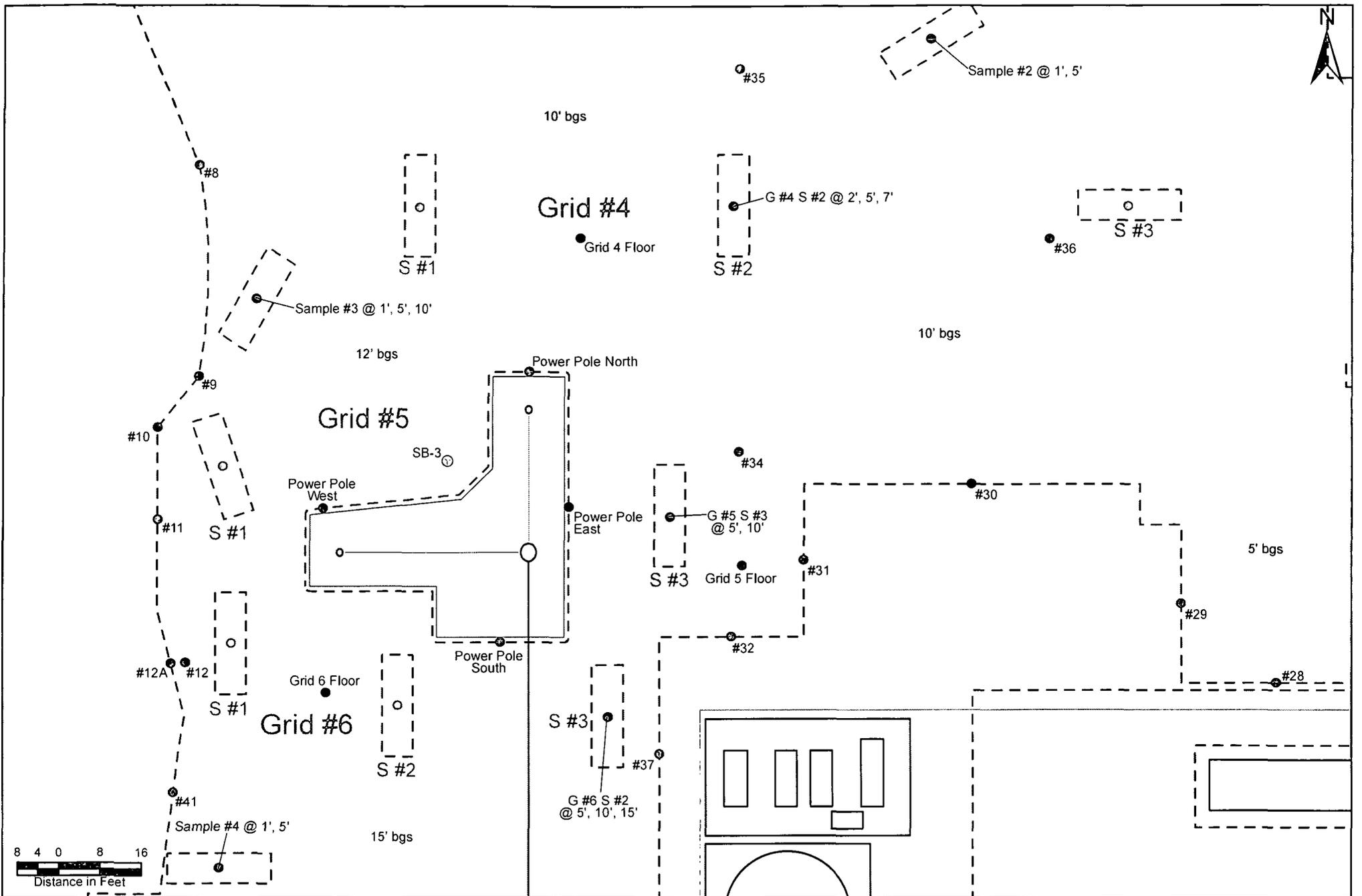
- - - Excavation Extent	● Sample Location
— Pipeline	● Trench Sample
— Road	○ Field Screen
— Steel Berm	⊙ Soil Boring
— Soil Island	
— Power Line	
— Guy-Wire	

**Figure 3**  
**Sample Location Map (Grids 1 - 3)**  
**BOPCO, LP**  
**Poker Lake Unit #78 SWD Tank Battery**  
**Eddy County, New Mexico**  
**NMOCD Reference #: 2RP-1190 & 2RP-1234**



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

Drawn By: BJA	Checked By: BRB
December 31, 2013	Scale: 1" = 30'



**Legend:**

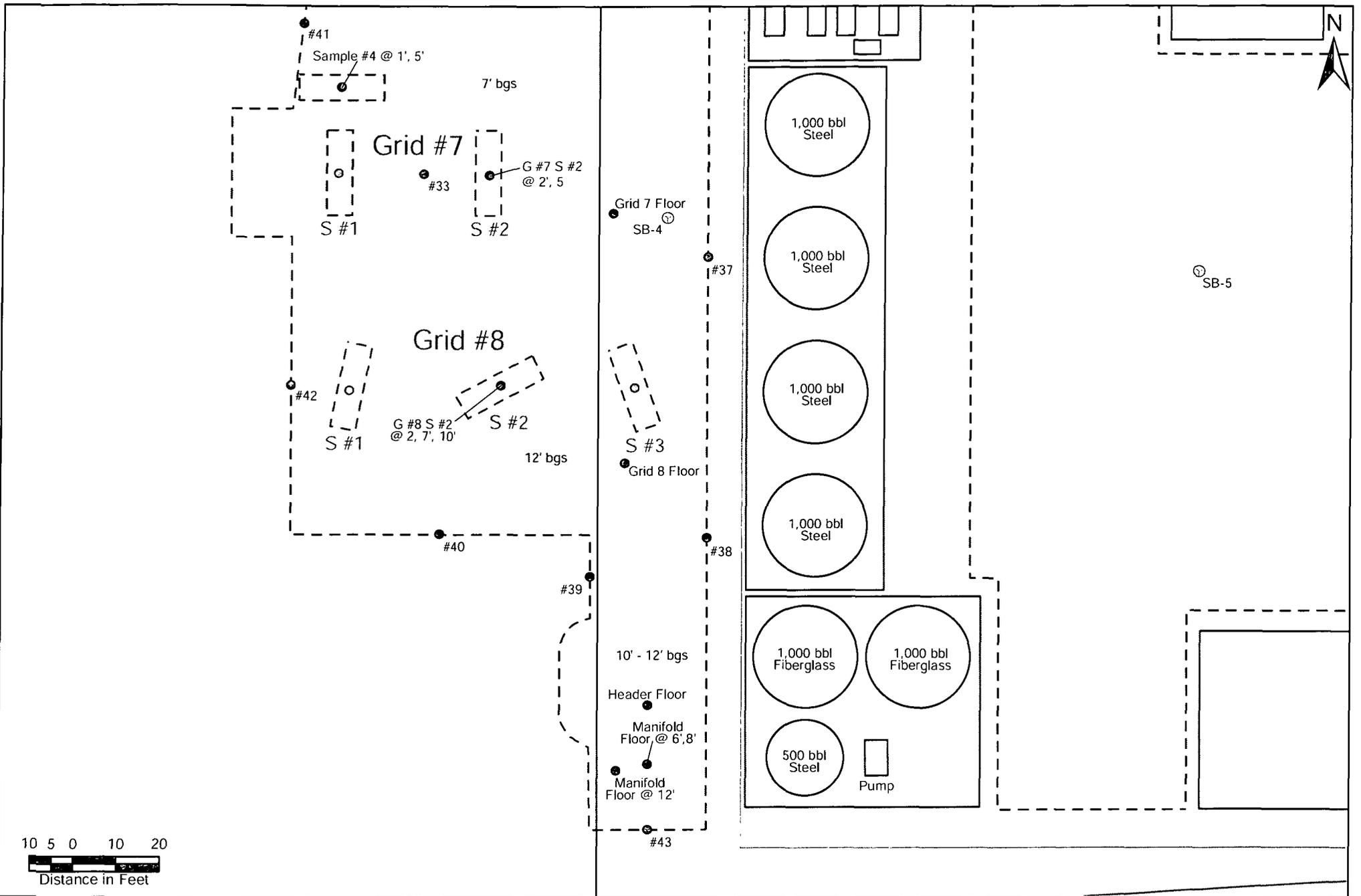
- - - Excavation Extent	● Sample Location
— Pipeline	● Trench Sample
— Road	○ Field Screen
— Steel Berm	⊙ Soil Boring
— Soil Island	
— Power Line	
— Guy-Wire	

**Figure 4**  
**Sample Location Map (Grids 4 - 6)**  
**BOPCO, LP**  
**Poker Lake Unit #78 SWD Tank Battery**  
**Eddy County, New Mexico**  
**NMOCD Reference #: 2RP-1190 & 2RP-1234**



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

Drawn By: BJA	Checked By: BRB
January 8, 2014	Scale: 1" = 25'



**Legend:**

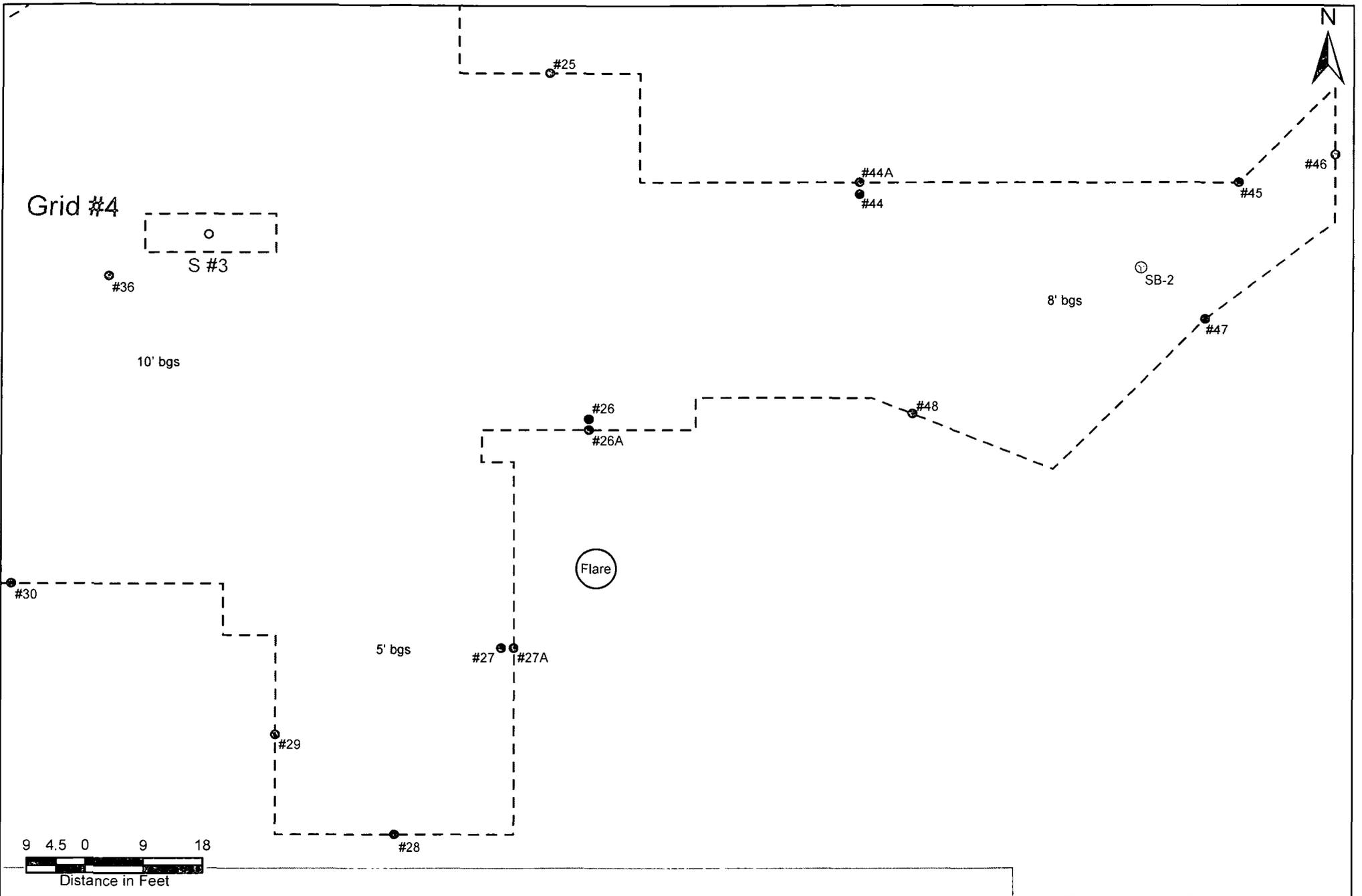
- - - Excavation Extent	● Sample Location
— Pipeline	● Trench Sample
— Road	○ Field Screen
— Steel Berm	⊙ Soil Boring
— Soil Island	
— Power Line	
— Guy-Wire	

**Figure 5**  
**Sample Location Map (Grids 7 - 8)**  
**BOPCO, LP**  
**Poker Lake Unit #78 SWD Tank Battery**  
**Eddy County, New Mexico**  
**NMOC Reference #: 2RP-1190 & 2RP-1234**



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

Drawn By: BJA	Checked By: BRB
December 31, 2013	Scale: 1" = 30'



**Legend:**

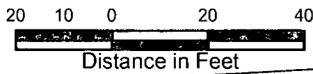
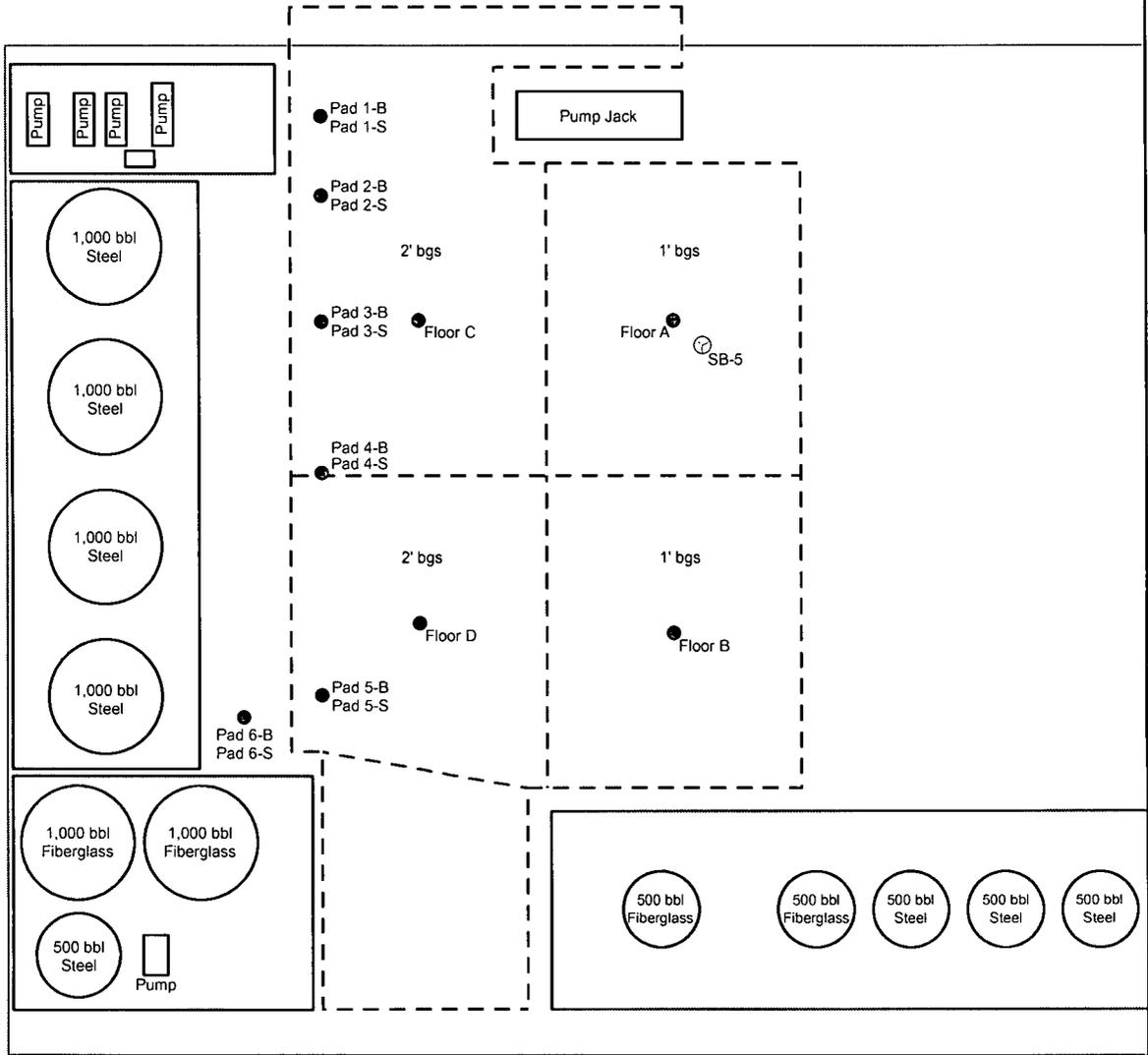
- - - Excavation Extent	● Sample Location
— Pipeline	● Trench Sample
— Road	○ Field Screen
— Steel Berm	⊙ Soil Boring
— Soil Island	
— Power Line	
— Guy-Wire	

**Figure 6**  
**Sample Location Map (Excavation - East)**  
**BOPCO, LP**  
**Poker Lake Unit #78 SWD Tank Battery**  
**Eddy County, New Mexico**  
**NMOCD Reference #: 2RP-1190 & 2RP-1234**



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

Drawn By: BJA	Checked By: BRB
January 8, 2014	Scale: 1" = 20'



**Legend:**  
 - - - Excavation Extent  
 — Steel Berm  
 — Caliche Pad/Road  
 ● Sample Location  
 ⊙ Soil Boring

**Figure 7**  
**Site & Sample Location Map**  
**(Pad Excavation)**  
**BOPCO, LP**  
**Poker Lake Unit #78 SWD Tank Battery**  
**Eddy County, New Mexico**  
**NMOCD Ref.#: 2RP-1190 & 2RP-1234**



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

Drawn By: BJA	Checked By: BRB
January 8, 2014	Scale: 1" = 40'

# Tables

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

BOPCO, LP  
POKER LAKE UNIT #78 SWD TANK BATTERY  
EDDY COUNTY, NEW MEXICO  
NMOCD REFERENCE NO: 2RP-1190 & 2RP-1234

SAMPLE LOCATION	SAMPLE DEPTH (BELOW EXCAVATION FLOOR)	SAMPLE DEPTH (BELOW GROUND SURFACE)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030					METHOD: 8015M			TOTAL TPH C <sub>6</sub> -C <sub>35</sub> (mg/Kg)	E 300 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)		
Sample #1 @ 1'	-	1'	5/31/2012	Excavated	-	-	-	-	-	2,800	10,600	1,370	14,770	11,600
Sample #1 @ 5'	-	5'	5/31/2012	Excavated	<0.050	<0.050	<0.050	<0.150	<0.150	<10.0	<10.0	<10.0	<10.0	336
Sample #2 @ 1'	-	1'	5/31/2012	Excavated	-	-	-	-	-	<10.0	29.3	14.1	43.4	2,720
Sample #2 @ 5'	-	5'	5/31/2012	Excavated	-	-	-	-	-	<10.0	13.5	26.4	39.9	160
Sample #3 @ 1'	-	1'	5/31/2012	Excavated	-	-	-	-	-	<10.0	73.8	22.6	96.4	11,900
Sample #3 @ 5'	-	5'	5/31/2012	Excavated	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	5,600
Sample #3 @ 10'	-	10'	5/31/2012	Excavated	<0.050	<0.050	<0.050	<0.150	<0.150	<10.0	<10.0	<10.0	<10.0	2,480
Sample #4 @ 1'	-	1'	5/31/2012	Excavated	-	-	-	-	-	<10.0	327	85.7	413	30,000
Sample #4 @ 5'	-	5'	5/31/2012	Excavated	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	320
Sample #1	-	4'	7/26/2012	In-Situ	-	-	-	-	-	<10.0	13.0	18.7	31.7	400
Sample #2	-	4'	7/26/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	192
Sample #3	-	4'	7/26/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	256
Sample #4	-	4'	7/26/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	144
Sample #5	-	4'	7/26/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	656
Sample #6	-	4'	7/26/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	544
Sample #7	-	4'	7/26/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	384
Sample #8	-	4'	7/26/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	144
Sample #9	-	4'	7/26/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	608
Sample #10	-	4'	7/26/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	416
Sample #11	-	4'	7/26/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	288
Sample #13	-	4'	7/26/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	432
Sample #14	-	4'	7/26/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	304
Sample #15	-	4'	7/26/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	656
Sample #16	-	4'	7/26/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	528
Sample #17	-	4'	7/26/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	48.0
Sample #18	-	4'	7/26/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	176
Sample #19	-	4'	7/26/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	160
Sample #20	-	4'	7/26/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	<16.0
Sample #21	-	4'	7/26/2012	In-Situ	-	-	-	-	-	<10.0	16.5	<10.0	16.5	128
Sample #22	-	4'	7/26/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	<16.0
Sample #23	-	4'	7/26/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	<16.0
Sample #24	-	4'	7/26/2012	In-Situ	-	-	-	-	-	28.3	82.1	<10.0	110	<16.0
Sample #25	-	4'	7/26/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	592
Sample #26	-	4'	7/26/2012	Excavated	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	8,660
Sample #29	-	4'	7/26/2012	In-Situ	-	-	-	-	-	<10.0	21.1	<10.0	21.1	256
Sample #30	-	4'	7/26/2012	In-Situ	-	-	-	-	-	<10.0	22.5	<10.0	22.5	1,680
Sample #31	-	4'	7/26/2012	In-Situ	-	-	-	-	-	<10.0	11.9	<10.0	11.9	160
Sample #32	-	4'	7/26/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	9,330
Sample #33	-	4'	7/26/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	96.0
Sample #34	-	4'	7/26/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	80.0
Sample #35	-	4'	7/26/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	128
Sample #36	-	4'	7/26/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	80.0
Sample #37	-	4'	7/26/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	50,400
Sample #38	-	4'	7/26/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	58,400
Sample #39	-	4'	7/26/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	448
East Pooling Area	-	4'	7/26/2012	Excavated	-	-	-	-	-	1,220	5,740	805	7,765	48.0

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

BOPCO, LP  
POKER LAKE UNIT #78 SWD TANK BATTERY  
EDDY COUNTY, NEW MEXICO  
NMOC REFERENCE NO: 2RP-1190 & 2RP-1234

SAMPLE LOCATION	SAMPLE DEPTH (BELOW EXCAVATION FLOOR)	SAMPLE DEPTH (BELOW GROUND SURFACE)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030					METHOD: 8015M			TOTAL TPH C <sub>6</sub> -C <sub>35</sub> (mg/Kg)	E 300 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)		
Manifold Floor 6'	-	6'	7/31/2012	Excavated	-	-	-	-	-	4,720	13,800	2,050	20,570	176
Manifold Floor 8'	-	8'	7/31/2012	Excavated	-	-	-	-	-	15,500	28,100	4,440	48,040	176
SB-1 @ 5' *	5'	10'	8/1/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	256
SB-1 @ 10' *	10'	15'	8/1/2012	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.150	<10.0	10.5	<10.0	10.5	1,300
SB-1 @ 15' *	15'	20'	8/1/2012	In-Situ	-	-	-	-	-	-	-	-	-	48.0
SB-1 @ 20' *	20'	25'	8/1/2012	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.150	<10.0	<10.0	<10.0	<10.0	32.0
SB-2 @ 5' *	5'	10'	8/1/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	864
SB-2 @ 10' *	10'	15'	8/1/2012	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.150	<10.0	<10.0	<10.0	<10.0	2,200
SB-2 @ 15' *	15'	20'	8/1/2012	In-Situ	-	-	-	-	-	-	-	-	-	3,560
SB-2 @ 20' *	20'	25'	8/1/2012	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.150	<10.0	<10.0	<10.0	<10.0	1,040
SB-3 @ 5' *	5'	10'	8/1/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	1,060
SB-3 @ 10' *	10'	15'	8/1/2012	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.150	<10.0	<10.0	<10.0	<10.0	1,470
SB-3 @ 15' *	15'	20'	8/1/2012	In-Situ	-	-	-	-	-	-	-	-	-	1,250
SB-3 @ 20' *	20'	25'	8/1/2012	In-Situ	-	-	-	-	-	-	-	-	-	576
SB-3 @ 25' *	25'	30'	8/1/2012	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.150	<10.0	189	407	596	128
SB-4 @ 5' *	5'	10'	8/1/2012	In-Situ	-	-	-	-	-	<10.0	32.8	86.3	119	1,360
SB-4 @ 10' *	10'	15'	8/1/2012	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.150	<10.0	11.1	23.9	35.0	384
SB-4 @ 15' *	15'	20'	8/1/2012	In-Situ	-	-	-	-	-	-	-	-	-	240
SB-4 @ 20' *	20'	25'	8/1/2012	In-Situ	-	-	-	-	-	-	-	-	-	240
SB-4 @ 25' *	25'	30'	8/1/2012	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.150	<10.0	<10.0	10.3	10.3	112
SB-5 @ 5'	-	5'	8/1/2012	In-Situ	-	-	-	-	-	<10.0	19.4	18.1	37.5	1,340
SB-5 @ 10'	-	10'	8/1/2012	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.150	<10.0	<10.0	<10.0	<10.0	2,520
SB-5 @ 15'	-	15'	8/1/2012	In-Situ	-	-	-	-	-	-	-	-	-	1,630
SB-5 @ 20'	-	20'	8/1/2012	In-Situ	-	-	-	-	-	-	-	-	-	208
SB-5 @ 25'	-	25'	8/1/2012	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.150	<10.0	<10.0	<10.0	<10.0	176
Sample #12	-	4'	8/3/2012	Excavated	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	7,280
Sample #40	-	4'	8/3/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	480
Sample #41	-	4'	8/3/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	688
Sample #42	-	4'	8/3/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	1,220
Sample #43	-	4'	8/3/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	944
Sample #44	-	4'	8/3/2012	Excavated	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	25,200
Manifold Floor 12'	-	12'	8/3/2012	In-Situ	-	-	-	-	-	<10.0	429	98.5	528	96.0
SB #1 Surface **	-	5'	8/3/2012	Excavated	-	-	-	-	-	<10.0	703	176	879	36,000
SB #2 Surface/East Pooling Area 8' **	-	8'	8/3/2012	Excavated	-	-	-	-	-	<10.0	337	126	463	1,560
SB #3 Surface **	-	5'	8/3/2012	Excavated	-	-	-	-	-	<10.0	153	82.7	236	61,600
SB #4 Surface **	-	5'	8/3/2012	Excavated	-	-	-	-	-	<10.0	1,310	320	1,630	20,000
Power Pole North	-	4'	8/3/2012	In-Situ	-	-	-	-	-	<10.0	15.2	42.7	57.9	40,000
Power Pole South	-	4'	8/3/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	18.2	18.2	37,600
Power Pole East	-	4'	8/3/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	10.0	10.0	48,000
Power Pole West	-	4'	8/3/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	43,200
Lines	-	0.5'	8/3/2012	In-Situ	-	-	-	-	-	52.4	14,900	3,980	18,880	10,100

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

BOPCO, LP  
POKER LAKE UNIT #78 SWD TANK BATTERY  
EDDY COUNTY, NEW MEXICO  
NMOCD REFERENCE NO: 2RP-1190 & 2RP-1234

SAMPLE LOCATION	SAMPLE DEPTH (BELOW EXCAVATION FLOOR)	SAMPLE DEPTH (BELOW GROUND SURFACE)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030					METHOD: 8015M			TOTAL TPH C <sub>6</sub> -C <sub>35</sub> (mg/Kg)	E 300 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)		
Sample #12A	-	4'	8/8/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	32.0
Sample #27	-	4'	8/8/2012	Excavated	<0.050	<0.050	<0.050	<0.150	<0.150	<10.0	1,010	206	1,216	8,130
Sample #28	-	4'	8/8/2012	In-Situ	-	-	-	-	-	<10.0	493	143	636	22,000
Sample #44A	-	4'	8/8/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	288
Sample #45	-	4'	8/8/2012	In-Situ	-	-	-	-	-	<10.0	13.1	26.6	39.7	48.0
Sample #46	-	4'	8/8/2012	In-Situ	-	-	-	-	-	<10.0	43.1	12.6	55.7	320
G #1 S #2 2' ***	2'	7'	8/13/2012	Excavated	-	-	-	-	-	-	-	-	-	19,000
G #1 S #2 7' ***	7'	12'	8/13/2012	Excavated	-	-	-	-	-	-	-	-	-	12,000
G #1 S #2 10' ***	10'	15'	8/13/2012	Excavated	-	-	-	-	-	-	-	-	-	256
G #2 S #2 5' ***	5'	10'	8/13/2012	Excavated	-	-	-	-	-	-	-	-	-	14,600
G #2 S #2 7' ***	7'	12'	8/13/2012	Excavated	-	-	-	-	-	-	-	-	-	10,400
G #2 S #2 10' ***	10'	15'	8/13/2012	In-Situ	-	-	-	-	-	-	-	-	-	400
G #3 S #2 2' ***	2'	7'	8/13/2012	Excavated	-	-	-	-	-	-	-	-	-	20,600
G #3 S #2 5' ***	5'	10'	8/13/2012	Excavated	-	-	-	-	-	-	-	-	-	14,000
G #3 S #2 7' ***	7'	12'	8/13/2012	In-Situ	-	-	-	-	-	-	-	-	-	1,620
G #4 S #2 2' ***	2'	7'	8/14/2012	Excavated	-	-	-	-	-	-	-	-	-	42,800
G #4 S #2 5' ***	5'	10'	8/14/2012	Excavated	-	-	-	-	-	-	-	-	-	12,400
G #4 S #2 7' ***	7'	12'	8/14/2012	In-Situ	-	-	-	-	-	-	-	-	-	4,000
G #5 S #3 5' ***	5'	10'	8/14/2012	Excavated	-	-	-	-	-	-	-	-	-	14,600
G #5 S #3 10' ***	10'	15'	8/14/2012	In-Situ	-	-	-	-	-	-	-	-	-	1,170
G #6 S #3 5' ***	5'	10'	8/14/2012	Excavated	-	-	-	-	-	-	-	-	-	17,400
G #6 S #3 10' ***	10'	15'	8/14/2012	Excavated	-	-	-	-	-	-	-	-	-	6,500
G #6 S #3 15' ***	15'	20'	8/14/2012	In-Situ	-	-	-	-	-	-	-	-	-	4,400
G #7 S #2 2' ***	2'	7'	8/14/2012	Excavated	-	-	-	-	-	-	-	-	-	6,640
G #7 S #2 5' ***	5'	10'	8/14/2012	In-Situ	-	-	-	-	-	-	-	-	-	4,480
G #8 S #2 2' ***	2'	7'	8/14/2012	Excavated	-	-	-	-	-	-	-	-	-	26,000
G #8 S #2 7' ***	7'	12'	8/14/2012	Excavated	-	-	-	-	-	-	-	-	-	9,000
G #8 S #2 10' ***	10'	15'	8/14/2012	In-Situ	-	-	-	-	-	-	-	-	-	688
Sample #26A	-	4'	9/12/2012	In-Situ	<0.050	<0.050	<0.050	<0.0150	<0.0150	<10.0	<10.0	<10.0	<10.0	800
Sample #27A	-	4'	9/12/2012	In-Situ	<0.050	<0.050	<0.050	<0.0150	<0.0150	<10.0	<10.0	<10.0	<10.0	576
Sample #47	-	4'	9/12/2012	In-Situ	<0.050	<0.050	<0.050	<0.0150	<0.0150	<10.0	<10.0	<10.0	<10.0	1,090
Sample #48	-	4'	9/12/2012	In-Situ	<0.050	<0.050	<0.050	<0.0150	<0.0150	<10.0	<10.0	<10.0	<10.0	608
Grid 1 Floor	-	18'	10/8/2012	In-Situ	-	-	-	-	-	-	-	-	-	3,920
Grid 2 Floor	-	10'	10/8/2012	In-Situ	-	-	-	-	-	-	-	-	-	2,200
Grid 3 Floor	-	10'	10/8/2012	In-Situ	-	-	-	-	-	-	-	-	-	3,000
Grid 4 Floor	-	10'	10/8/2012	In-Situ	-	-	-	-	-	-	-	-	-	5,040
Grid 5 Floor	-	12'	10/8/2012	In-Situ	-	-	-	-	-	-	-	-	-	3,640
Grid 6 Floor	-	15'	10/8/2012	In-Situ	-	-	-	-	-	-	-	-	-	4,200
Grid 7 Floor	-	7'	10/8/2012	In-Situ	-	-	-	-	-	-	-	-	-	3,000

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

**BOPCO, LP  
POKER LAKE UNIT #78 SWD TANK BATTERY  
EDDY COUNTY, NEW MEXICO  
NMOCD REFERENCE NO: 2RP-1190 & 2RP-1234**

SAMPLE LOCATION	SAMPLE DEPTH (BELOW EXCAVATION FLOOR)	SAMPLE DEPTH (BELOW GROUND SURFACE)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030					METHOD: 8015M			TOTAL TPH C <sub>6</sub> -C <sub>35</sub> (mg/Kg)	E 300 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)		
Grid 8 Floor	-	12'	10/8/2012	In-Situ	-	-	-	-	-	-	-	-	-	3,600
Header Floor	-	10'	10/8/2012	In-Situ	-	-	-	-	-	-	-	-	-	2,600
Pad 1-S	-	2'	12/3/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	1,300
Pad 1-B	-	3'	12/3/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	2,240
Pad 2-S	-	2'	12/3/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	512
Pad 2-B	-	3'	12/3/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	640
Pad 3-S	-	2'	12/3/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	128
Pad 3-B	-	4'	12/3/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	272
Pad 4-S	-	2'	12/3/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	288
Pad 4-B	-	4'	12/3/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	480
Pad 5-S	-	2'	12/3/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	272
Pad 5-B	-	3'	12/3/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	368
Pad 6-S	-	2'	12/3/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	96.0
Pad 6-B	-	3'	12/3/2012	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	128
Floor A	-	1'	10/30/2013	In-Situ	-	-	-	-	-	-	-	-	-	3,720
Floor B	-	1'	10/30/2013	In-Situ	-	-	-	-	-	-	-	-	-	4,040
Floor C	-	2'	10/30/2013	In-Situ	-	-	-	-	-	-	-	-	-	1,070
Floor D	-	2'	10/30/2013	In-Situ	-	-	-	-	-	-	-	-	-	992
<b>NMOCD Regulatory Standard</b>					<b>10</b>				<b>50</b>				<b>5,000</b>	<b>3,000 - 5,000</b>

Notes:

- Not applicable.
- \* Indicates drilling depth. Soil borings were advanced in the floor of the excavation, approximately five feet (5') below ground surface (bgs).
- \*\* Due to the presence of a layer of pad sand in the floor of the excavation on the drilling date (August 1, 2012), soil samples could not be collected from the drilling surface (i.e., the floor of the excavation). On August 3, 2012, heavy equipment was utilized to remove the layer of pad sand in order to collect a sample of native, in-situ soil from the floor of the excavation.
- \*\*\* Indicates trenching depth. Delineation trenches were advanced in the floor of the excavation, approximately five feet (5') below ground surface (bgs).

**Table 2  
FIELD TEST RESULTS**

**BOPCO, LP  
POKER LAKE UNIT #78 SWD TANK BATTERY  
EDDY COUNTY, NEW MEXICO  
NMOCD REFERENCE NO: 2RP-1190 & 2RP-1234**

SAMPLE LOCATION	SAMPLE DEPTH** (Below Excavation Floor)	SAMPLE DEPTH** (Below Ground Surface)	SAMPLE DATE	Field Test
				CHLORIDE (mg/Kg)
Grid 1 - S #1	2'	7'	8/13/2012	8,540
"	5'	10'	8/13/2012	1,876
Grid 1 - S #2	2'	7'	8/13/2012	18,060*
"	5'	10'	8/13/2012	14,720
"	7'	12'	8/13/2012	10,152*
"	10'	15'	8/13/2012	248*
Grid 1 - S #3	2'	7'	8/13/2012	11,096
"	5'	10'	8/13/2012	6,656
"	7'	12'	8/13/2012	1,372
Grid 2 - S #1	2'	7'	8/13/2012	16,272
"	5'	10'	8/13/2012	11,096
"	7'	12'	8/13/2012	8,540
"	10'	15'	8/13/2012	352
Grid 2 - S #2	2'	7'	8/13/2012	14,720
"	5'	10'	8/13/2012	14,720*
"	7'	12'	8/13/2012	9,304*
"	10'	15'	8/13/2012	472*
Grid 2 - S #3	2'	7'	8/13/2012	13,360
"	5'	10'	8/13/2012	12,160
"	7'	12'	8/13/2012	3,780
"	10'	15'	8/13/2012	188
Grid 3 - S #1	2'	7'	8/13/2012	>25,444
"	5'	10'	8/13/2012	8,540
"	7'	12'	8/13/2012	112
Grid 3 - S #2	2'	7'	8/13/2012	22,568*
"	5'	10'	8/13/2012	14,720*
"	7'	12'	8/13/2012	1,532*
Grid 3 - S #3	2'	7'	8/13/2012	4,100
"	5'	10'	8/13/2012	3,204
Grid 3 - S #4	2'	7'	8/13/2012	13,360
"	5'	10'	8/13/2012	6,656
"	7'	12'	8/13/2012	1,532
Grid 4 - S #1	2'	7'	8/14/2012	20,136
"	5'	10'	8/14/2012	8,540
"	7'	12'	8/14/2012	6,656
"	10'	15'	8/14/2012	188
Grid 4 - S #2	2'	7'	8/14/2012	>25,444*
"	5'	10'	8/14/2012	11,096*
"	7'	12'	8/14/2012	3,484*
Grid 4 - S #3	2'	7'	8/14/2012	3,780
"	5'	10'	8/14/2012	1,044

**Table 2  
FIELD TEST RESULTS**

**BOPCO, LP  
POKER LAKE UNIT #78 SWD TANK BATTERY  
EDDY COUNTY, NEW MEXICO  
NMOCD REFERENCE NO: 2RP-1190 & 2RP-1234**

SAMPLE LOCATION	SAMPLE DEPTH** (Below Excavation Floor)	SAMPLE DEPTH** (Below Ground Surface)	SAMPLE DATE	Field Test
				CHLORIDE (mg/Kg)
Grid 5 - S #1	2'	7'	8/14/2012	>25,444
"	5'	10'	8/14/2012	10,152
"	7'	12'	8/14/2012	8,948
"	10'	15'	8/14/2012	3,484
Grid 5 - S #2 <sup>a</sup>	N/A	N/A	N/A	N/A
Grid 5 - S #3	2'	7'	8/14/2012	>25,444
"	5'	10'	8/14/2012	14,720*
"	7'	12'	8/14/2012	93.04
"	10'	15'	8/14/2012	1,220*
Grid 6 - S #1	2'	7'	8/14/2012	11,096
"	5'	10'	8/14/2012	4,816
Grid 6 - S #2	2'	7'	8/14/2012	18,060
"	5'	10'	8/14/2012	8,948
"	7'	12'	8/14/2012	5,220
"	10'	15'	8/14/2012	2,948
Grid 6 - S #3	2'	7'	8/14/2012	>25,444
"	5'	10'	8/14/2012	14,428*
"	7'	12'	8/14/2012	6,656
"	10'	15'	8/14/2012	5,220*
"	15'	20'	8/14/2012	3,780*
"	20'	25'	8/14/2012	3,484
Grid 7 - S #1	2'	7'	8/14/2012	6,656
"	5'	10'	8/14/2012	4,816
Grid 7 - S #2	2'	7'	8/14/2012	5,220*
"	5'	10'	8/14/2012	3,484*
Grid 7 - S #3 <sup>b</sup>	N/A	N/A	N/A	N/A
Grid 8 - S #1	2'	7'	8/14/2012	2,476
"	5'	10'	8/14/2012	1,220
Grid 8 - S #2	2'	7'	8/14/2012	20,136*
"	5'	10'	8/14/2012	7,852
"	7'	12'	8/14/2012	7,852*
"	10'	15'	8/14/2012	612*
Grid 8 - S #3	2'	7'	8/14/2012	11,096
"	5'	10'	8/14/2012	7,852
"	7'	12'	8/14/2012	6,656
"	10'	15'	8/14/2012	5,220
"	15'	20'	8/14/2012	776

Notes:

\* Submitted for laboratory analysis of chloride concentrations.

\*\* Delineation trenches were advanced in the floor of the excavation, approximately five feet (5') below ground surface (bgs).

<sup>a</sup> Soil boring SB-3 is representative of soil in this area. Trench was not excavated.

<sup>b</sup> Soil boring SB-4 is representative of soil in this area. Trench was not excavated.

# Appendices

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District I  
1625 N French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

**RECEIVED**  
Energy  
JUN 26 2012  
NMOCD ARTESIA

State of New Mexico  
Minerals and Natural Resources  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised October 10, 2003

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

**Release Notification and Corrective Action**

*NMCR 12/7938053*  
**OPERATOR**  Initial Report  Final Report  
 Name of Company BOPCO, L.P. *260737* Contact Tony Savoie  
 Address 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220 Telephone No. 432-556-8730  
 Facility Name Poker Lake Unit #78 SWD Tank Battery Facility Type E&P

Surface Owner Federal Mineral Owner Federal Lease No. \_\_\_\_\_

**LOCATION OF RELEASE** *30-015-27536*

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	25	24S	30E					Eddy

Latitude N 32.194069 Longitude W 103.827614

**NATURE OF RELEASE**

Type of Release: <u>Crude oil and produced water</u>	Volume of Release: <u>4000 Bbls of produced water and 20 bbls of crude oil.</u>	Volume Recovered: <u>1820 bbls. From the damaged containment. None from the surface area outside the containment.</u>
Source of Release: <u>SWD Tank Battery</u>	Date and Hour of Occurrence: <u>5/26/12 9:00 p.m.</u>	Date and Hour of Discovery: <u>8/20/11 8:00 a.m.</u>
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? <u>NMOCD emergency #104, Jim Amos BLM</u>	
By Whom? <u>Tony Savoie</u>	Date and Hour <u>5/26/11 9:22 p.m. to the BLM and 9:24 p.m. to the NMOCD</u>	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* Lightning struck the facility gun barrel tanks causing immediate damage to both tanks and the adjacent tanks inside the containment. All of the production was immediately shut down and incoming streams were diverted to other facilities. Fire crews from Malaga and Loving responded to and had the fire put out by 11:00 p.m. Vacuum trucks started removing water from the damaged containment.

Describe Area Affected and Cleanup Action Taken.\* The salt water disposal tanks were located inside a poly lined metal containment. Two of the 1000 bbl fiberglass gun barrel tanks were nearly completely destroyed due to the lightning hit and fire. The 500 bbl steel oil skim tank was also severely damaged along with one of the 1000 bbl fiberglass water storage tanks. There were a total of 4-1000 bbl fiberglass storage tanks, (2) 1000 bbl gun barrels, and (1) 500 bbl. Oil skim tank inside the containment area. The containment was damaged by falling piping and fire; however it was holding most some of the water being released by the damaged tanks. There were 3 areas where the containment was breached allowing crude oil and produced water to travel off-site into the pasture. The affected area in the pasture measured approximately 21,680 sq. ft. A sampling event was started on 5/31/12 to determine the vertical and horizontal extent of the spill. On 6/4/12 we began removing the heavily impacted soil and hauling it to an approved disposal facility. The Site remediation for the produced water and crude oil spill will follow the NMOCD and BLM guidelines for leaks and spills.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: <u>Tony Savoie</u>	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: <u>Tony Savoie</u>	Approved by District Supervisor: Signed By: <u>[Signature]</u>	
Title: <u>Waste Mgmt. &amp; Remediation Specialist</u>	Approval Date: <u>JUN 27 2012</u>	Expiration Date: _____
E-mail Address: <u>TASavoie@BassPet.com</u>	Conditions of Approval: <u>Remediation per OCD Rules &amp; Guidelines. SUBMIT REMEDIATION PROPOSAL NOT LATER THAN:</u>	Attached <input type="checkbox"/>
Date: <u>6/22/12</u>	Phone: <u>432-556-8730</u>	

\* Attach Additional Sheets If Necessary

7/27/12

*2RP-1190*

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

**RECEIVED**  
JUL 17 2012  
Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.  
**NMOCD ARTESIA**

Form C-141  
Revised August 8, 2011

**Release Notification and Corrective Action**

*nJMW 122-1430661* **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. 432-556-8730
Facility Name: Poker Lake Unit 78 SWD	Facility Type: Salt Water Disposal Tank Battery
Surface Owner: Federal	Mineral Owner: Federal
API No. 30-015-27536	

**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	25	24S	30E					Eddy

Latitude: N 32.194069 Longitude: W 103.827614

**NATURE OF RELEASE**

Type of Release Produced Water and crude oil	Volume of Release 600 bbls produced water and 10 bbls crude oil	Volume Recovered 500 bbls total fluid
Source of Release Tank overflow and containment failure	Date and Hour of Occurrence: 7/11/12 Approximately 5:00 p.m.	Date and Hour of Discovery: 7/11/12 Approximately 5:00 p.m.
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 BLM	
By Whom? Tony Savoie	Date and Hour : 7/11/12 NMOCD at 7:10 p.m. BLM e-mail 7:39 p.m.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*  
The SWD was without power when the tanks started overflowing, electricians were on-site and vacuum trucks were on the way to the facility when the new 0 perm containment wall separated at a seam. Screws were used to secure the wall and keep it from totally collapsing.

Describe Area Affected and Cleanup Action Taken.\*  
The area affected was undergoing a remediation to clean up a previous produced water spill, most of the water along with a large amount of rain water ponded up in one of the excavations in the pasture. A total of 1050 bbls of water and oil was recovered; the water tested at about 25,000 mg/kg chlorides, which is about 1/2 the normal chloride concentration for the produced water. Remediation efforts are continuing following the NMOCD and BLM guidelines for spill remediation.

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	Signed By <i>Mike Brannon</i>	
Title: Waste Mgmt. and Remediation Specialist	Approved by Environmental Specialist:	Approval Date: <b>AUG 01 2012</b>
E-mail Address: <i>tasavoie@basspet.com</i>	Conditions of Approval:	Expiration Date:
Date: 7/16/12	Phone: 432-556-8730	Attached <input type="checkbox"/>

\* Attach Additional Sheets If Necessary

Remediation per OCD Rules & Guidelines. **SUBMIT REMEDIATION PROPOSAL NOT LATER THAN:**

*2RP-1234*

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

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

Form C-141  
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 16 on back side of form

RECEIVED

RECEIVED  
JAN 23 2014  
NMOCD ARTESIA  
Initial Report  Final Report

Release Notification and Corrective Action

OPERATOR

Name of Company	BOPCO, LP	260737	Contact	Tony Savoie
Address	522 W. Mermod, Suite 704, Carlsbad, NM 88220		Telephone No.	(432)556-8730
Facility Name	Poker Lake Unit #78 SWD Tank Battery		Facility Type	E&P
Surface Owner	Federal	Mineral Owner	Federal	Lease No. API #30-015-27536

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	25	24S	30E					Eddy

Latitude 32.194069° North Longitude 103.827614° West

NATURE OF RELEASE

Type of Release	Crude oil and produced water	Volume of Release	4,000 bbls of produced water and 20 bbls of crude oil	Volume Recovered	1,820 bbls from the damaged containment. None from the surface area outside the containment.
Source of Release	SWD Tank Battery	Date and Hour of Occurrence	5/26/12, 9:00 p.m.	Date and Hour of Discovery	5/26/12 9:00 p.m.
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, Jim Amos BLM		
By Whom?	Tony Savoie	Date and Hour	5/26/12, 9:22 to the BLM & 9:24 to the NMOCD		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* Lightning struck the facility gun barrel tanks, causing immediate damage to both tanks and the adjacent tanks inside the containment. All of the production was immediately shut down, and incoming streams were diverted to other facilities. Fire crews from Malaga and Loving responded to and had the fire put out by 11:00 p.m. Vacuum trucks started removing water from the damaged containment.

Describe Area Affected and Cleanup Action Taken.\* The salt water disposal tanks were nearly completely destroyed due to the lightning hit and fire. The 500 bbl steel oil skim tank was also severely damaged along with one of the 1,000 bbl fiberglass water storage tanks. There were a total of four (4) 1,000-bbl fiberglass storage tanks, two (2) 1,000-bbl gun barrels, and one (1) 500-bbl oil skim tank inside the containment area. The containment was damaged by falling piping and fire; however, it was holding most of the water being released by the damaged tanks. There were 3 areas where the containment was breached, allowing crude oil and produced water to travel off-site into the pasture. The affected area in the pasture measured approximately 21,680 ft<sup>2</sup>. Following initial response activities, the release was remediated as per NMOCD recommended guidelines. Please reference the attached *Remediation Summary & Risk-Based Site Closure Request* for remediation details.

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: 	<u>OIL CONSERVATION DIVISION</u>		
Printed Name: Tony Savoie			
Title: Waste Mgmt. & Remediation Specialist	Approval Date:	Expiration Date:	
E-mail Address: TASavoie@BassPet.com	Conditions of Approval:		
Date: 1/22/14 Phone: 432-556-8730			

2RP-1190

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Form C-141  
Revised October 10, 2003

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

**RECEIVED**  
Submitted to appropriate District Office in accordance with Rule 116 on back side of form  
JAN 23 2014  
NMOCD ARTESIA

**Release Notification and Corrective Action**

**OPERATOR**

Initial Report       Final Report

Name of Company	BOPCO, LP	290737	Contact	Tony Savoie
Address	522 W. Mermod, Suite 704, Carlsbad, NM 88220		Telephone No.	(432)556-8730
Facility Name	Poker Lake Unit #78 SWD		Facility Type	E&P

Surface Owner	Federal	Mineral Owner	Federal	Lease No.	API #30-015-27536
---------------	---------	---------------	---------	-----------	-------------------

**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	25	24S	30E					Eddy

**Latitude** 32.194069° North      **Longitude** 103.827614° West

**NATURE OF RELEASE**

Type of Release	Produced water and crude oil	Volume of Release	600 bbls of produced water and 10 bbls of crude oil	Volume Recovered	500 bbls total fluid
Source of Release	Tank overflow and containment failure	Date and Hour of Occurrence	7/11/12, 5:00 p.m.	Date and Hour of Discovery	7/11/12 Approximately 5:00 p.m.
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No    Not Required	If YES, To Whom?	NMOCD Emergency #104 and BLM		
By Whom?	Tony Savoie	Date and Hour	7/11/12 NMOCD at 7:10 p.m. BLM e-mail 7:39 p.m.		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* The SWD was without power when the tanks started overflowing. Electricians were on-site and vacuum trucks were on the way to the facility when the new 0-perm containment wall separated at a seam. Screws were used to secure the wall and keep it from totally collapsing.

Describe Area Affected and Cleanup Action Taken.\* The area affected was undergoing a remediation to clean up a previous produced water spill. Most of the water, along with a large amount of rain water ponded up in one of the excavations in the pasture. A total of 1,050 bbls of water and oil was recovered. Following initial response activities, the release was remediated as per NMOCD recommended guidelines. Please reference the attached *Remediation Summary & Risk-Based Site Closure Request* for remediation details.

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.

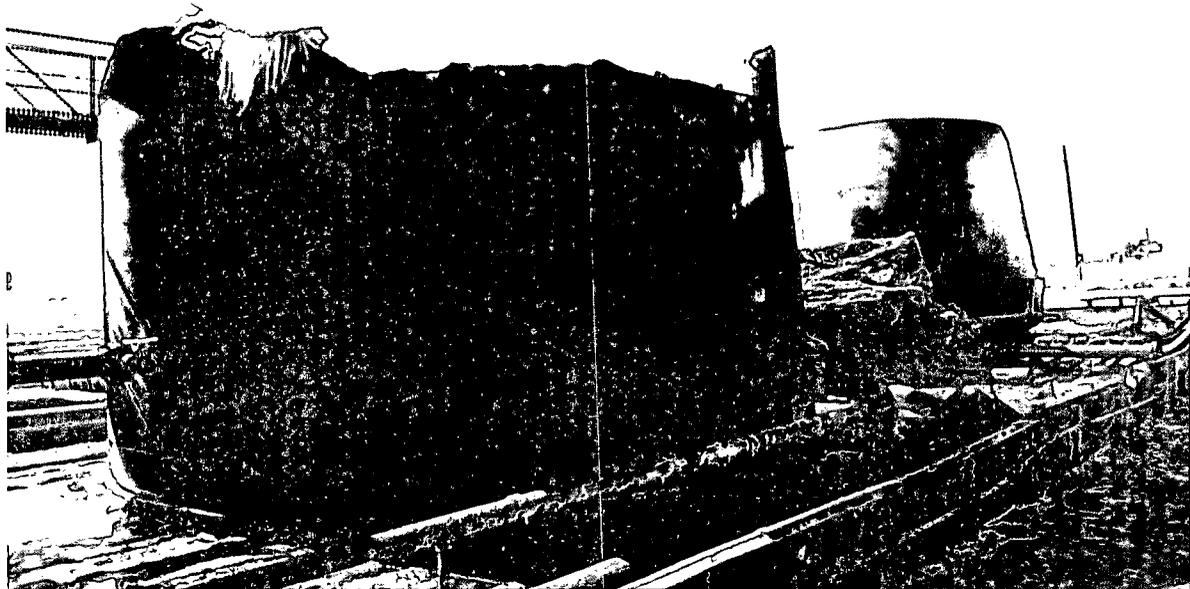
Signature: 	<b>OIL CONSERVATION DIVISION</b>		
Printed Name: Tony Savoie	Approved by District Supervisor:		
Title: Waste Mgmt. & Remediation Specialist	Approval Date:	Expiration Date:	
E-mail Address: TASavoie@BassPet.com	Conditions of Approval:		
Date: 1/22/14      Phone: 432-556-8730			

2 RP - 1234

**Appendix B**  
**Photographs**



Poker Lake Unit #78 SWD Tank Battery - 5/26/2012 Release



Poker Lake Unit #78 SWD Tank Battery - 5/26/2012 Release



Poker Lake Unit #78 SWD Tank Battery - 5/26/2012 Release



Poker Lake Unit #78 SWD Tank Battery - 5/26/2012 Release



Poker Lake Unit #78 SWD Tank Battery - 5/26/2012 Release



Poker Lake Unit #78 SWD Tank Battery - 5/26/2012 Release



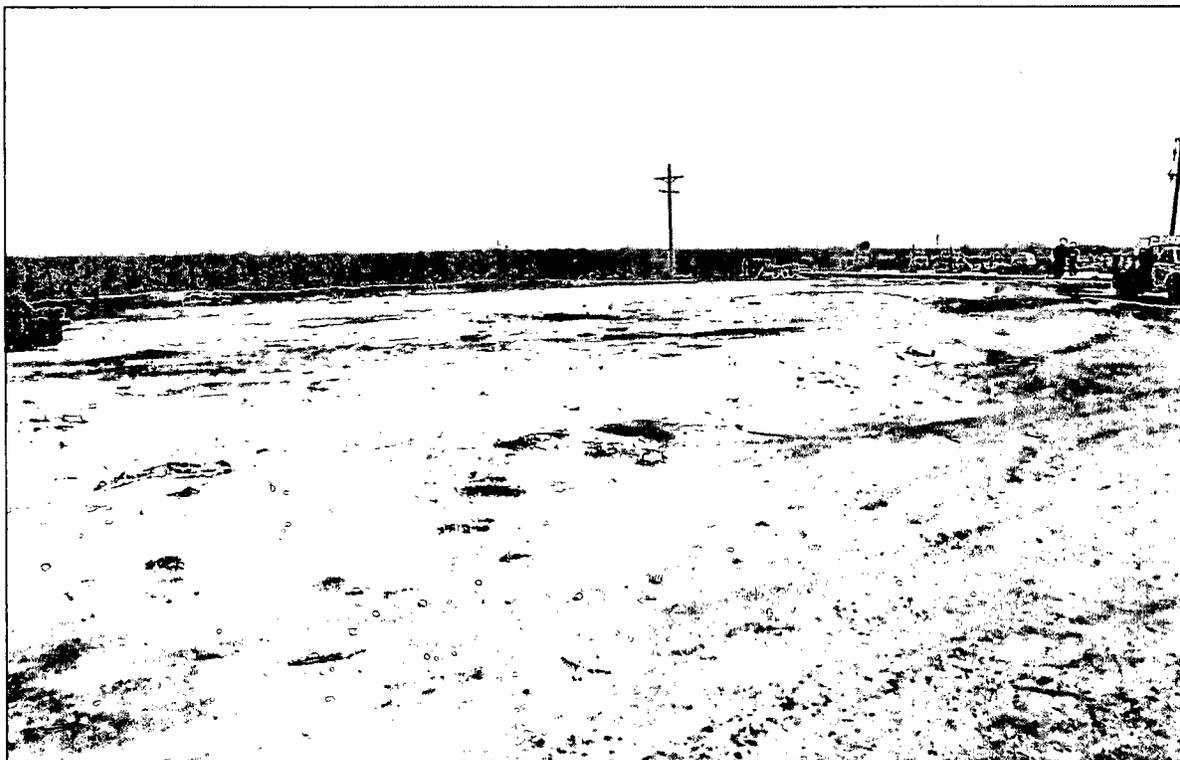
Poker Lake Unit #78 SWD Tank Battery - 5/26/2012 Release



Poker Lake Unit #78 SWD Tank Battery - 5/26/2012 Release



Poker Lake Unit #78 SWD Tank Battery - 5/26/2012 Release Site  
(Following Removal of Heavily Impacted Soil on Battery Pad)



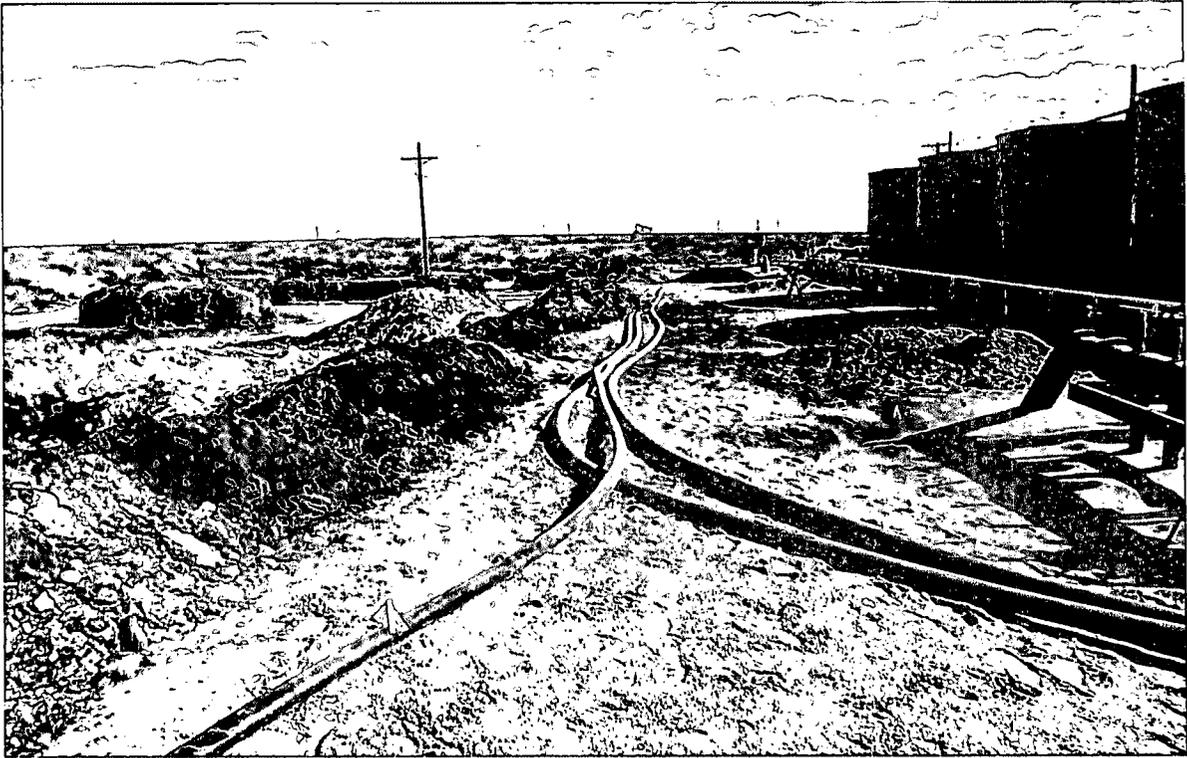
Poker Lake Unit #78 SWD Tank Battery - 5/26/2012 Release Site  
(Following Removal of Heavily Impacted Soil on Battery Pad)



Poker Lake Unit #78 SWD Tank Battery - 7/11/2012 Release



Poker Lake Unit #78 SWD Tank Battery - 7/11/2012 Release



Poker Lake Unit #78 SWD Tank Battery - Pasture Excavation (Looking North)



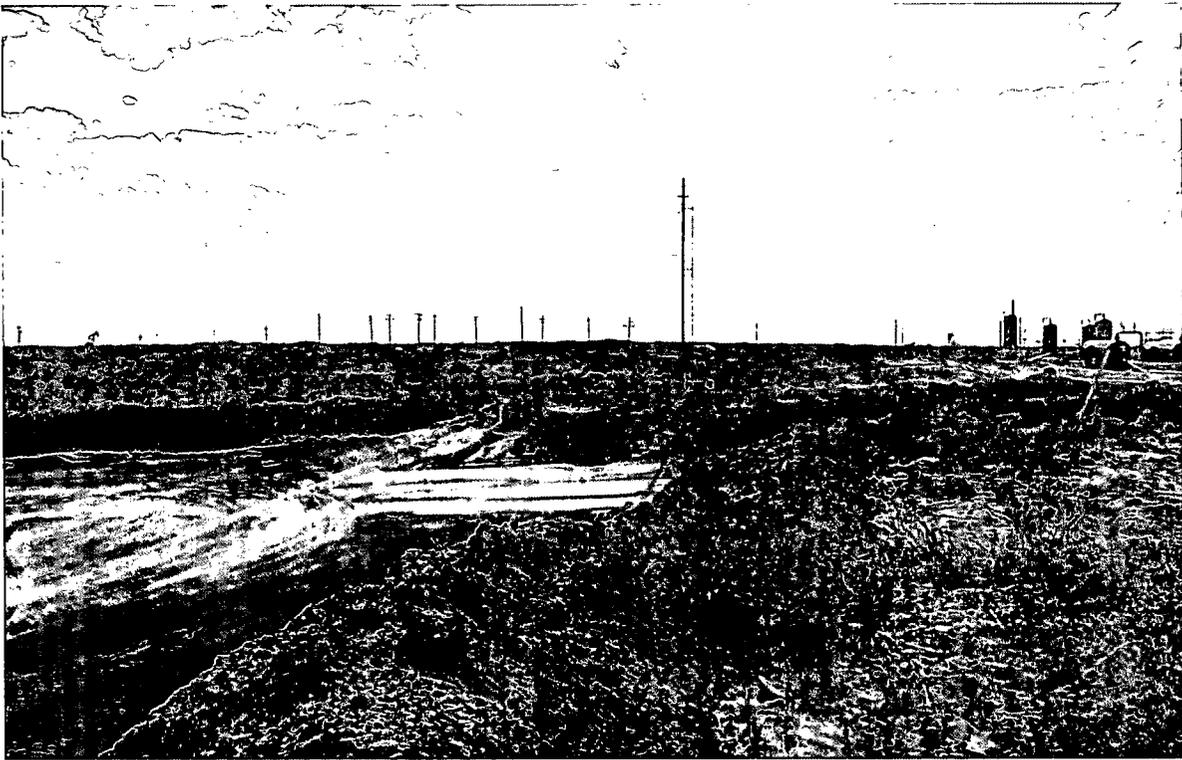
Poker Lake Unit #78 SWD Tank Battery - Pasture Excavation (Looking Northwest)



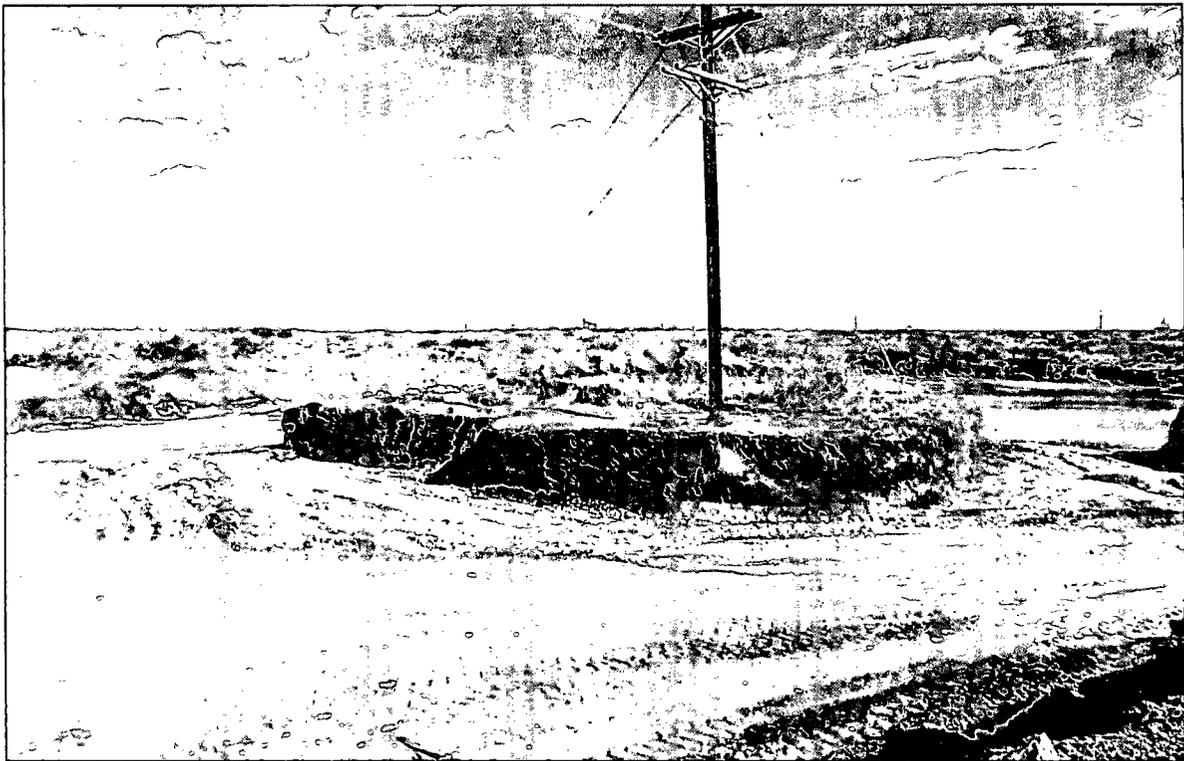
Poker Lake Unit #78 SWD Tank Battery - Pasture Excavation (Looking Northeast)



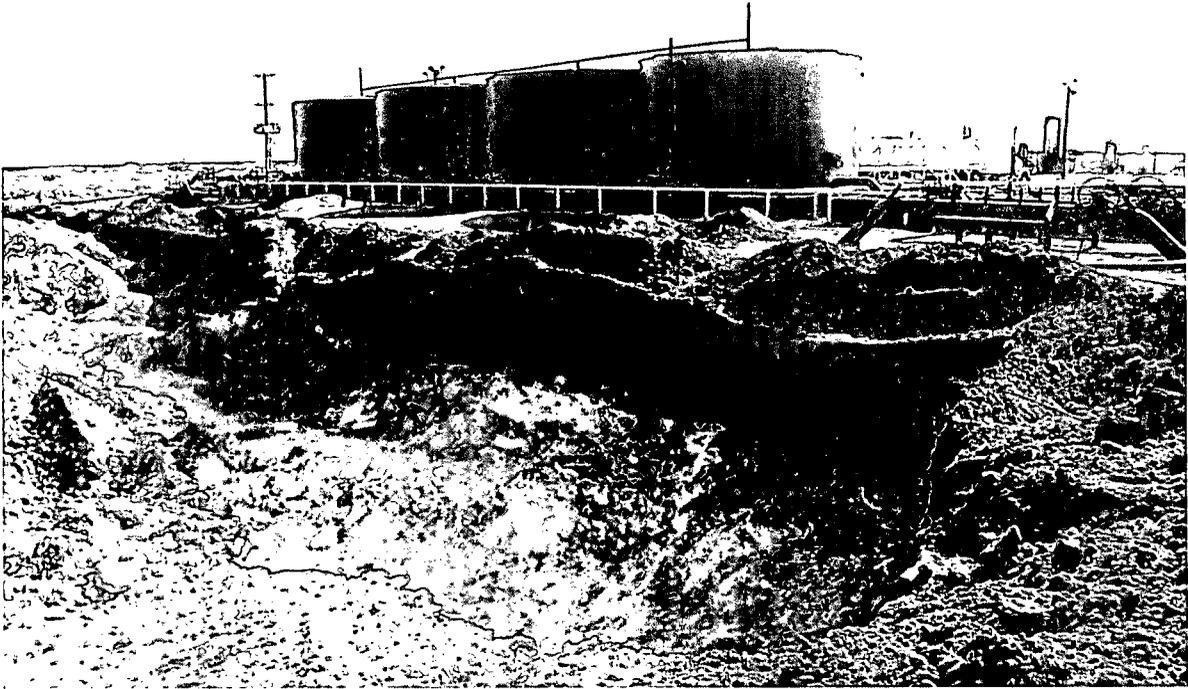
Poker Lake Unit #78 SWD Tank Battery - Pasture Excavation (Looking East-Northeast)



Poker Lake Unit #78 SWD Tank Battery - Pasture Excavation (Looking East)



Poker Lake Unit #78 SWD Tank Battery - Pasture Excavation (Soil "Island")



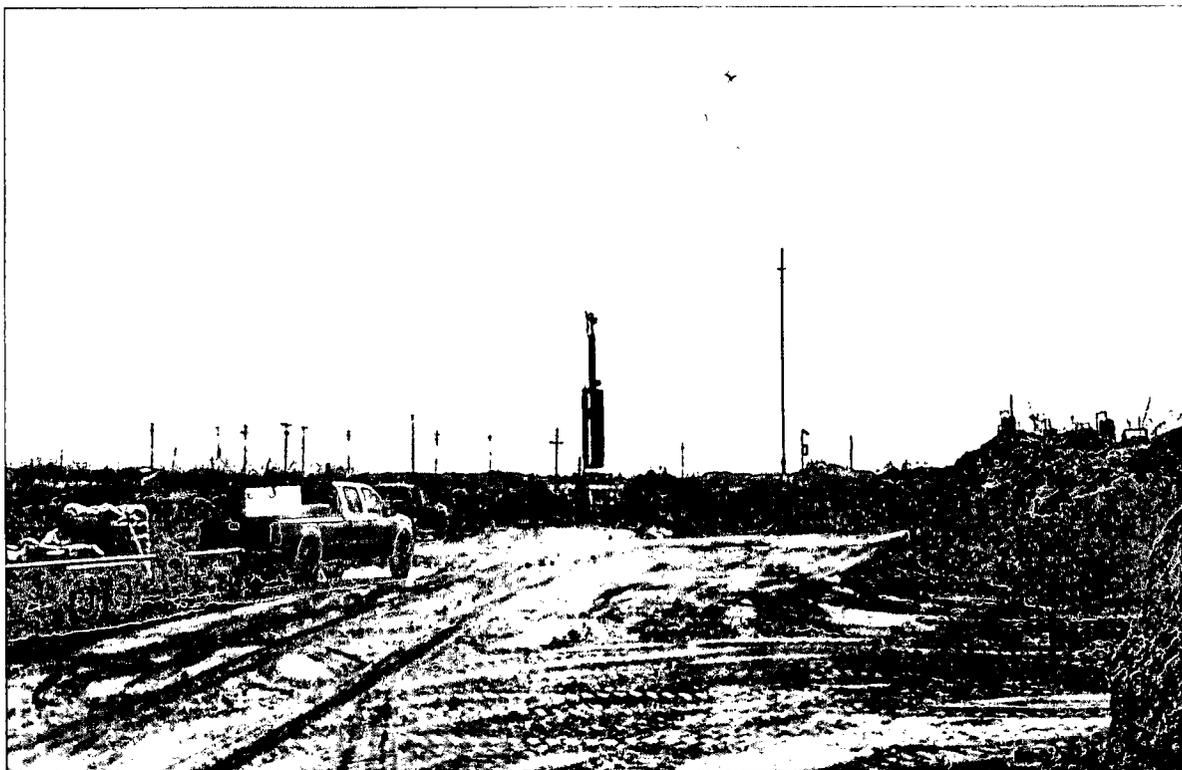
Poker Lake Unit #78 SWD Tank Battery - Pasture Excavation (Manifold Floor)



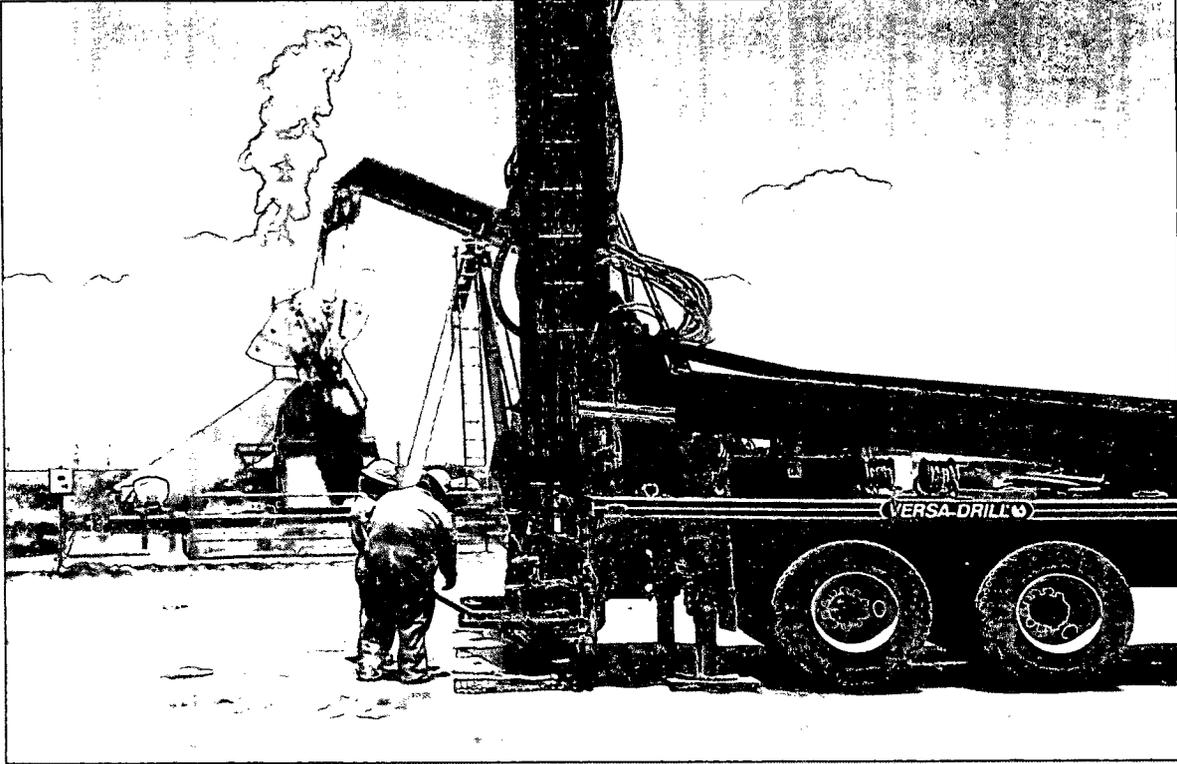
Poker Lake Unit #78 SWD Tank Battery - Pasture Excavation (Looking Northeast)



Poker Lake Unit #78 SWD Tank Battery - Advancement of Soil Boring SB-1  
(Looking Southwest)



Poker Lake Unit #78 SWD Tank Battery - Advancement of Soil Boring SB-2 (Looking East)



Poker Lake Unit #78 SWD Tank Battery - Advancement of Soil Boring SB-5 (Looking North)



Poker Lake Unit #78 SWD Tank Battery - Pasture Excavation  
(Following Backfill; Looking North)



Poker Lake Unit #78 SWD Tank Battery - Pasture Excavation (Following Backfill)



Poker Lake Unit #78 SWD Tank Battery - Pad Excavation



Poker Lake Unit #78 SWD Tank Battery - Pad Excavation



Poker Lake Unit #78 SWD Tank Battery - Pad Excavation

**Appendix C**  
**Soil Boring Logs**

# Soil Boring SB-1

Depth Below Ground Surface	Soil Column	Chloride Field Test	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description	Boring SB-1
0			(0.5)	None	None	0' - 1' - Red fine sand	Date Drilled <u>August 1, 2012</u>
5				None	None	1' - 3' - Gypsum; tan fine sand	Thickness of Bentonite Seal <u>20 Ft</u>
10		(904)	(1.3)	None	None	3' - 16' - Tan fine sand; sandstone	Depth of Exploratory Boring <u>29 Ft bgs</u>
15		(<112)	(1.2)	None	None		Depth to Groundwater _____
20		(<112)	(1.3)	None	None	16' - 20' - Tan fine sand	Ground Water Elevation _____

▼ Indicates the PSH level measured on \_\_\_\_\_  
 ▼ Indicates the groundwater level measured on \_\_\_\_\_  
 ○ Indicates samples selected for Laboratory Analysis.  
 PID Head-space reading in ppm obtained with a photo-ionization detector.

### Completion Notes

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

**Soil Boring SB-1**

**BOPCO, LP**  
 Poker Lake Unit #78 SWD Tank Battery  
 Eddy County, New Mexico  
 NMOCD Reference #: 2RP-1190



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

Prep By: BJA	Checked By: BRB
September 5, 2012	

# Soil Boring SB-2

Depth Below Ground Surface	Soil Column	Chloride Field Test	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description
0						0' - 1' - Red fine sand
1-3			157	None	None	1' - 3' - Gypsum; tan fine sand
3-16			13.4	None	None	3' - 16' - Tan fine sand; sandstone
16-16			9.6	None	None	16' - 16' - Tan fine sand
20			10.9	None	None	

### Boring SB-2

Date Drilled: August 1, 2012  
 Thickness of Bentonite Seal: 20 Ft  
 Depth of Exploratory Boring: 20 Ft bgs  
 Depth to Groundwater: \_\_\_\_\_  
 Ground Water Elevation: \_\_\_\_\_

- ▼ Indicates the PSH level measured on \_\_\_\_\_
- ▼ Indicates the groundwater level measured on \_\_\_\_\_
- Indicates samples selected for Laboratory Analysis.
- PID Head-space reading in ppm obtained with a photo-ionization detector.

### Completion Notes

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

**Soil Boring SB-2**

**BOPCO, LP**  
 Poker Lake Unit #78 SWD Tank Battery  
 Eddy County, New Mexico  
 NMOCD Reference #: 2RP-1190



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

Prep By: BJA	Checked By: BRB
September 5, 2012	

# Soil Boring SB-3

Depth Below Ground Surface	Soil Column	Chloride Field Test	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description	
0			0.0	None	None	0' - 1' - Red fine sand	
5			0.4	None	None	1' - 11' - Tan fine sand; sandstone	
10			1,200	0.8	None	None	
15			472	0.4	None	None	11' - 25' - Tan fine sand
20			136	0.0	None	None	
25							

### Boring SB-3

Date Drilled August 1, 2012  
 Thickness of Bentonite Seal 25 Ft  
 Depth of Exploratory Boring 25 Ft bgs  
 Depth to Groundwater \_\_\_\_\_  
 Ground Water Elevation \_\_\_\_\_

- ▼ Indicates the PSH level measured on \_\_\_\_\_
- ▼ Indicates the groundwater level measured on \_\_\_\_\_
- Indicates samples selected for Laboratory Analysis.
- PID Head-space reading in ppm obtained with a photo-ionization detector.

### Completion Notes

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

**Soil Boring SB-3**

BOPCO, LP  
 Poker Lake Unit #78 SWD Tank Battery  
 Eddy County, New Mexico  
 NMOCD Reference #: 2RP-1190



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

Prep By: BJA	Checked By: BRB
September 5, 2012	

# Soil Boring SB-4

Depth Below Ground Surface	Soil Column	Chloride Field Test	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description	
0			0.9	None	None	0' - 2' - Gypsum, tan fine sand	
5			1.7	None	None	2' - 13' - Tan fine sand; sandstone	
10			2.0	None	None		
15			248	3.6	None	None	13' - 25' - Tan fine sand
20			136	1.9	None	None	
25							

Boring SB-4

Date Drilled August 1, 2012  
 Thickness of Bentonite Seal 25 Ft  
 Depth of Exploratory Boring 25 Ft bgs  
 Depth to Groundwater \_\_\_\_\_  
 Ground Water Elevation \_\_\_\_\_

▼ Indicates the PSH level measured on \_\_\_\_\_  
 ▼ Indicates the groundwater level measured on \_\_\_\_\_  
 ○ Indicates samples selected for Laboratory Analysis.  
 PID Head-space reading in ppm obtained with a photo-ionization detector.

### Completion Notes

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

**Soil Boring SB-4**

**BOPCO, LP**  
 Poker Lake Unit #78 SWD Tank Battery  
 Eddy County, New Mexico  
 NMOCD Reference #: 2RP-1190



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

Prep By: BJA	Checked By: BRB
September 5, 2012	

# Soil Boring SB-5

Depth  
Below  
Ground  
Surface



Chloride

Field  
Test

Reading

0.9

0.6

1,480

280

108

112

PID  
Reading

0.9

0.6

0.5

0.0

1.2

0.6

Petroleum  
Odor

None

None

None

None

None

None

Petroleum  
Stain

None

None

None

None

None

None

Soil Description

0' - 0.5' - Tan fine sand

0.5' - 6' - Red fine sand

6' - 13' - Tan fine sand, gypsum;  
sandstone

13' - 30' - Tan fine sand; sandstone

Boring SB-5

Date Drilled August 1, 2012

Thickness of Bentonite Seal 30 Ft

Depth of Exploratory Boring 30 Ft bgs

Depth to Groundwater \_\_\_\_\_

Ground Water Elevation \_\_\_\_\_

▼ Indicates the PSH level measured on \_\_\_\_\_

▼ Indicates the groundwater level measured on \_\_\_\_\_

○ Indicates samples selected for Laboratory Analysis.

PID Head-space reading in ppm obtained with a photo-ionization detector.

### Completion Notes

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

**Soil Boring SB-5**

**BOPCO, LP**  
Poker Lake Unit #78 SWD Tank Battery  
Eddy County, New Mexico  
NMOCD Reference #: 2RP-1190



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

Prep By: BJA

Checked By: BRB

September 5, 2012

**Analytical Results For:**

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

 Received: 05/31/2012  
 Reported: 06/01/2012  
 Project Name: PLU 78 SWD PAD  
 Project Number: NONE GIVEN  
 Project Location: EDDY COUNTY, NM

 Sampling Date: 05/31/2012  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SAMPLE #3 @ 1' (H201227-03)**

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>11900</b>	16.0	06/01/2012	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	06/01/2012	ND	192	95.8	200	4.75		
<b>DRO &gt;C10-C28</b>	<b>73.8</b>	10.0	06/01/2012	ND	198	99.0	200	10.5		
<b>EXT DRO &gt;C28-C35</b>	<b>22.6</b>	10.0	06/01/2012	ND						

Surrogate: 1-Chlorooctane 106 % 65.2-140

Surrogate: 1-Chlorooctadecane 120 % 63.6-154

**Sample ID: SAMPLE #4 @ 1' (H201227-04)**

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>30000</b>	16.0	06/01/2012	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	06/01/2012	ND	192	95.8	200	4.75		
<b>DRO &gt;C10-C28</b>	<b>327</b>	10.0	06/01/2012	ND	198	99.0	200	10.5		
<b>EXT DRO &gt;C28-C35</b>	<b>85.7</b>	10.0	06/01/2012	ND						

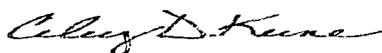
Surrogate: 1-Chlorooctane 109 % 65.2-140

Surrogate: 1-Chlorooctadecane 132 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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



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:	05/31/2012	Sampling Date:	05/31/2012
Reported:	06/01/2012	Sampling Type:	Soil
Project Name:	PLU 78 SWD PAD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

**Sample ID: SAMPLE #2 @ 5' (H201227-06)**

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>160</b>	16.0	06/01/2012	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	06/01/2012	ND	192	95.8	200	4.75		
<b>DRO &gt;C10-C28</b>	<b>13.5</b>	10.0	06/01/2012	ND	198	99.0	200	10.5		
<b>EXT DRO &gt;C28-C35</b>	<b>26.4</b>	10.0	06/01/2012	ND						

Surrogate: 1-Chlorooctane 99.4 % 65.2-140  
 Surrogate: 1-Chlorooctadecane 115 % 63.6-154

**Sample ID: SAMPLE #3 @ 5' (H201227-07)**

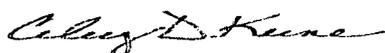
Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>5600</b>	16.0	06/01/2012	ND	400	100	400	3.92		
TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	06/01/2012	ND	192	95.8	200	4.75		
DRO >C10-C28	<10.0	10.0	06/01/2012	ND	198	99.0	200	10.5		
EXT DRO >C28-C35	<10.0	10.0	06/01/2012	ND						

Surrogate: 1-Chlorooctane 108 % 65.2-140  
 Surrogate: 1-Chlorooctadecane 117 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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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: 05/31/2012  
 Reported: 06/01/2012  
 Project Name: PLU 78 SWD PAD  
 Project Number: NONE GIVEN  
 Project Location: EDDY COUNTY, NM

 Sampling Date: 05/31/2012  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SAMPLE #3 @ 10' (H201227-09)**

BTX 8021B		mg/kg		Analyzed By: ZZZ						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/01/2012	ND	2.08	104	2.00	5.71		
Toluene*	<0.050	0.050	06/01/2012	ND	1.90	94.9	2.00	4.96		
Ethylbenzene*	<0.050	0.050	06/01/2012	ND	1.80	89.9	2.00	5.46		
Total Xylenes*	<0.150	0.150	06/01/2012	ND	5.47	91.2	6.00	5.00		

Surrogate: 4-Bromofluorobenzene (PIE) 99.1 % 89.4-126

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>2480</b>	16.0	06/01/2012	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	06/01/2012	ND	192	95.8	200	4.75		
DRO >C10-C28	<10.0	10.0	06/01/2012	ND	198	99.0	200	10.5		
EXT DRO >C28-C35	<10.0	10.0	06/01/2012	ND						

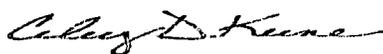
Surrogate: 1-Chlorooctane 105 % 65.2-140

Surrogate: 1-Chlorooctadecane 117 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celest 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

Company Name: Basin Environmental Service Technologies, LLC			BILL TO			ANALYSIS REQUEST														
Project Manager: Ben J. Arquijo			P.O. #:																	
Address: P.O. Box 301			Company: BOPCO, LP																	
City: Lovington		State: NM		Zip: 88260												Attn: Tony Savoie				
Phone #: (575) 396-2378		Fax #: (575) 396-1429		Address: 522 w. Mermod																
Project #:		Project Owner: BOPCO, LP		City: Carlsbad																
Project Name: <b>PLU 78 SWD PAD</b>			State: NM													Zip: 88220				
Project Location: <b>EDDY N.M.</b>			Phone #: (432) 556-8730																	
Sampler Name: <b>Jody Walters</b>			Fax #:																	
FOR LAB USE ONLY	Lab I.D.	Sample I.D.	G/RAS OR Y/C/OMP	# CONTAINERS	MATRIX											PRESERV	SAMPLING		DATE	TIME
					GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER:	ACID/BASE ICE / COOL OTHER:														
	<b>H201227</b>																			
		1 Sample # 1 @ 1'	G	1			X		5-31-12	10:00	X	X								
		2 Sample # 2 @ 1'	G	1			X		5-31-12	10:10	X	X								
		3 Sample # 3 @ 1'	G	1			X		5-31-12	10:20	X	X								
		4 Sample # 4 @ 1'	G	1			X		5-31-12	10:30	X	X								
		5 Sample # 1 @ 5'	G	1			X		5-31-12	11:00	X	X	X							RUSH
		6 Sample # 2 @ 5'	G	1			X		5-31-12	11:30	X	X								
		7 Sample # 3 @ 5'	G	1			X		5-31-12	12:00	X	X								
		8 Sample # 4 @ 5'	G	1			X		5-31-12	12:30	X	X								
		9 Sample # 3 @ 10'	G	1			X		5-31-12	1:30	X	X	X							RUSH

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Relinquished By:			Date: <b>5/31/12</b>	Received By:		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No (Add'l Phone #:		
			Time: <b>4:37</b>			Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No (Add'l Fax #:		
Relinquished By:			Date:	Received By:		REMARKS:		
			Time:			Please email results to <a href="mailto:pm@basinenv.com">pm@basinenv.com</a> & <a href="mailto:TA Savoie@BassPer.com">TASavoie@BassPer.com</a>		
Delivered By: (Circle One)			Sample Condition:		CHECKED BY:			
Sampler - UPS - Bus - Other: <b>3c</b>			<input type="checkbox"/> Cool <input type="checkbox"/> Intact <input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No					

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

August 01, 2012

JOEL LOWRY

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: POKER LAKE UNIT #78 SWD

Enclosed are the results of analyses for samples received by the laboratory on 07/28/12 9:59.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_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  
 JOEL LOWRY  
 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

 Received: 07/28/2012  
 Reported: 08/01/2012  
 Project Name: POKER LAKE UNIT #78 SWD  
 Project Number: BOPCO  
 Project Location: EDDY CO., NM

 Sampling Date: 07/26/2012  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Celey D. Keene

**Sample ID: SAMPLE #3 (H201758-03)**

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>256</b>	16.0	07/31/2012	ND	432	108	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	07/30/2012	ND	193	96.4	200	0.923		
DRO >C10-C28	<10.0	10.0	07/30/2012	ND	218	109	200	3.18		
EXT DRO >C28-C35	<10.0	10.0	07/30/2012	ND						
<i>Surrogate: 1-Chlorooctane</i>	<i>93.9 %</i>	<i>65.2-140</i>								
<i>Surrogate: 1-Chlorooctadecane</i>	<i>105 %</i>	<i>63.6-154</i>								

**Sample ID: SAMPLE #4 (H201758-04)**

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>144</b>	16.0	07/31/2012	ND	432	108	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	07/30/2012	ND	193	96.4	200	0.923		
DRO >C10-C28	<10.0	10.0	07/30/2012	ND	218	109	200	3.18		
EXT DRO >C28-C35	<10.0	10.0	07/30/2012	ND						
<i>Surrogate: 1-Chlorooctane</i>	<i>88.0 %</i>	<i>65.2-140</i>								
<i>Surrogate: 1-Chlorooctadecane</i>	<i>97.2 %</i>	<i>63.6-154</i>								

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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: 07/28/2012  
 Reported: 08/01/2012  
 Project Name: POKER LAKE UNIT #78 SWD  
 Project Number: BOPCO  
 Project Location: EDDY CO., NM

 Sampling Date: 07/26/2012  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Celey D. Keene

**Sample ID: SAMPLE #7 (H201758-07)**

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>384</b>	16.0	07/31/2012	ND	432	108	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	07/30/2012	ND	193	96.4	200	0.923		
DRO >C10-C28	<10.0	10.0	07/30/2012	ND	218	109	200	3.18		
EXT DRO >C28-C35	<10.0	10.0	07/30/2012	ND						
<i>Surrogate: 1-Chlorooctane</i>	<i>91.8 %</i>	<i>65.2-140</i>								
<i>Surrogate: 1-Chlorooctadecane</i>	<i>104 %</i>	<i>63.6-154</i>								

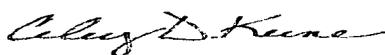
**Sample ID: SAMPLE #8 (H201758-08)**

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>144</b>	16.0	07/31/2012	ND	432	108	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	07/30/2012	ND	193	96.4	200	0.923		
DRO >C10-C28	<10.0	10.0	07/30/2012	ND	218	109	200	3.18		
EXT DRO >C28-C35	<10.0	10.0	07/30/2012	ND						
<i>Surrogate: 1-Chlorooctane</i>	<i>98.0 %</i>	<i>65.2-140</i>								
<i>Surrogate: 1-Chlorooctadecane</i>	<i>108 %</i>	<i>63.6-154</i>								

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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: 07/28/2012  
 Reported: 08/01/2012  
 Project Name: POKER LAKE UNIT #78 SWD  
 Project Number: BOPCO  
 Project Location: EDDY CO., NM

 Sampling Date: 07/26/2012  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Celey D. Keene

**Sample ID: SAMPLE #11 (H201758-11)**

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>288</b>	16.0	07/31/2012	ND	432	108	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	07/31/2012	ND	193	96.4	200	0.923		
DRO >C10-C28	<10.0	10.0	07/31/2012	ND	218	109	200	3.18		
EXT DRO >C28-C35	<10.0	10.0	07/31/2012	ND						
<i>Surrogate: 1-Chlorooctane</i>	82.7 %	65.2-140								
<i>Surrogate: 1-Chlorooctadecane</i>	94.5 %	63.6-154								

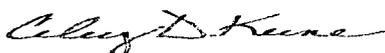
**Sample ID: SAMPLE #13 (H201758-12)**

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>432</b>	16.0	07/31/2012	ND	432	108	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	07/31/2012	ND	193	96.4	200	0.923		
DRO >C10-C28	<10.0	10.0	07/31/2012	ND	218	109	200	3.18		
EXT DRO >C28-C35	<10.0	10.0	07/31/2012	ND						
<i>Surrogate: 1-Chlorooctane</i>	84.2 %	65.2-140								
<i>Surrogate: 1-Chlorooctadecane</i>	92.5 %	63.6-154								

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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:	07/28/2012	Sampling Date:	07/26/2012
Reported:	08/01/2012	Sampling Type:	Soil
Project Name:	POKER LAKE UNIT #78 SWD	Sampling Condition:	** (See Notes)
Project Number:	BOPCO	Sample Received By:	Celey D. Keene
Project Location:	EDDY CO., NM		

**Sample ID: SAMPLE #16 (H201758-15)**

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>528</b>	16.0	07/31/2012	ND	432	108	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	07/31/2012	ND	193	96.4	200	0.923		
DRO >C10-C28	<10.0	10.0	07/31/2012	ND	218	109	200	3.18		
EXT DRO >C28-C35	<10.0	10.0	07/31/2012	ND						
<i>Surrogate: 1-Chlorooctane</i>	<i>90.4 %</i>	<i>65.2-140</i>								
<i>Surrogate: 1-Chlorooctadecane</i>	<i>98.5 %</i>	<i>63.6-154</i>								

**Sample ID: SAMPLE #17 (H201758-16)**

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>48.0</b>	16.0	07/31/2012	ND	432	108	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	07/31/2012	ND	193	96.4	200	0.923		
DRO >C10-C28	<10.0	10.0	07/31/2012	ND	218	109	200	3.18		
EXT DRO >C28-C35	<10.0	10.0	07/31/2012	ND						
<i>Surrogate: 1-Chlorooctane</i>	<i>91.3 %</i>	<i>65.2-140</i>								
<i>Surrogate: 1-Chlorooctadecane</i>	<i>99.7 %</i>	<i>63.6-154</i>								

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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: 07/28/2012  
 Reported: 08/01/2012  
 Project Name: POKER LAKE UNIT #78 SWD  
 Project Number: BOPCO  
 Project Location: EDDY CO., NM

 Sampling Date: 07/26/2012  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Celey D. Keene

**Sample ID: SAMPLE #20 (H201758-19)**

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	07/31/2012	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	07/31/2012	ND	193	96.4	200	0.923		
DRO >C10-C28	<10.0	10.0	07/31/2012	ND	218	109	200	3.18		
EXT DRO >C28-C35	<10.0	10.0	07/31/2012	ND						

Surrogate: 1-Chlorooctane 91.6 % 65.2-140  
 Surrogate: 1-Chlorooctadecane 100 % 63.6-154

**Sample ID: SAMPLE #21 (H201758-20)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	07/31/2012	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	07/31/2012	ND	193	96.4	200	0.923		
DRO >C10-C28	16.5	10.0	07/31/2012	ND	218	109	200	3.18		
EXT DRO >C28-C35	<10.0	10.0	07/31/2012	ND						

Surrogate: 1-Chlorooctane 84.5 % 65.2-140  
 Surrogate: 1-Chlorooctadecane 87.9 % 63.6-154

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:	07/28/2012	Sampling Date:	07/26/2012
Reported:	08/01/2012	Sampling Type:	Soil
Project Name:	POKER LAKE UNIT #78 SWD	Sampling Condition:	** (See Notes)
Project Number:	BOPCO	Sample Received By:	Celey D. Keene
Project Location:	EDDY CO., NM		

**Sample ID: SAMPLE #24 (H201758-23)**

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	07/31/2012	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	28.3	10.0	07/31/2012	ND	193	96.6	200	0.500		
DRO >C10-C28	82.1	10.0	07/31/2012	ND	203	101	200	3.37		
EXT DRO >C28-C35	<10.0	10.0	07/31/2012	ND						

Surrogate: 1-Chlorooctane 82.9 % 65.2-140

Surrogate: 1-Chlorooctadecane 57.6 % 63.6-154

**Sample ID: SAMPLE #25 (H201758-24)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	592	16.0	07/31/2012	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	07/31/2012	ND	193	96.6	200	0.500		
DRO >C10-C28	<10.0	10.0	07/31/2012	ND	203	101	200	3.37		
EXT DRO >C28-C35	<10.0	10.0	07/31/2012	ND						

Surrogate: 1-Chlorooctane 94.0 % 65.2-140

Surrogate: 1-Chlorooctadecane 96.0 % 63.6-154

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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:	07/28/2012	Sampling Date:	07/26/2012
Reported:	08/01/2012	Sampling Type:	Soil
Project Name:	POKER LAKE UNIT #78 SWD	Sampling Condition:	** (See Notes)
Project Number:	BOPCO	Sample Received By:	Celey D. Keene
Project Location:	EDDY CO., NM		

**Sample ID: SAMPLE #30 (H201758-27)**

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>1680</b>	16.0	07/31/2012	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	07/31/2012	ND	193	96.6	200	0.500		
<b>DRO &gt;C10-C28</b>	<b>22.5</b>	10.0	07/31/2012	ND	203	101	200	3.37		
EXT DRO >C28-C35	<10.0	10.0	07/31/2012	ND						

Surrogate: 1-Chlorooctane 86.4 % 65.2-140  
 Surrogate: 1-Chlorooctadecane 87.3 % 63.6-154

**Sample ID: SAMPLE #31 (H201758-28)**

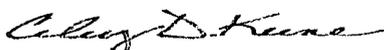
Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>160</b>	16.0	07/31/2012	ND	400	100	400	3.92		
TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	07/31/2012	ND	193	96.6	200	0.500		
<b>DRO &gt;C10-C28</b>	<b>11.9</b>	10.0	07/31/2012	ND	203	101	200	3.37		
EXT DRO >C28-C35	<10.0	10.0	07/31/2012	ND						

Surrogate: 1-Chlorooctane 92.8 % 65.2-140  
 Surrogate: 1-Chlorooctadecane 96.0 % 63.6-154

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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:	07/28/2012	Sampling Date:	07/26/2012
Reported:	08/01/2012	Sampling Type:	Soil
Project Name:	POKER LAKE UNIT #78 SWD	Sampling Condition:	** (See Notes)
Project Number:	BOPCO	Sample Received By:	Celey D. Keene
Project Location:	EDDY CO., NM		

**Sample ID: SAMPLE #34 (H201758-31)**

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	07/31/2012	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	07/31/2012	ND	193	96.6	200	0.500	
DRO >C10-C28	<10.0	10.0	07/31/2012	ND	203	101	200	3.37	
EXT DRO >C28-C35	<10.0	10.0	07/31/2012	ND					

Surrogate: 1-Chlorooctane 107 % 65.2-140  
 Surrogate: 1-Chlorooctadecane 112 % 63.6-154

**Sample ID: SAMPLE #35 (H201758-32)**

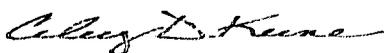
Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>128</b>	16.0	07/31/2012	ND	400	100	400	3.92	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/31/2012	ND	193	96.6	200	0.500	
DRO >C10-C28	<10.0	10.0	07/31/2012	ND	203	101	200	3.37	
EXT DRO >C28-C35	<10.0	10.0	07/31/2012	ND					

Surrogate: 1-Chlorooctane 86.1 % 65.2-140  
 Surrogate: 1-Chlorooctadecane 84.8 % 63.6-154

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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:	07/28/2012	Sampling Date:	07/26/2012
Reported:	08/01/2012	Sampling Type:	Soil
Project Name:	POKER LAKE UNIT #78 SWD	Sampling Condition:	** (See Notes)
Project Number:	BOPCO	Sample Received By:	Celey D. Keene
Project Location:	EDDY CO., NM		

**Sample ID: SAMPLE #38 (H201758-35)**

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>58400</b>	16.0	07/31/2012	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	07/31/2012	ND	193	96.6	200	0.500		
DRO >C10-C28	<10.0	10.0	07/31/2012	ND	203	101	200	3.37		
EXT DRO >C28-C35	<10.0	10.0	07/31/2012	ND						
<i>Surrogate: 1-Chlorooctane</i>		<i>95.5 %</i>	<i>65.2-140</i>							
<i>Surrogate: 1-Chlorooctadecane</i>		<i>99.6 %</i>	<i>63.6-154</i>							

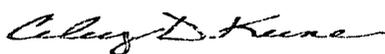
**Sample ID: SAMPLE #39 (H201758-36)**

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>448</b>	16.0	07/31/2012	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	07/31/2012	ND	193	96.6	200	0.500		
DRO >C10-C28	<10.0	10.0	07/31/2012	ND	203	101	200	3.37		
EXT DRO >C28-C35	<10.0	10.0	07/31/2012	ND						
<i>Surrogate: 1-Chlorooctane</i>		<i>94.6 %</i>	<i>65.2-140</i>							
<i>Surrogate: 1-Chlorooctadecane</i>		<i>100 %</i>	<i>63.6-154</i>							

Cardinal Laboratories

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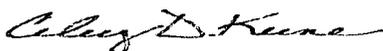
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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

- S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-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





August 01, 2012

BEN J. ARGUIJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: PLU 78 SWD PAD

Enclosed are the results of analyses for samples received by the laboratory on 07/31/12 15:45.

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

**Notes and Definitions**

- S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

\*=Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager

August 07, 2012

BEN J. ARGUIJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: POKER LAKE UNIT #78 SWD

Enclosed are the results of analyses for samples received by the laboratory on 08/02/12 16:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_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:	08/02/2012	Sampling Date:	08/01/2012
Reported:	08/07/2012	Sampling Type:	Soil
Project Name:	POKER LAKE UNIT #78 SWD	Sampling Condition:	Cool & Intact
Project Number:	BOPCO	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB - 1 @ 10' (H201805-02)**

BTEX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/07/2012	ND	1.70	85.2	2.00	7.84		
Toluene*	<0.050	0.050	08/07/2012	ND	1.83	91.3	2.00	6.14		
Ethylbenzene*	<0.050	0.050	08/07/2012	ND	1.87	93.5	2.00	6.07		
Total Xylenes*	<0.150	0.150	08/07/2012	ND	5.64	94.0	6.00	5.24		

Surrogate: 4-Bromofluorobenzene (PIC) 100 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>1300</b>	16.0	08/06/2012	ND	416	104	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	08/03/2012	ND	185	92.3	200	0.279		
<b>DRO &gt;C10-C28</b>	<b>10.5</b>	10.0	08/03/2012	ND	195	97.6	200	5.50		
EXT DRO >C28-C35	<10.0	10.0	08/03/2012	ND						

Surrogate: 1-Chlorooctane 92.8 % 65.2-140

Surrogate: 1-Chlorooctadecane 90.0 % 63.6-154

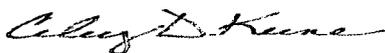
**Sample ID: SB - 1 @ 15' (H201805-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>48.0</b>	16.0	08/06/2012	ND	416	104	400	3.92		

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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:	08/02/2012	Sampling Date:	08/01/2012
Reported:	08/07/2012	Sampling Type:	Soil
Project Name:	POKER LAKE UNIT #78 SWD	Sampling Condition:	Cool & Intact
Project Number:	BOPCO	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB - 2 @ 5' (H201805-05)**

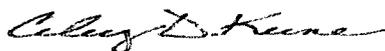
Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>864</b>	16.0	08/06/2012	ND	416	104	400	3.92		
TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	08/03/2012	ND	185	92.3	200	0.279		
DRO >C10-C28	<10.0	10.0	08/03/2012	ND	195	97.6	200	5.50		
EXT DRO >C28-C35	<10.0	10.0	08/03/2012	ND						

<i>Surrogate: 1-Chlorooctane</i>	<i>90.1 %</i>	<i>65.2-140</i>
<i>Surrogate: 1-Chlorooctadecane</i>	<i>93.6 %</i>	<i>63.6-154</i>

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\*=Accredited Analyte

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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:	08/02/2012	Sampling Date:	08/01/2012
Reported:	08/07/2012	Sampling Type:	Soil
Project Name:	POKER LAKE UNIT #78 SWD	Sampling Condition:	Cool & Intact
Project Number:	BOPCO	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB - 2 @ 20' (H201805-08)**

BTEX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/07/2012	ND	1.70	85.2	2.00	7.84		
Toluene*	<0.050	0.050	08/07/2012	ND	1.83	91.3	2.00	6.14		
Ethylbenzene*	<0.050	0.050	08/07/2012	ND	1.87	93.5	2.00	6.07		
Total Xylenes*	<0.150	0.150	08/07/2012	ND	5.64	94.0	6.00	5.24		

Surrogate: 4-Bromofluorobenzene (PIC) 100 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>1040</b>	16.0	08/06/2012	ND	416	104	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	08/03/2012	ND	185	92.3	200	0.279		
DRO >C10-C28	<10.0	10.0	08/03/2012	ND	195	97.6	200	5.50		
EXT DRO >C28-C35	<10.0	10.0	08/03/2012	ND						

Surrogate: 1-Chlorooctane 85.2 % 65.2-140

Surrogate: 1-Chlorooctadecane 85.5 % 63.6-154

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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:	08/02/2012	Sampling Date:	08/01/2012
Reported:	08/07/2012	Sampling Type:	Soil
Project Name:	POKER LAKE UNIT #78 SWD	Sampling Condition:	Cool & Intact
Project Number:	BOPCO	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB - 3 @ 10' (H201805-10)**

BTEX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/07/2012	ND	1.70	85.2	2.00	7.84		
Toluene*	<0.050	0.050	08/07/2012	ND	1.83	91.3	2.00	6.14		
Ethylbenzene*	<0.050	0.050	08/07/2012	ND	1.87	93.5	2.00	6.07		
Total Xylenes*	<0.150	0.150	08/07/2012	ND	5.64	94.0	6.00	5.24		

*Surrogate: 4-Bromofluorobenzene (PIE)*      98.4 %      89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>1470</b>	16.0	08/06/2012	ND	416	104	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	08/03/2012	ND	185	92.3	200	0.279		
DRO >C10-C28	<10.0	10.0	08/03/2012	ND	195	97.6	200	5.50		
EXT DRO >C28-C35	<10.0	10.0	08/03/2012	ND						

*Surrogate: 1-Chlorooctane*      85.0 %      65.2-140

*Surrogate: 1-Chlorooctadecane*      87.2 %      63.6-154

**Sample ID: SB - 3 @ 15' (H201805-11)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>1250</b>	16.0	08/06/2012	ND	416	104	400	3.92		

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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:	08/02/2012	Sampling Date:	08/01/2012
Reported:	08/07/2012	Sampling Type:	Soil
Project Name:	POKER LAKE UNIT #78 SWD	Sampling Condition:	Cool & Intact
Project Number:	BOPCO	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB - 4 @ 5' (H201805-14)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>1360</b>	16.0	08/06/2012	ND	416	104	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	08/04/2012	ND	185	92.3	200	0.279		
<b>DRO &gt;C10-C28</b>	<b>32.8</b>	10.0	08/04/2012	ND	195	97.6	200	5.50		
<b>EXT DRO &gt;C28-C35</b>	<b>86.3</b>	10.0	08/04/2012	ND						

Surrogate: 1-Chlorooctane	89.0 %	65.2-140
Surrogate: 1-Chlorooctadecane	93.9 %	63.6-154

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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:	08/02/2012	Sampling Date:	08/01/2012
Reported:	08/07/2012	Sampling Type:	Soil
Project Name:	POKER LAKE UNIT #78 SWD	Sampling Condition:	Cool & Intact
Project Number:	BOPCO	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB - 4 @ 20' (H201805-17)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>240</b>	16.0	08/06/2012	ND	416	104	400	3.92		

**Sample ID: SB - 4 @ 25' (H201805-18)**

BTX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/07/2012	ND	1.70	85.2	2.00	7.84		
Toluene*	<0.050	0.050	08/07/2012	ND	1.83	91.3	2.00	6.14		
Ethylbenzene*	<0.050	0.050	08/07/2012	ND	1.87	93.5	2.00	6.07		
Total Xylenes*	<0.150	0.150	08/07/2012	ND	5.64	94.0	6.00	5.24		

Surrogate: 4-Bromofluorobenzene (PIE) 101 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>112</b>	16.0	08/06/2012	ND	416	104	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	08/04/2012	ND	185	92.3	200	0.279		
DRO >C10-C28	<10.0	10.0	08/04/2012	ND	195	97.6	200	5.50		
<b>EXT DRO &gt;C28-C35</b>	<b>10.3</b>	10.0	08/04/2012	ND						

Surrogate: 1-Chlorooctane 88.0 % 65.2-140

Surrogate: 1-Chlorooctadecane 89.2 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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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:	08/02/2012	Sampling Date:	08/01/2012
Reported:	08/07/2012	Sampling Type:	Soil
Project Name:	POKER LAKE UNIT #78 SWD	Sampling Condition:	Cool & Intact
Project Number:	BOPCO	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB - 5 @ 10' (H201805-20)**

BTEX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/07/2012	ND	1.70	85.2	2.00	7.84		
Toluene*	<0.050	0.050	08/07/2012	ND	1.83	91.3	2.00	6.14		
Ethylbenzene*	<0.050	0.050	08/07/2012	ND	1.87	93.5	2.00	6.07		
Total Xylenes*	<0.150	0.150	08/07/2012	ND	5.64	94.0	6.00	5.24		

*Surrogate: 4-Bromofluorobenzene (PIC) 101 % 89.4-126*

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>2520</b>	16.0	08/06/2012	ND	416	104	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	08/04/2012	ND	185	92.3	200	0.279		
DRO >C10-C28	<10.0	10.0	08/04/2012	ND	195	97.6	200	5.50		
EXT DRO >C28-C35	<10.0	10.0	08/04/2012	ND						

*Surrogate: 1-Chlorooctane 90.3 % 65.2-140*
*Surrogate: 1-Chlorooctadecane 87.8 % 63.6-154*
**Sample ID: SB - 5 @ 15' (H201805-21)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>1630</b>	16.0	08/06/2012	ND	416	104	400	3.92		

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

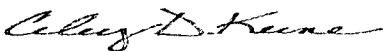
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported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

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---

Celey D. Keene, Lab Director/Quality Manager

# Laboratories

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Basin Environmental Service Technologies, LLC		<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>																			
Project Manager: Ben J. Arquijo		P.O. #:																							
Address: P.O. Box 301		Company: EOPCO, LP																							
City: Lovington State: NM Zip: 88260		Attn: Tony Savoia																							
Phone #: (575) 396-2378 Fax #: (575) 396-1429		Address: 522 W. Mermod																							
Project #: Project Owner: BOPCO, LP		City: Carlsbad																							
Project Name: Poker Lake Unit #78 SWD		State: NM Zip: 88220																							
Project Location: Eddy Co., NM		Phone #: (432) 556-8730																							
Sampler Name:		Fax #:																							
FOR LAB USE ONLY				MATRIX		PRESERV.		SAMPLING																	
Lab I.D.	Sample I.D.	GRAB OR (COMP. # CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME												
H201805																									
9	SB-3 @ 5'	G		X					X			8/11/10	1100	X	X										
10	SB-3 @ 10'												1105	X	X										
11	SB-3 @ 15'												1110												
12	SB-3 @ 20'												1115												
13	SB-3 @ 25'												1120	X	X										
14	SB-4 @ 5'												1140	X											
15	SB-4 @ 10'												1145	X	X										
16	SB-4 @ 15'												1150												
17	SB-4 @ 20'												1155												
18	SB-4 @ 25'												1200	X	X										

Chloride  
8015A  
BTEX

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Relinquished By:	Date: 8/10/10	Received By: Dodi Benson	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
	Time: 1645		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:	
	Time:			
Delivered By: (Circle One)	Sample Condition	CHECKED BY:	Please email results to pm@basinenv.com	
Sampler - UPS - Bus - Other:	Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>	(Initials) CJA	& TSavoie@BassPart.com	

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

#26

August 06, 2012

BEN J. ARGUIJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: POKER LAKE UNIT #78 SWD

Enclosed are the results of analyses for samples received by the laboratory on 08/03/12 15:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_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:	08/03/2012	Sampling Date:	08/03/2012
Reported:	08/06/2012	Sampling Type:	Soil
Project Name:	POKER LAKE UNIT #78 SWD	Sampling Condition:	Cool & Intact
Project Number:	BOPCO	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SAMPLE #41 (H201814-03)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>688</b>	16.0	08/06/2012	ND	416	104	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	08/06/2012	ND	167	83.6	200	3.32		
DRO >C10-C28	<10.0	10.0	08/06/2012	ND	153	76.5	200	8.37		
EXT DRO >C28-C35	<10.0	10.0	08/06/2012	ND						

Surrogate: 1-Chlorooctane 87.2 % 65.2-140  
 Surrogate: 1-Chlorooctadecane 89.4 % 63.6-154

**Sample ID: SAMPLE #42 (H201814-04)**

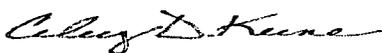
Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>1220</b>	16.0	08/06/2012	ND	416	104	400	3.92		
TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	08/06/2012	ND	167	83.6	200	3.32		
DRO >C10-C28	<10.0	10.0	08/06/2012	ND	153	76.5	200	8.37		
EXT DRO >C28-C35	<10.0	10.0	08/06/2012	ND						

Surrogate: 1-Chlorooctane 87.2 % 65.2-140  
 Surrogate: 1-Chlorooctadecane 88.4 % 63.6-154

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\*=Accredited Analyte

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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:	08/03/2012	Sampling Date:	08/03/2012
Reported:	08/06/2012	Sampling Type:	Soil
Project Name:	POKER LAKE UNIT #78 SWD	Sampling Condition:	Cool & Intact
Project Number:	BOPCO	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: MANIFOLD FLOOR 12' (H201814-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>96.0</b>	16.0	08/06/2012	ND	416	104	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	08/06/2012	ND	167	83.6	200	3.32		
<b>DRO &gt;C10-C28</b>	<b>429</b>	10.0	08/06/2012	ND	153	76.5	200	8.37		
<b>EXT DRO &gt;C28-C35</b>	<b>98.5</b>	10.0	08/06/2012	ND						

Surrogate: 1-Chlorooctane 96.0 % 65.2-140  
 Surrogate: 1-Chlorooctadecane 97.6 % 63.6-154

**Sample ID: SB #2 SUR/ EP. A 8' (H201814-08)**

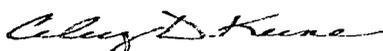
Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>1560</b>	16.0	08/06/2012	ND	416	104	400	3.92		
TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	08/06/2012	ND	167	83.6	200	3.32		
<b>DRO &gt;C10-C28</b>	<b>337</b>	10.0	08/06/2012	ND	153	76.5	200	8.37		
<b>EXT DRO &gt;C28-C35</b>	<b>126</b>	10.0	08/06/2012	ND						

Surrogate: 1-Chlorooctane 97.8 % 65.2-140  
 Surrogate: 1-Chlorooctadecane 104 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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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:	08/03/2012	Sampling Date:	08/03/2012
Reported:	08/06/2012	Sampling Type:	Soil
Project Name:	POKER LAKE UNIT #78 SWD	Sampling Condition:	Cool & Intact
Project Number:	BOPCO	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB #4 SUR (H201814-11)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>20000</b>	16.0	08/06/2012	ND	416	104	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	08/06/2012	ND	167	83.6	200	3.32		
<b>DRO &gt;C10-C28</b>	<b>1310</b>	10.0	08/06/2012	ND	153	76.5	200	8.37		
<b>EXT DRO &gt;C28-C35</b>	<b>320</b>	10.0	08/06/2012	ND						

Surrogate: 1-Chlorooctane 99.0 % 65.2-140  
 Surrogate: 1-Chlorooctadecane 123 % 63.6-154

**Sample ID: POWER POLE NORTH (H201814-12)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>40000</b>	16.0	08/06/2012	ND	416	104	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	08/06/2012	ND	167	83.6	200	3.32		
<b>DRO &gt;C10-C28</b>	<b>15.2</b>	10.0	08/06/2012	ND	153	76.5	200	8.37		
<b>EXT DRO &gt;C28-C35</b>	<b>42.7</b>	10.0	08/06/2012	ND						

Surrogate: 1-Chlorooctane 88.2 % 65.2-140  
 Surrogate: 1-Chlorooctadecane 90.3 % 63.6-154

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\*=Accredited Analyte

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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:	08/03/2012	Sampling Date:	08/03/2012
Reported:	08/06/2012	Sampling Type:	Soil
Project Name:	POKER LAKE UNIT #78 SWD	Sampling Condition:	Cool & Intact
Project Number:	BOPCO	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: POWER POLE WEST (H201814-15)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>43200</b>	16.0	08/06/2012	ND	416	104	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	08/06/2012	ND	167	83.6	200	3.32		
DRO >C10-C28	<10.0	10.0	08/06/2012	ND	153	76.5	200	8.37		
EXT DRO >C28-C35	<10.0	10.0	08/06/2012	ND						

Surrogate: 1-Chlorooctane	92.8 %	65.2-140
Surrogate: 1-Chlorooctadecane	96.8 %	63.6-154

**Sample ID: LINES (H201814-16)**

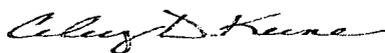
Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>10100</b>	16.0	08/06/2012	ND	416	104	400	3.92		
TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>GRO C6-C10</b>	<b>52.4</b>	50.0	08/06/2012	ND	167	83.6	200	3.32		
<b>DRO &gt;C10-C28</b>	<b>14900</b>	50.0	08/06/2012	ND	153	76.5	200	8.37		
<b>EXT DRO &gt;C28-C35</b>	<b>3980</b>	50.0	08/06/2012	ND						

Surrogate: 1-Chlorooctane	101 %	65.2-140
Surrogate: 1-Chlorooctadecane	287 %	63.6-154

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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

Company Name: Basin Environmental Service Technologies, LLC		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>																							
Project Manager: Ben J. Arquiño		P.O. #:		<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Chlorides</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">8015M</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Hold For BTEX</div> </div>																							
Address: P.O. Box 301		Company: BOECO, LP																									
City: Lovington State: NM Zip: 88260		Attn: Tony Savoie																									
Phone #: (575) 396-2378 Fax #: (575) 396-1429		Address: 522 W. Mermod																									
Project #: Project Owner: BOECO, LP		City: Carlsbad																									
Project Name: Poker Lake Unit 78 SWD		State: NM Zip: 88220																									
Project Location: EDDY NM		Phone #: (432) 556-8730																									
Sampler Name: Jody Walters		Fax #:																									
FOR LAB USE ONLY																											
Lab I.D.	Sample I.D.	(C/R) LAB OR (C) COMP.	# CONTAINERS											MATRIX					PRESERV			SAMPLING					
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE/COOL	OTHER:	DATE	TIME													
H201814																											
1	Sample #12	G	1		X					X			8-3-12	9:00	X	X											
2	Sample #40	G	1		X					X			8-3-12	9:05	X	X											
3	Sample #41	G	1		X					X			8-3-12	9:10	X	X											
4	Sample #42	G	1		X					X			8-3-12	9:15	X	X											
5	Sample #43	G	1		X					X			8-3-12	9:20	X	X											
6	Sample #44	G	1		X					X			8-3-12	9:25	X	X											
7	Manifold Floor 12'	G	1		X					X			8-3-12	9:30	X	X	X										
8	SB#2 sub / E.P.A 8'	G	1		X					X			8-3-12	9:35	X	X	X										
9	SB#1 SUR	G	1		X					X			8-3-12	9:40	X	X											
10	SB#2 SUR	G	1		X					X			8-3-12	9:45	X	X											

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Relinquished By:	Date: 8/3/12	Received By:	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
	Time: 3:05		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:	
	Time:			
Delivered By: (Circle One)	Sample Condition	CHECKED BY:	Please email results to pm@basinenr.com	
Sampler - UPS - Bus - Other:	Cool <input type="checkbox"/> Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	(Initials)	& TSavoie@BassPet.com	

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

August 23, 2012

BEN J. ARGUIJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: POKER LAKE UNIT #78 SWD

Enclosed are the results of analyses for samples received by the laboratory on 08/09/12 15:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_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:	08/09/2012	Sampling Date:	08/08/2012
Reported:	08/23/2012	Sampling Type:	Soil
Project Name:	POKER LAKE UNIT #78 SWD	Sampling Condition:	Cool & Intact
Project Number:	BOPCO	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SAMPLE 27 (H201850-02)**

BTX 8021B		mg/kg		Analyzed By: AP				I-02		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/23/2012	ND	1.92	96.0	2.00	0.190		
Toluene*	<0.050	0.050	08/23/2012	ND	1.96	98.2	2.00	1.16		
Ethylbenzene*	<0.050	0.050	08/23/2012	ND	1.99	99.4	2.00	1.76		
Total Xylenes*	<0.150	0.150	08/23/2012	ND	6.45	107	6.00	2.18		

Surrogate: 4-Bromofluorobenzene (PIC) 100 % 89.4-126

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>8130</b>	16.0	08/13/2012	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	08/11/2012	ND	174	86.8	200	1.44		
<b>DRO &gt;C10-C28</b>	<b>1010</b>	10.0	08/11/2012	ND	176	88.2	200	0.126		
<b>EXT DRO &gt;C28-C35</b>	<b>206</b>	10.0	08/11/2012	ND						

Surrogate: 1-Chlorooctane 117 % 65.2-140

Surrogate: 1-Chlorooctadecane 134 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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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:	08/09/2012	Sampling Date:	08/08/2012
Reported:	08/23/2012	Sampling Type:	Soil
Project Name:	POKER LAKE UNIT #78 SWD	Sampling Condition:	Cool & Intact
Project Number:	BOPCO	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SAMPLE 45 (H201850-05)**

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>48.0</b>	16.0	08/13/2012	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	08/13/2012	ND	188	94.1	200	0.729		
<b>DRO &gt;C10-C28</b>	<b>13.1</b>	10.0	08/13/2012	ND	190	95.1	200	0.877		
<b>EXT DRO &gt;C28-C35</b>	<b>26.6</b>	10.0	08/13/2012	ND						

Surrogate: 1-Chlorooctane 106 % 65.2-140

Surrogate: 1-Chlorooctadecane 107 % 63.6-154

**Sample ID: SAMPLE 46 (H201850-06)**

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>320</b>	16.0	08/13/2012	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	08/13/2012	ND	188	94.1	200	0.729		
<b>DRO &gt;C10-C28</b>	<b>43.1</b>	10.0	08/13/2012	ND	190	95.1	200	0.877		
<b>EXT DRO &gt;C28-C35</b>	<b>12.6</b>	10.0	08/13/2012	ND						

Surrogate: 1-Chlorooctane 115 % 65.2-140

Surrogate: 1-Chlorooctadecane 119 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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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

Company Name: Basin Environmental Service Technologies, LLC			<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>																	
Project Manager: Ben J. Arquijo			P.O. #:																					
Address: P.O. Box 301			Company: BOPCO, LP																					
City: Lovington State: NM Zip: 88260			Attn: Tony Savoie																					
Phone #: (575) 396-2378 Fax #: (575) 396-1429			Address: 522 w. Mermod																					
Project #: Project Owner: BOPCO, LP			City: Carlsbad																					
Project Name: <u>Poker Lake Unit 78 SWD</u>			State: NM Zip: 88220																					
Project Location: <u>EDDY, NM.</u>			Phone #: (432) 556-8730																					
Sampler Name: <u>Jody Walters</u>			Fax #:																					
FOR LAB USE ONLY																								
Lab I.D.		Sample I.D.		# CONTAINERS	MATRIX					PRESERV			SAMPLING											
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE	ICE / COOL	OTHER	DATE	TIME									
H201850															Chlorides BOISM. Hold for BTEC									
1		SAMPLE 12A		G		X				X			8-8-12	1:00										
2		Sample 27		G		X				X			8-8-12	1:15										
3		Sample 28		G		X				X			8-8-12	1:15										
4		Sample 44		G		X				X			8-8-12	1:20										
5		Sample 45		G		X				X			8-8-12	1:25										
6		Sample 46		G		X				X			8-8-12	1:30										
		Sample Floor #5		G		X				X			8-8-12	1:35	SDSO									
		Sample Floor #6		G		X				X			8-8-12	1:40	SDSO									

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

Relinquished By: <u>Jody Walters</u>		Date: <u>8/8/12</u>		Received By: <u>Jodi Benson</u>		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:	
		Time: <u>3:30</u>				Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Fax #:	
Relinquished By:		Date:		Received By:		REMARKS:			
		Time:							
Delivered By: (Circle One) Sampler - UPS - Bus - Other: <u>30</u>				Sample Condition Cool Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		CHECKED BY: (initials) <u>[Signature]</u>			
Please email results to <a href="mailto:pm@basinenv.com">pm@basinenv.com</a> & <a href="mailto:TSavoie@BassPet.com">TSavoie@BassPet.com</a>									

August 21, 2012

BEN J. ARGUIJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: POKER LAKE UNIT #78 SWD

Enclosed are the results of analyses for samples received by the laboratory on 08/15/12 15:40.

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

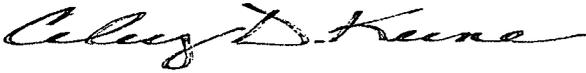
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

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:	08/15/2012	Sampling Date:	08/13/2012
Reported:	08/21/2012	Sampling Type:	Soil
Project Name:	POKER LAKE UNIT #78 SWD	Sampling Condition:	Cool & Intact
Project Number:	BOPCO	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: G #2, S #2, 7' (H201909-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	10400	16.0	08/16/2012	ND	416	104	400	0.00		

**Sample ID: G #2, S #2, 10' (H201909-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	400	16.0	08/16/2012	ND	416	104	400	0.00		

**Sample ID: G #3, S #2, 2' (H201909-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	20600	16.0	08/16/2012	ND	416	104	400	0.00		

**Sample ID: G #3, S #2, 5' (H201909-08)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	14000	16.0	08/16/2012	ND	416	104	400	0.00		

**Sample ID: G #3, S #2, 7' (H201909-09)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1620	16.0	08/16/2012	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  
 BEN J. ARGUIJO  
 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

 Received: 08/15/2012  
 Reported: 08/21/2012  
 Project Name: POKER LAKE UNIT #78 SWD  
 Project Number: BOPCO  
 Project Location: EDDY CO., NM

 Sampling Date: 08/14/2012  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: G #6, S #3, 5' (H201909-15)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	17400	16.0	08/16/2012	ND	416	104	400	0.00		

**Sample ID: G #6, S #3, 10' (H201909-16)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	6500	16.0	08/17/2012	ND	416	104	400	0.00		

**Sample ID: G #6, S #3, 15' (H201909-17)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4400	16.0	08/17/2012	ND	416	104	400	0.00		

**Sample ID: G #7, S #2, 2' (H201909-18)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	6640	16.0	08/17/2012	ND	416	104	400	0.00		

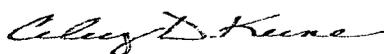
**Sample ID: G #7, S #2, 5' (H201909-19)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4480	16.0	08/17/2012	ND	416	104	400	0.00		

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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Cardinal Laboratories

\*=Accredited Analyte

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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

Company Name: Basin Environmental Service Technologies, LLC		BILL TO				ANALYSIS REQUEST																			
Project Manager: Ben J. Arguijo		P.O. #:																							
Address: P.O. Box 301		Company: BOPCO, LP																							
City: Lovington State: NM Zip: 88260		Attn: Tony Savoie																							
Phone #: (575) 396-2378 Fax #: (575) 396-1429		Address: 522 w. Mermod																							
Project #: Project Owner: BOPCO, LP		City: Carlsbad																							
Project Name: Poker Lake Unit 78 SWD		State: NM Zip: 88220																							
Project Location: EDDY, N.M.		Phone #: (432) 556-8730																							
Sampler Name: Jody Walters		Fax #:																							
FOR LAB USE ONLY																									
Lab I.D.	Sample I.D.	(GRAB OR) (C) (IMP.) # CONTAINERS	MATRIX													PRESERV.		SAMPLING		DATE	TIME	Chlorides			
			GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:														
H201909																									
11	G#4, SH2, 5'	G 1		X				X			8-14-12	9:00	X												
12	G#4, SH2, 7'	G 1		X				X			8-14-12	9:20	X												
13	G#5, SH3, 5'	G 1		X				X			8-14-12	9:40	X												
14	G#5, SH3, 10'	G 1		X				X			8-14-12	10:00	X												
15	G#6, SH3, 5'	G 1		X				X			8-14-12	10:20	X												
16	G#6, SH3, 10'	G 1		X				X			8-14-12	10:50	X												
17	G#6, SH3, 15'	G 1		X				X			8-14-12	11:20	X												
18	G#7, SH2, 2'	G 1		X				X			8-14-12	11:50	X												
19	G#7, SH2, 5'	G 1		X				X			8-14-12	12:10	X												
20	G#8, SH2, 2'	G 1		X				X			8-14-12	12:30	X												

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

Relinquished By: <i>Jody Walters</i>	Date: 8/15/12 Time: 3:40	Received By: <i>Jodi Hanson</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:	Sample Condition Cool <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	CHECKED BY: <i>[Signature]</i>	REMARKS:	
			Please email results to pm@basinenv.com & TSavoie@BassPet.com	

September 20, 2012

BEN J. ARGUIJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: PLU 78 SWD PAD

Enclosed are the results of analyses for samples received by the laboratory on 09/12/12 16:20.

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

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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: 09/12/2012  
 Reported: 09/20/2012  
 Project Name: PLU 78 SWD PAD  
 Project Number: NONE GIVEN  
 Project Location: EDDY COUNTY, NM

 Sampling Date: 09/12/2012  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SAMPLE #48 (H202207-04)**

BTEX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/20/2012	ND	2.25	113	2.00	9.99		
Toluene*	<0.050	0.050	09/20/2012	ND	2.46	123	2.00	10.6		
Ethylbenzene*	<0.050	0.050	09/20/2012	ND	2.44	122	2.00	11.2		
Total Xylenes*	<0.150	0.150	09/20/2012	ND	7.41	124	6.00	10.8		

Surrogate: 4-Bromofluorobenzene (PIC) 97.8 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>608</b>	16.0	09/17/2012	ND	416	104	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	09/17/2012	ND	190	94.9	200	2.67		
DRO >C10-C28	<10.0	10.0	09/17/2012	ND	186	92.9	200	5.65		
EXT DRO >C28-C35	<10.0	10.0	09/17/2012	ND						

Surrogate: 1-Chlorooctane 93.2 % 65.2-140

Surrogate: 1-Chlorooctadecane 93.8 % 63.6-154

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



October 17, 2012

BEN J. ARGUIJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: POKER LAKE UNIT #78 SWD

Enclosed are the results of analyses for samples received by the laboratory on 10/15/12 11:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_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:	10/15/2012	Sampling Date:	10/08/2012
Reported:	10/17/2012	Sampling Type:	Soil
Project Name:	POKER LAKE UNIT #78 SWD	Sampling Condition:	Cool & Intact
Project Number:	BOPCO	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: GRID 5 FLOOR 12' (H202502-05)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3640	16.0	10/17/2012	ND	400	100	400	0.00		

**Sample ID: GRID 6 FLOOR 15' (H202502-06)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4200	16.0	10/17/2012	ND	400	100	400	0.00		

**Sample ID: GRID 7 FLOOR 7' (H202502-07)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3000	16.0	10/17/2012	ND	400	100	400	0.00		

**Sample ID: GRID 8 FLOOR 12' (H202502-08)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3600	16.0	10/17/2012	ND	400	100	400	0.00		

**Sample ID: HEADER FLOOR 10' (H202502-09)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2600	16.0	10/17/2012	ND	400	100	400	0.00		

Cardinal Laboratories

\*=Accredited Analyte

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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

Company Name: Basin Environmental Service Technologies, LLC				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>											
Project Manager: Ben J. Arquiño				P.O. #:															
Address: P.O. Box 301				Company: BOPCO, LP															
City: Lovington		State: NM Zip: 88260		Attn: Tony Savoie															
Phone #: (575) 396-2378		Fax #: (575) 396-1429		Address: 522 W. Mermod															
Project #:		Project Owner: BOPCO, LP		City: Carlsbad															
Project Name: <u>Poker Lake Unit 785WD</u>				State: NM Zip: 88220															
Project Location: <u>EDDY, N.M.</u>				Phone #: (432) 556-8730															
Sampler Name: <u>Jody Walters</u>				Fax #:															
FOR LAB USE ONLY																			
Lab I.D.	Sample I.D.	GRAB OR (COMPI. # CONTAINERS	MATRIX					PRESERV.			SAMPLING		Chlorides						
			GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE		TIME					
<u>H202502</u>																			
1	Grid 1 Floor 18'	G	1			X				X			10-8-12	7:00	X				
2	Grid 2 Floor 10'	G	1			X				X			10-8-12	7:05	X				
3	Grid 3 Floor 10'	G	1			X				X			10-8-12	7:10	X				
4	Grid 4 Floor 10'	G	1			X				X			10-8-12	7:15	X				
5	Grid 5 Floor 12'	G	1			X				X			10-8-12	7:20	X				
6	Grid 6 Floor 15'	G	1			X				X			10-8-12	7:25	X				
7	Grid 7 Floor 7'	G	1			X				X			10-8-12	7:30	X				
8	Grid 8 Floor 12'	G	1			X				X			10-8-12	7:35	X				
9	Header Floor 10'	G	1			X				X			10-8-12	7:40	X				

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

Relinquished By: <u>Jody Walters</u>		Date: <u>10-15-12</u>	Received By: <u>Wade Benson</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>Wade Benson</u>		Date: <u>10-15-12</u>	Received By: <u>Wade Benson</u>		REMARKS:	
		Time: <u>11:45</u>				
Delivered By: (Circle One) <u>UPS</u>			Sample Condition	CHECKED BY:	Please email results to pm@basinenv.com & TSavoie@BassPet.com	
Sampler - UPS - Bus - Other: <u>UPS</u>			Cool / Intact <input type="checkbox"/> Yes <input type="checkbox"/> No	(Initials) <u>WB</u>		



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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November 01, 2013

BEN J. ARGUIJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: POKER LAKE UNIT #78 SWD

Enclosed are the results of analyses for samples received by the laboratory on 10/31/13 15:45.

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

**Notes and Definitions**

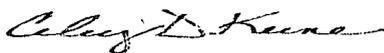
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported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

---

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\* = Accredited Analyte

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