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Effective Solutions

REMEDIATION SUMMARY

AND SITE

CLOSURE PROPOSAL

BOPCO, L.P.
Josephine Rodke Federal #1
Eddy County, New Mexico
BOPCO Job # 24510
UNIT LTR "C" (NE ¼ /NW ¼), Section 27, Township 20 South, Range 31 East
Latitude 32° 32' 45.132" North, Longitude 103° 51' 15.048"
NMOCD Reference # 2RP-370

Prepared For:

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

Prepared By:

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May 2010

Camille J. Bryant
Project Manager

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1.0 INTRODUCTION AND BACKGROUND INFORMATION

Basin Environmental Consulting, LLC (Basin), on behalf of BOPCO, L.P. (BOPCO), has prepared this Remediation Summary and Site Closure Proposal for the release site known as Josephine Rodke Federal #1 (BOPCO Job #24510). The legal description of the release site is Unit Letter "C" (NE ¼ NW ¼), Section 27, Township 20 South, Range 31 East, in Eddy County, New Mexico. The property affected by the release is owned and administered by the United States Department of the Interior, Bureau of Land Management (BLM). The release site GPS coordinates are 32° 32' 45.132" North and 103° 51' 15.048" West. Please reference Figure 1 for a Site Location Map and Figure 2 for a Site and Sample Location Map. General site photographs are provided as Appendix C.

On June 15, 2009, BOPCO submitted notification to the New Mexico Oil Conservation Division (NMOCD) and the BLM, of BOPCO's intention to conduct closure activities at the permanent pit located at the Josephine Rodke Federal #1 well site. The pit was to be excavated to approximately ten (10) feet below ground surface (bgs). All excavated soil was transported to Controlled Recovery Incorporated (CRI) (NM Permit R-9166). The final dimensions of the excavation were approximately one-hundred fifty five (155) feet in width and one-hundred sixty one (161) feet in length and approximately thirty five (35) feet in depth. The soil beneath the permanent pit was analyzed to determine if a release had occurred. On July 1, 2009, BOPCO submitted a Pit, Closed-Loop System, Below-Grade Tank, or Proposed Alternative Method Permit of Closure Plan Application (Form C-144) to the New Mexico Oil Conservation Division (NMOCD) for the permanent pit closure. On December 7, 2009, BOPCO submitted a Release Notification and Corrective Action (Form C-141) to the NMOCD. The Forms C-144 and C-141 are provided as Appendix D.

On November 13, 2009, BOPCO requested Basin assume remediation oversight at the Josephine Rodke Federal #1 site.

On November 20, 2009, BOPCO and Basin representatives met with NMOCD Artesia District Office representatives to discuss remediation activities to be conducted at the site. Due to safety issues associated with the depth of the excavation, it was agreed a six (6) inch PVC conduit would be cemented in the floor of the excavation and extended to approximately eighteen (18) feet bgs and the excavation would be backfilled around the conduit. These activities allowed drilling activities to be conducted in the floor of the excavation.

2.0 NMOCD SITE CLASSIFICATION

According to data obtained from the New Mexico Office of the State Engineer (NMOSE), no water wells are registered in Section 27, Township 20 S, Range 31 E. A depth to groundwater reference map utilized by the NMOCD indicates groundwater should be encountered at approximately one hundred (100) feet below ground surface (bgs). The inferred depth to groundwater in this area results in a score of ten (10) being assigned to the site based on the NMOCD depth to groundwater criteria.

The water well database, maintained by the NMOSE, indicated there are no water wells less than 1,000 feet from the release, resulting in zero (0) points being assigned to this site as a result of this criteria.

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

The NMOCD guidelines indicate the Josephine Rodke Federal #1 release site has an initial ranking score of ten (10). Based on this score, the soil remediation levels for a site with a ranking score of ten (10) points are as follows:

- Benzene – 10 mg/Kg (ppm)
- BTEX – 50 mg/Kg (ppm)
- TPH – 1,000 mg/Kg (ppm)

NMOCD chloride clean-up level concentrations are site specific and are set by the NMOCD.

3.0 DISTRIBUTION OF CONTAMINANTS IN THE UNSATURATED ZONE

On November 23, 2009, the installation of the conduit and backfilling of the excavation commenced. The excavation was backfilled and compacted to approximately eighteen (18) feet bgs.

On December 11 through 21, 2009, nine (9) soil borings (SB-1 through SB-9) were advanced to vertically and horizontally investigate the extent of impact at the site. Soil boring logs are provided as Appendix A. Soil samples were collected at five (5) foot drilling intervals and field screened using a Photo-Ionization Detector (PID) and chloride field screening kit. Selected soil samples were submitted to the laboratory for determination of concentrations of benzene, toluene, ethyl-benzene and total xylene (BTEX), total petroleum hydrocarbons (TPH) and chlorides using EPA Method SW 846-8021B, EPA Method SW 848-8015M and EPA Method 4500 Cl-B, respectively. A Summary of Concentrations of TPH, BTEX and Chlorides in Soil is provided as Table 1. Laboratory analytical reports are provided as Appendix B.

Soil Boring SB-1, was advanced through the conduit in the floor of the excavation at approximately thirty five (35) feet bgs. The soil boring was advanced to a total depth of approximately one hundred fifteen (115) feet bgs. Soil samples collected at thirty five (35) feet bgs, forty (40) feet bgs, fifty (50) feet bgs, fifty five (55) feet bgs, sixty (60) feet bgs, seventy (70) feet bgs, seventy five (75) feet bgs, eighty five (85) feet bgs, ninety (90) feet bgs, ninety five (95) feet bgs, one hundred (100) feet bgs, one hundred five (105) feet bgs, one hundred ten (110) feet bgs and one hundred fifteen (115) feet bgs were submitted to the laboratory for chloride analysis, the soil samples collected at thirty five (35) and forty (40) feet bgs were also analyzed for BTEX and TPH constituent concentrations. Laboratory analytical results indicated chloride concentrations ranged from 320 mg/Kg in the soil sample collected at one hundred (100) feet bgs to 16,000 mg/Kg for the soil sample collected at ninety (90) feet bgs. The soil samples collected at thirty five (35) and forty (40) feet bgs exhibited benzene and BTEX concentrations of less than the appropriate laboratory method detection limit (MDL). TPH concentrations were less than the laboratory MDL in the soil sample collected at forty (40) feet bgs and 18.5 mg/Kg in the soil sample collected at thirty five (35) feet bgs. Soil boring SB-1 was converted to a two (2) inch monitor well (MW-4).

Soil boring SB-2 was advanced approximately fifty (50) feet west of the excavation to a total depth of approximately seventy five (75) feet bgs. Soil samples collected at five (5) feet bgs, fifteen (15) feet bgs, twenty five (25) feet bgs, thirty five (35) feet bgs, forty five (45) feet bgs, fifty five (55) feet bgs, sixty (60) feet bgs, sixty five (65) feet bgs, seventy (70) feet bgs and seventy five (75) feet bgs were submitted to the laboratory for analysis of chloride concentrations, the soil sample collected at five (5) feet bgs was also analyzed for BTEX and TPH constituent concentrations. Laboratory analytical results indicated chloride concentrations ranged from 32 mg/Kg in the soil sample collected at sixty five (65) feet bgs to 7,300 mg/Kg in the soil sample collected at fifty five (55) feet bgs. The soil sample collected at five (5) feet bgs exhibited benzene, BTEX and TPH constituent concentrations of less than the appropriate laboratory MDL.

Soil boring SB-3 was advanced inside the excavation on the south side at approximately eight (8) feet bgs. The soil boring was advanced to a total depth of approximately seventy eight (78) feet bgs. Soil samples collected at thirteen (13) feet bgs, twenty three (23) feet bgs, thirty three (33) feet bgs, forty three (43) feet bgs, forty eight (48) feet bgs, fifty three (53) feet bgs, sixty three (63) feet bgs, seventy three (73) feet bgs and seventy eight (78) feet bgs were submitted to the laboratory for analysis of chloride concentrations, the soil sample collected at thirteen (13) feet bgs was also analyzed for BTEX and TPH constituent concentrations. Laboratory analytical results indicated chloride concentrations ranged from 16 mg/Kg in the soil sample collected at seventy three (73) feet bgs to 1,630 mg/Kg in the soil sample collected at forty eight (48) feet bgs. The soil sample collected at thirteen (13) feet bgs exhibited benzene, BTEX and TPH constituent concentrations less than the appropriate laboratory MDL.

Soil boring SB-4 was advanced approximately sixty seven (67) feet south of the excavation. The soil boring was advanced to a total depth of approximately one hundred forty (140) feet bgs. Soil samples collected at five (5) feet bgs, fifteen (15) feet bgs, twenty five (25) feet bgs, thirty five (35) feet bgs, forty five (45) feet bgs, fifty five (55) feet bgs, sixty five (65) feet bgs, seventy five (75) feet bgs, eighty five (85) feet bgs, ninety five (95) feet bgs, one hundred five (105) feet bgs, one hundred fifteen (115) feet bgs, one hundred twenty five (125) feet bgs, one hundred thirty five (135) feet bgs and one hundred forty (140) feet bgs were submitted to the laboratory for analysis of chloride concentrations, the soil sample collected at five (5) feet bgs was also analyzed for BTEX and TPH constituent concentrations. Laboratory analytical results indicated chloride concentrations ranged from less than the laboratory MDL in the soil sample collected at sixty five (65) feet bgs to 1,020 mg/Kg in the soil sample collected at fifteen (15) feet bgs. The soil sample collected at five (5) feet bgs exhibited benzene, BTEX and TPH constituent concentrations less than the appropriate laboratory MDL. Soil boring SB-4 was converted to a two (2) inch monitor well (MW-1).

Soil boring SB-5 was advanced inside the excavation on the east side at approximately seven (7) feet bgs. The soil boring was advanced to a total depth of approximately seventy seven (77) feet bgs. Soil samples collected at twelve (12) feet bgs, twenty two (22) feet bgs, thirty two (32) feet bgs, forty two (42) feet bgs, fifty two (52) feet bgs, fifty seven (57) feet bgs, sixty two (62) feet bgs, seventy two (72) feet bgs and seventy seven (77) feet bgs were submitted to the laboratory for analysis of chloride concentrations, the soil sample collected at twelve (12) feet bgs was also analyzed for BTEX and TPH constituent concentrations. The laboratory analytical results indicated chloride concentrations ranged from 80 mg/Kg in the soil sample collected at forty two (42) feet bgs to 3,040 mg/Kg in the soil sample collected at fifty two (52) feet bgs. The soil

sample collected at twelve (12) feet bgs exhibited benzene, BTEX and TPH constituent concentrations less than the appropriate laboratory MDL.

Soil boring SB-6 was advanced approximately twenty five (25) feet north of the excavation. The soil boring was advanced to a total depth of approximately eighty five (85) feet bgs. Soil samples collected at five (5) feet bgs, fifteen (15) feet bgs, twenty five (25) feet bgs, thirty five (35) feet bgs, forty (40) feet bgs, forty five (45) feet bgs, fifty five (55) feet bgs, sixty (60) feet bgs, sixty five (65) feet bgs, seventy five (75) feet bgs, eighty (80) feet bgs and eighty five (85) feet bgs were submitted to the laboratory for analysis of chloride concentrations, the soil sample collected at five (5) feet bgs was also analyzed for BTEX and TPH constituent concentrations. Laboratory analytical results indicated chloride concentrations ranged from 144 mg/Kg in the soil sample collected at twenty five (25) feet bgs to 9,600 mg/Kg in the soil sample collected at fifty five (55) feet bgs. The soil sample collected at five (5) feet bgs exhibited benzene, BTEX and TPH constituent concentrations less than the appropriate laboratory MDL.

Soil boring SB-7 was advanced approximately seventy five (75) feet north of the excavation. The soil boring was advanced to a total depth of approximately one hundred fifteen (115) feet bgs. Soil samples collected at five (5) feet bgs, fifteen (15) feet bgs, twenty five (25) feet bgs, thirty five (35) feet bgs, forty five (45) feet bgs, fifty five (55) feet bgs, sixty (60) feet bgs, sixty five (65) feet bgs, seventy five (75) feet bgs, eighty five (85) feet bgs, ninety five (95) feet bgs and one hundred (100) feet bgs were submitted to the laboratory for analysis of chloride concentrations, the soil sample collected at five (5) feet bgs was also analyzed for BTEX and TPH constituent concentrations. Laboratory analytical results indicated chloride concentrations ranged from 16 mg/Kg in the soil sample collected at seventy five (75) feet bgs to 4,480 mg/Kg in the soil sample collected at sixty (60) feet bgs. The soil sample collected at five (5) feet bgs exhibited benzene and BTEX concentrations less than the appropriate laboratory MDL and a TPH concentration of 77.1 mg/Kg. Soil boring SB-7 was converted to a two (2) inch monitor well (MW-2).

Soil boring SB-8 was advanced approximately eighty seven (87) feet north of the excavation. The soil boring was advanced to a total depth of approximately seventy five (75) feet bgs. Soil samples collected at five (5) feet bgs, fifteen (15) feet bgs, twenty five (25) feet bgs, thirty five (35) feet bgs, forty (40) feet bgs, forty five (45) feet bgs, fifty five (55) feet bgs, sixty (60) feet bgs, sixty five (65) feet bgs, seventy (70) feet bgs and seventy five (75) feet bgs were submitted to the laboratory for analysis of chloride concentrations, the soil sample collected at five (5) feet bgs was also analyzed for BTEX and TPH constituent concentrations. Laboratory analytical results indicated chloride concentrations ranged from 96 mg/Kg in the soil sample collected at five (5) feet bgs to 3,080 mg/Kg in the soil sample collected at twenty five (25) feet bgs. The soil sample collected at five (5) feet bgs exhibited benzene and BTEX concentrations less than the appropriate laboratory MDL and a TPH concentration of 192 mg/Kg.

Soil boring SB-9 was advanced approximately nineteen (19) feet to the west of the excavation. The soil boring was advanced to a total depth of approximately one hundred fifteen (115) feet bgs. Soil samples collected at five (5) feet bgs, fifteen (15) feet bgs, twenty five (25) feet bgs, thirty five (35) feet bgs, forty five (45) feet bgs, fifty (50) feet bgs, fifty five (55) feet bgs, sixty (60) feet bgs, sixty five (65) feet bgs, seventy five (75) feet bgs, eighty (80) feet bgs, eighty five (85) feet bgs, ninety five (95) feet bgs, one hundred five (105) feet bgs and one hundred ten (110) feet bgs were submitted to the laboratory for analysis of chloride concentrations, the soil

sample collected at five (5) feet bgs was also analyzed for BTEX and TPH constituent concentrations. Laboratory analytical results indicated chloride concentrations ranged from 80 mg/Kg in the soil samples collected at five (5) and fifteen (15) feet bgs to 2,440 mg/Kg in the soil sample collected at sixty (60) feet bgs. The soil sample collected at five (5) feet bgs exhibited benzene and BTEX concentrations less than the appropriate laboratory MDL and a TPH concentration of 67.5 mg/Kg. Soil boring SB-9 was converted to a two (2) inch monitor well (MW-3).

On December 17, 2009, eight (8) soil samples (East S/W @ 10', North S/W @ 10', South S/W @ 10', West S/W @ 10', Northeast Corner @ 10', Northwest Corner @ 10', Southeast Corner @ 10' and Southwest Corner @ 10') 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 benzene and BTEX concentrations were less than the appropriate laboratory MDL for all the submitted soil samples. TPH concentrations ranged from 26.2 mg/Kg in soil sample Southwest Corner @ 10' to 55.4 mg/Kg in the soil sample West S/W @ 10'. Chloride concentrations ranged from 48 mg/Kg in the soil sample Southeast Corner @ 10' to 3,200 mg/Kg in the soil sample West S/W @ 10'. A review of the analytical results indicated benzene, BTEX and TPH concentrations were less than the NMOCD regulatory guidelines for all the selected soil samples.
Chloride concentrations were less than the NMOCD approved level of 1,000 mg/Kg in all the submitted soil samples, with the exception of soil samples West S/W @ 10', Northwest Corner @ 10' and Southwest Corner @ 10' which exhibited chloride concentrations of 3,200 mg/kg, 1,490 mg/Kg and 1,810 mg/Kg, respectively. Based on the analytical results additional excavation was conducted along the west sidewall and the northwest and southwest corners of the excavation.

On January 18, 2010, Basin resumed excavation activities on the west sidewall and the northwest and southwest corners of the excavation. Excavated soil was placed in the excavation and leveled.

On February 1, 2010, three (3) soil samples (West S/W A @ 10', Southwest Corner A @ 10' and Northwest Corner A @ 10') were collected and submitted to the laboratory for analysis of chloride concentrations. Laboratory analytical results indicated chloride concentrations ranged from 112 mg/Kg in soil sample West S/W A @ 10' to 496 mg/Kg in soil sample Southwest Corner A @ 10'. Review of the analytical results indicated chloride concentrations were less than 1,000 mg/Kg in all the submitted soil samples.

4.0 DISTRIBUTION OF CONTAMINANTS IN THE SATURATED ZONE

Groundwater was observed at depths ranging from eighty two (82) to one hundred two (102) feet bgs in the on-site monitor wells. Groundwater elevation data collected during the February 23, 2010 sampling event, indicated an inferred groundwater gradient of generally 0.0037 feet/foot to the southeast. Locations of the groundwater monitor wells are depicted on Figure 2. Groundwater Elevation Data is provided as Table 2.

The four (4) groundwater monitor wells (MW-1, MW-2, MW-3 and MW-4) were gauged, purged and sampled on January 12 and January 19, 2010. Pursuant to NMOCD request groundwater monitor well MW-3 was sampled on March 24, 2010 for chloride concentrations.

Groundwater samples were collected from the monitor wells and delivered to Cardinal Laboratory, for determination of chloride concentrations using EPA Method 4500 Cl-B and total dissolved solids (TDS) using EPA Method 160.1. A summary of Concentrations of Chlorides and TDS in Groundwater is presented in Table 3.

Monitor well MW-1 was sampled on January 12 and January 19, 2010. Laboratory analytical results indicated chloride concentrations ranged from 108 mg/L during the January 19th sampling event to 112 mg/L during the January 12th sampling event. TDS concentrations ranged from 639 mg/L during the January 19th sampling event to 708 mg/L during the January 12th sampling event. Chloride concentrations were less than the NMOCD regulatory standard during both sampling events.

Monitor well MW-2 was sampled on January 12 and January 19, 2010. Laboratory analytical results indicated chloride concentrations ranged from 128 mg/L during the January 19th sampling event to 136 mg/L during the January 12th sampling event. TDS concentrations ranged from 541 mg/L during the January 19th sampling event to 598 mg/L during the January 12th sampling event. Chloride concentrations were less than the NMOCD regulatory standard during both sampling events.

Monitor well MW-3 was sampled on January 12, January 19 and March 24, 2010. Laboratory analytical results indicated chloride concentrations were 24,500 mg/L during the January 12th sampling event, 46,000 mg/L during the January 19th sampling event and 61,000 mg/L during the March 24th sampling event. Monitor well MW-3 was sampled on January 12 and 19, 2010 for TDS concentrations. Laboratory analytical results indicated TDS concentrations ranged from 39,300 mg/L during the January 12th sampling event to 72,800 mg/L during the January 19th sampling event. Chloride concentrations exceeded the NMOCD regulatory standard during all three (3) sampling events.

Monitor well MW-4 was sampled on January 12 and January 19, 2010. Laboratory analytical results indicated chloride concentrations ranged from 136 mg/L during the January 19th sampling event to 196 mg/L during the January 12th sampling event. TDS concentrations ranged from 603 mg/L during the January 19th sampling event to 687 mg/L during the January 12th sampling event. Chloride concentrations were less than the NMOCD regulatory standard during both sampling events.

5.0 SITE CLOSURE PROPOSAL

5.1 Soil Closure Proposal

Based on analytical results of the soil samples collected during excavation activities and advancement of the soil borings, BOPCO proposes to conduct a risk-based closure at the site. Due to the depth of impact below and adjacent to the release point, excavation of the impacted soil would be cost prohibitive and impractical given the production facilities located to the west and north of the site.

With NMOCD approval, BOPCO proposes to install a 20 mil polyurethane liner at approximately ten (10) to twelve (12) feet bgs in the existing excavation. Approximately one (1) foot of non-impacted cushion sand will be installed above and below the liner to protect the liner

from damage during installation and backfilling activities. The excavation will be backfilled with locally purchased non-impacted soil and compacted in twelve (12) inch lifts. Following backfilling activities the site will be contoured to fit the surrounding topography and seeded a BLM approved seed mixture.

5.2 Groundwater Closure Proposal

There are currently four (4) groundwater monitor wells (MW-1, MW-2, MW-3 and MW-4) on-site. The monitor wells are sampled on a quarterly schedule. Groundwater elevation data collected during the February 23, 2010 sampling event indicated an inferred groundwater gradient of 0.0037 feet/foot to the southeast.

Analytical results from the two (2) groundwater sampling events indicate chloride concentrations are less than NMOCD regulatory guidelines in three (3) of the on-site monitor wells (MW-1, MW-2 and MW-4). Analytical results indicate chloride concentrations in monitor well MW-3 exceed NMOCD regulatory guidelines. BOPCO proposes to conduct quarterly groundwater sampling and monitoring of the on-site monitor wells.

6.0 REPORTING

On approval and completion of the proposed closure activities, BOPCO will submit a Remediation Summary and Site Closure Request for NMOCD and BLM approval.

7.0 LIMITATIONS

Basin Environmental Consulting, LLC has prepared this Remediation Summary and Soil Closure Proposal to the best of its ability. No other warranty, expressed or implied, is made or intended.

Basin Environmental Consulting, LLC has examined and relied upon documents referenced in the report and has relied on oral statements made by certain individuals. Basin Environmental Consulting, LLC has not conducted an independent examination of the facts contained in referenced materials and statements. We have presumed the genuineness of the documents and that the information provided in documents or statements is true and accurate. Basin Environmental Consulting, LLC has prepared this report, in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Basin Environmental Consulting, LLC also 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. 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 Consulting, LLC and/or BOPCO.

6.0 DISTRIBUTION

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Figures

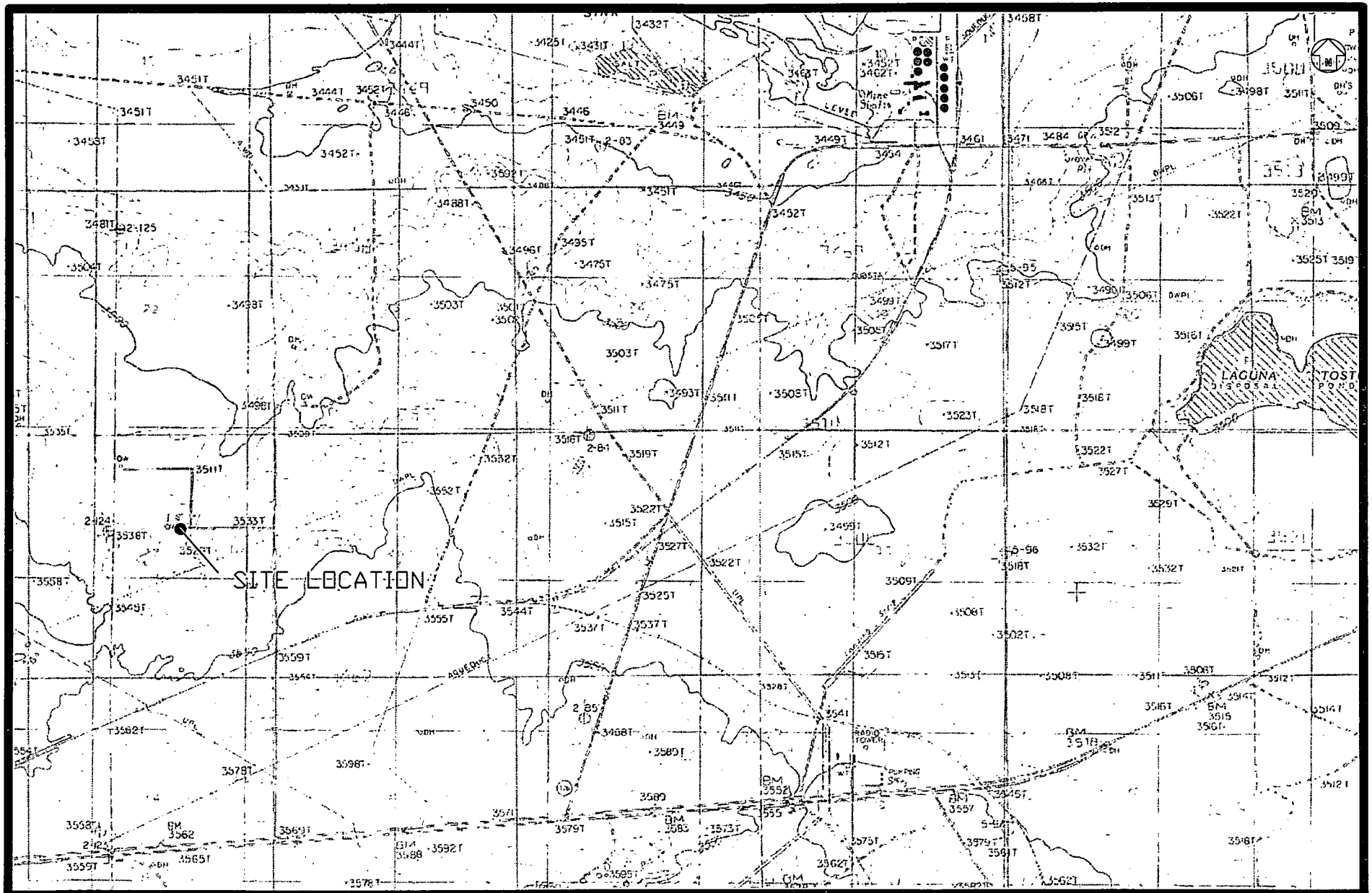
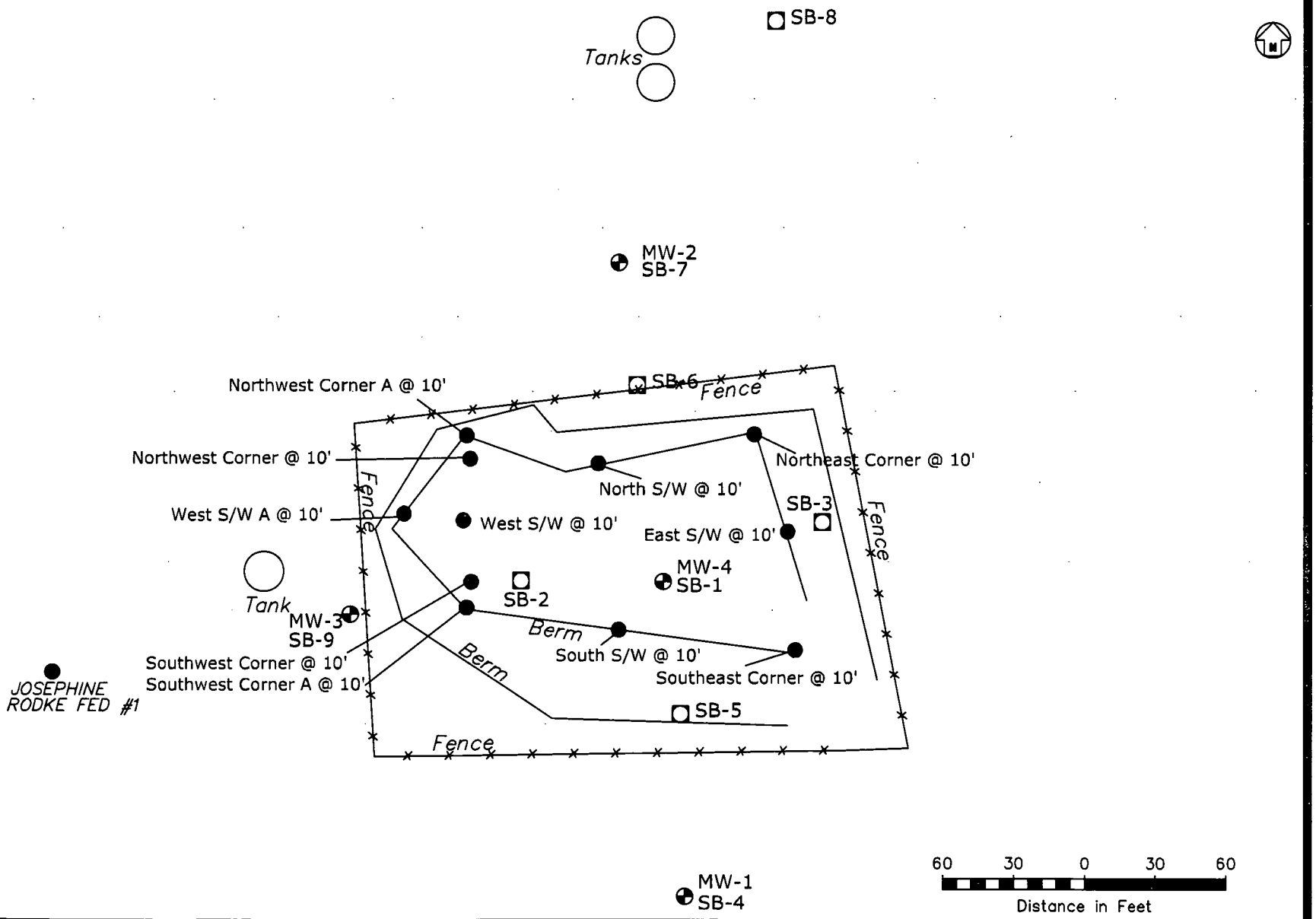


Figure 1
Site Location Map
BOPCO, LP
Joesphine Rodke Federal #1
Eddy County, New Mexico

2RP-370

Basin Environmental Consulting

Prep By: CDS	Checked By: CDS
October 29, 2009	Scale 1"=1,200'



Legend:

- Excavation Extent
- Bench Extent
- MW-1 Monitor Well Location
- SB-1 Soil Boring Location
- Soil Sample Location

Figure 2
Site and Sample Location Map
BOPCO
Joesphine Rodke #1
Eddy County, NM

Basin Environmental Consulting

Prep By: CDS	Checked By: CJB
March 3, 2010	Scale 1"=60'

Tables

TABLE 1

CONCENTRATIONS OF TPH, BTEX AND CHLORIDES IN SOIL

BOPCO, LP
JOSEPHINE RODKE FEDERAL #1
EDDY COUNTY, NEW MEXICO
NMOCD REFERENCE # 2RP-370

SAMPLE LOCATION	SAMPLE DEPTH (Below Grade Surface)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030					SW 848-8015M				4500
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	BTEX (mg/Kg)	GRO C_6-C_{10} (mg/Kg)	DRO C_{10}-C_{28} (mg/Kg)	DRO Ext. C_{28}-C_{35} (mg/Kg)	TOTAL TPH C_6-C_{35} (mg/Kg)	CHLORIDE (mg/Kg)
SB-1 Surface	35 Feet	12/11/09	In-Situ	<0.050	<0.100	<0.050	<0.300	<0.100	<10.0	18.5	<10.0	18.5	**3,640**
SB-1 @ 5'	40 Feet	12/11/09	In-Situ	<0.050	<0.100	<0.050	<0.300	<0.100	<10.0	<10.0	<10.0	<10.0	**7,200**
SB-1 @ 15'	50 Feet	12/11/09	In-Situ	-	-	-	-	-	-	-	-	-	**8,160**
SB-1 @ 20'	55 Feet	12/11/09	In-Situ	-	-	-	-	-	-	-	-	-	**8,000**
SB-1 @ 25'	60 Feet	12/11/09	In-Situ	-	-	-	-	-	-	-	-	-	**2,960**
SB-1 @ 35'	70 Feet	12/11/09	In-Situ	-	-	-	-	-	-	-	-	-	**1,380**
SB-1 @ 40'	75 Feet	12/11/09	In-Situ	-	-	-	-	-	-	-	-	-	848
SB-1 @ 50'	85 Feet	12/11/09	In-Situ	-	-	-	-	-	-	-	-	-	**1,280**
SB-1 @ 55'	90 Feet	12/28/09	In-Situ	-	-	-	-	-	-	-	-	-	**16,000**
SB-1 @ 60'	95 Feet	12/28/09	In-Situ	-	-	-	-	-	-	-	-	-	**11,600**
SB-1 @ 65'	100 Feet	12/28/09	In-Situ	-	-	-	-	-	-	-	-	-	320
SB-1 @ 70'	105 Feet	12/28/09	In-Situ	-	-	-	-	-	-	-	-	-	**1,870**
SB-1 @ 75'	110 Feet	12/28/09	In-Situ	-	-	-	-	-	-	-	-	-	**1,100**
SB-1 @ 80'	115 Feet	12/28/09	In-Situ	-	-	-	-	-	-	-	-	-	**1,230**
SB-2 @ 5'	5 Feet	12/14/09	In-Situ	<0.050	<0.100	<0.050	<0.300	<0.100	<10.0	<10.0	<10.0	<10.0	**1,630**
SB-2 @ 15'	15 Feet	12/14/09	In-Situ	-	-	-	-	-	-	-	-	-	480
SB-2 @ 25'	25 Feet	12/14/09	In-Situ	-	-	-	-	-	-	-	-	-	576
SB-2 @ 35'	35 Feet	12/14/09	In-Situ	-	-	-	-	-	-	-	-	-	160
SB-2 @ 45'	45 Feet	12/14/09	In-Situ	-	-	-	-	-	-	-	-	-	224
SB-2 @ 55'	55 Feet	12/14/09	In-Situ	-	-	-	-	-	-	-	-	-	**7,300**
SB-2 @ 60'	60 Feet	12/14/09	In-Situ	-	-	-	-	-	-	-	-	-	384
SB-2 @ 65'	65 Feet	12/14/09	In-Situ	-	-	-	-	-	-	-	-	-	32
SB-2 @ 70'	70 Feet	12/14/09	In-Situ	-	-	-	-	-	-	-	-	-	272
SB-2 @ 75'	75 Feet	12/14/09	In-Situ	-	-	-	-	-	-	-	-	-	832
SB-3 @ 5'	13 Feet	12/14/09	In-Situ	<0.050	<0.100	<0.050	<0.300	<0.100	<10.0	<10.0	<10.0	<10.0	160

TABLE 1

CONCENTRATIONS OF TPH, BTEX AND CHLORIDES IN SOIL

BOPCO, LP
JOSEPHINE RODKE FEDERAL #1
EDDY COUNTY, NEW MEXICO
NMOCD REFERENCE # 2RP-370

SAMPLE LOCATION	SAMPLE DEPTH (Below Grade Surface)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030					SW 848-8015M				4500
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	BTEX (mg/Kg)	GRO C_6-C_{10} (mg/Kg)	DRO C_{10}-C_{28} (mg/Kg)	DRO Ext. C_{28}-C_{35} (mg/Kg)	TOTAL TPH C_6-C_{35} (mg/Kg)	CHLORIDE (mg/Kg)
SB-3 @ 15'	23 Feet	12/14/09	In-Situ	-	-	-	-	-	-	-	-	-	224
SB-3 @ 25'	33 Feet	12/14/09	In-Situ	-	-	-	-	-	-	-	-	-	80
SB-3 @ 35'	43 Feet	12/14/09	In-Situ	-	-	-	-	-	-	-	-	-	48
SB-3 @ 40'	48 Feet	12/15/09	In-Situ	-	-	-	-	-	-	-	-	-	**1,630**
SB-3 @ 45'	53 Feet	12/15/09	In-Situ	-	-	-	-	-	-	-	-	-	144
SB-3 @ 55'	63 Feet	12/15/09	In-Situ	-	-	-	-	-	-	-	-	-	416
SB-3 @ 65'	73 Feet	12/15/09	In-Situ	-	-	-	-	-	-	-	-	-	16
SB-3 @ 70'	78 Feet	12/15/09	In-Situ	-	-	-	-	-	-	-	-	-	96
SB-4 @ 5'	5 Feet	12/15/09	In-Situ	<0.050	<0.100	<0.050	<0.300	<0.100	<10.0	<10.0	<10.0	<10.0	16
SB-4 @ 15'	15 Feet	12/15/09	In-Situ	-	-	-	-	-	-	-	-	-	**1,020**
SB-4 @ 25'	25 Feet	12/15/09	In-Situ	-	-	-	-	-	-	-	-	-	144
SB-4 @ 35'	35 Feet	12/15/09	In-Situ	-	-	-	-	-	-	-	-	-	80
SB-4 @ 45'	45 Feet	12/15/09	In-Situ	-	-	-	-	-	-	-	-	-	64
SB-4 @ 55'	55 Feet	12/15/09	In-Situ	-	-	-	-	-	-	-	-	-	32
SB-4 @ 65'	65 Feet	12/15/09	In-Situ	-	-	-	-	-	-	-	-	-	<16
SB-4 @ 75'	75 Feet	12/15/09	In-Situ	-	-	-	-	-	-	-	-	-	48
SB-4 @ 85'	85 Feet	12/15/09	In-Situ	-	-	-	-	-	-	-	-	-	32
SB-4 @ 95'	95 Feet	12/15/09	In-Situ	-	-	-	-	-	-	-	-	-	48
SB-4 @ 105'	105 Feet	12/16/09	In-Situ	-	-	-	-	-	-	-	-	-	32
SB-4 @ 115'	115 Feet	12/16/09	In-Situ	-	-	-	-	-	-	-	-	-	32
SB-4 @ 125'	125 Feet	12/16/09	In-Situ	-	-	-	-	-	-	-	-	-	16
SB-4 @ 135'	135 Feet	12/16/09	In-Situ	-	-	-	-	-	-	-	-	-	32
SB-4 @ 140'	140 Feet	12/16/09	In-Situ	-	-	-	-	-	-	-	-	-	48
SB-5 @ 5'	12 Feet	12/16/09	In-Situ	<0.050	<0.100	<0.050	<0.300	<0.100	<10.0	<10.0	<10.0	<10.0	224
SB-5 @ 15'	22 Feet	12/16/09	In-Situ	-	-	-	-	-	-	-	-	-	400

TABLE 1

CONCENTRATIONS OF TPH, BTEX AND CHLORIDES IN SOIL

BOPCO, LP
JOSEPHINE RODKE FEDERAL #1
EDDY COUNTY, NEW MEXICO
NMOCD REFERENCE # 2RP-370

SAMPLE LOCATION	SAMPLE DEPTH (Below Grade Surface)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030					SW 848-8015M				4500
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	BTEX (mg/Kg)	GRO C_6-C_{10} (mg/Kg)	DRO C_{10}-C_{28} (mg/Kg)	DRO Ext. C_{28}-C_{35} (mg/Kg)	TOTAL TPH C_6-C_{35} (mg/Kg)	CHLORIDE (mg/Kg)
SB-5 @ 25'	32 Feet	12/16/09	In-Situ	-	-	-	-	-	-	-	-	-	176
SB-5 @ 35'	42 Feet	12/16/09	In-Situ	-	-	-	-	-	-	-	-	-	80
SB-5 @ 45'	52 Feet	12/16/09	In-Situ	-	-	-	-	-	-	-	-	-	**3,040**
SB-5 @ 50'	57 Feet	12/16/09	In-Situ	-	-	-	-	-	-	-	-	-	**1,710**
SB-5 @ 55'	62 Feet	12/16/09	In-Situ	-	-	-	-	-	-	-	-	-	464
SB-5 @ 65'	72 Feet	12/16/09	In-Situ	-	-	-	-	-	-	-	-	-	**1,820**
SB-5 @ 70'	77 Feet	12/16/09	In-Situ	-	-	-	-	-	-	-	-	-	496
SB-6 @ 5'	5 Feet	12/17/09	In-Situ	<0.050	<0.100	<0.050	<0.300	<0.100	<10.0	<10.0	<10.0	<10.0	160
SB-6 @ 15'	15 Feet	12/17/09	In-Situ	-	-	-	-	-	-	-	-	-	224
SB-6 @ 25'	25 Feet	12/17/09	In-Situ	-	-	-	-	-	-	-	-	-	144
SB-6 @ 35'	35 Feet	12/17/09	In-Situ	-	-	-	-	-	-	-	-	-	**1,140**
SB-6 @ 40'	40 Feet	12/17/09	In-Situ	-	-	-	-	-	-	-	-	-	**2,080**
SB-6 @ 45'	45 Feet	12/17/09	In-Situ	-	-	-	-	-	-	-	-	-	272
SB-6 @ 55'	55 Feet	12/17/09	In-Situ	-	-	-	-	-	-	-	-	-	**9,600**
SB-6 @ 60'	60 Feet	12/17/09	In-Situ	-	-	-	-	-	-	-	-	-	656
SB-6 @ 65'	65 Feet	12/17/09	In-Situ	-	-	-	-	-	-	-	-	-	**2,200**
SB-6 @ 75'	75 Feet	12/17/09	In-Situ	-	-	-	-	-	-	-	-	-	**4,360**
SB-6 @ 80'	80 Feet	12/17/09	In-Situ	-	-	-	-	-	-	-	-	-	**6,480**
SB-6 @ 85'	85 Feet	12/17/09	In-Situ	-	-	-	-	-	-	-	-	-	**1,360**
SB-7 @ 5'	5 Feet	12/17/09	In-Situ	<0.050	<0.050	<0.050	<0.300	<0.050	<10.0	77.1	<10.0	77.1	192
SB-7 @ 15'	15 Feet	12/17/09	In-Situ	-	-	-	-	-	-	-	-	-	480
SB-7 @ 25'	25 Feet	12/17/09	In-Situ	-	-	-	-	-	-	-	-	-	672
SB-7 @ 35'	35 Feet	12/17/09	In-Situ	-	-	-	-	-	-	-	-	-	336
SB-7 @ 45'	45 Feet	12/17/09	In-Situ	-	-	-	-	-	-	-	-	-	752
SB-7 @ 55'	55 Feet	12/18/09	In-Situ	-	-	-	-	-	-	-	-	-	**1,760**

TABLE 1

CONCENTRATIONS OF TPH, BTEX AND CHLORIDES IN SOIL

BOPCO, LP
JOSEPHINE RODKE FEDERAL #1
EDDY COUNTY, NEW MEXICO
NMOCD REFERENCE # 2RP-370

SAMPLE LOCATION	SAMPLE DEPTH (Below Grade Surface)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030					SW 848-8015M				4500
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	BTEX (mg/Kg)	GRO C_6-C_{10} (mg/Kg)	DRO C_{10}-C_{28} (mg/Kg)	DRO Ext. C_{28}-C_{35} (mg/Kg)	TOTAL TPH C_6-C_{35} (mg/Kg)	CHLORIDE (mg/Kg)
SB-7 @ 60'	60 Feet	12/18/09	In-Situ	-	-	-	-	-	-	-	-	-	**4,480**
SB-7 @ 65'	65 Feet	12/18/09	In-Situ	-	-	-	-	-	-	-	-	-	208
SB-7 @ 75'	75 Feet	12/18/09	In-Situ	-	-	-	-	-	-	-	-	-	16
SB-7 @ 85'	85 Feet	12/18/09	In-Situ	-	-	-	-	-	-	-	-	-	160
SB-7 @ 95'	95 Feet	12/18/09	In-Situ	-	-	-	-	-	-	-	-	-	176
SB-7 @ 100'	100 Feet	12/18/09	In-Situ	-	-	-	-	-	-	-	-	-	240
SB-8 @ 5'	5 Feet	12/18/09	In-Situ	<0.050	<0.050	<0.050	<0.300	<0.050	<10.0	192	<10.0	192	96
SB-8 @ 15'	15 Feet	12/18/09	In-Situ	-	-	-	-	-	-	-	-	-	640
SB-8 @ 25'	25 Feet	12/18/09	In-Situ	-	-	-	-	-	-	-	-	-	**3,080**
SB-8 @ 35'	35 Feet	12/18/09	In-Situ	-	-	-	-	-	-	-	-	-	**1,310**
SB-8 @ 40'	40 Feet	12/18/09	In-Situ	-	-	-	-	-	-	-	-	-	640
SB-8 @ 45'	45 Feet	12/18/09	In-Situ	-	-	-	-	-	-	-	-	-	544
SB-8 @ 55'	55 Feet	12/18/09	In-Situ	-	-	-	-	-	-	-	-	-	**1,730**
SB-8 @ 60'	60 Feet	12/18/09	In-Situ	-	-	-	-	-	-	-	-	-	**2,120**
SB-8 @ 65'	65 Feet	12/21/09	In-Situ	-	-	-	-	-	-	-	-	-	336
SB-8 @ 70'	70 Feet	12/21/09	In-Situ	-	-	-	-	-	-	-	-	-	176
SB-8 @ 75'	75 Feet	12/21/09	In-Situ	-	-	-	-	-	-	-	-	-	592
SB-9 @ 5'	5 Feet	12/21/09	In-Situ	<0.050	<0.050	<0.050	<0.300	<0.050	<10.0	67.5	<10.0	67.5	80
SB-9 @ 15'	15 Feet	12/21/09	In-Situ	-	-	-	-	-	-	-	-	-	80
SB-9 @ 25'	25 Feet	12/21/09	In-Situ	-	-	-	-	-	-	-	-	-	144
SB-9 @ 35'	35 Feet	12/21/09	In-Situ	-	-	-	-	-	-	-	-	-	624
SB-9 @ 45'	45 Feet	12/21/09	In-Situ	-	-	-	-	-	-	-	-	-	736
SB-9 @ 50'	50 Feet	12/21/09	In-Situ	-	-	-	-	-	-	-	-	-	**1,070**
SB-9 @ 55'	55 Feet	12/21/09	In-Situ	-	-	-	-	-	-	-	-	-	480
SB-9 @ 60'	60 Feet	12/21/09	In-Situ	-	-	-	-	-	-	-	-	-	**2,440**

TABLE 1

CONCENTRATIONS OF TPH, BTEX AND CHLORIDES IN SOIL

BOPCO, LP
JOSEPHINE RODKE FEDERAL #1
EDDY COUNTY, NEW MEXICO
NMOCD REFERENCE # 2RP-370

SAMPLE LOCATION	SAMPLE DEPTH (Below Grade Surface)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030					SW 848-8015M				4500
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	BTEX (mg/Kg)	GRO C_6-C_{10} (mg/Kg)	DRO C_{10}-C_{28} (mg/Kg)	DRO Ext. C_{28}-C_{35} (mg/Kg)	TOTAL TPH C_6-C_{35} (mg/Kg)	CHLORIDE (mg/Kg)
SB-9 @ 65'	65 Feet	12/21/09	In-Situ	-	-	-	-	-	-	-	-	-	448
SB-9 @ 75'	75 Feet	12/21/09	In-Situ	-	-	-	-	-	-	-	-	-	**1,300**
SB-9 @ 80'	80 Feet	12/21/09	In-Situ	-	-	-	-	-	-	-	-	-	240
SB-9 @ 85'	85 Feet	12/21/09	In-Situ	-	-	-	-	-	-	-	-	-	240
SB-9 @ 95'	95 Feet	12/21/09	In-Situ	-	-	-	-	-	-	-	-	-	512
SB-9 @ 105'	105 Feet	12/21/09	In-Situ	-	-	-	-	-	-	-	-	-	144
SB-9 @ 110'	110 Feet	12/21/09	In-Situ	-	-	-	-	-	-	-	-	-	112
East S/W @ 10'	10 Feet	12/17/09	In-Situ	<0.050	<0.050	<0.050	<0.300	<0.050	<10.0	44.7	<10.0	44.7	160
North S/W @ 10'	10 Feet	12/17/09	In-Situ	<0.050	<0.050	<0.050	<0.300	<0.050	<10.0	42.2	<10.0	42.2	352
South S/W @ 10'	10 Feet	12/17/09	In-Situ	<0.050	<0.050	<0.050	<0.300	<0.050	<10.0	51.4	<10.0	51.4	288
West S/W @ 10'	10 Feet	12/17/09	Excavated	<0.050	<0.050	<0.050	<0.300	<0.050	<10.0	55.4	<10.0	55.4	**3,200**
Northeast Corner @ 10'	10 Feet	12/17/09	In-Situ	<0.050	<0.050	<0.050	<0.300	<0.050	<10.0	29.7	<10.0	29.7	144
Northwest Corner @ 10'	10 Feet	12/17/09	Excavated	<0.050	<0.050	<0.050	<0.300	<0.050	<10.0	30.8	<10.0	30.8	**1,490**
Southeast Corner @ 10'	10 Feet	12/17/09	In-Situ	<0.050	<0.050	<0.050	<0.300	<0.050	<10.0	27.6	<10.0	27.6	48
Southwest Corner @ 10'	10 Feet	12/17/09	Excavated	<0.050	<0.050	<0.050	<0.300	<0.050	<10.0	26.2	<10.0	26.2	**1,810**
West S/W A @ 10'	10 Feet	02/01/10	In-Situ	-	-	-	-	-	-	-	-	-	112
Southwest Corner A @ 10'	10 Feet	02/01/10	In-Situ	-	-	-	-	-	-	-	-	-	496
Northwest Corner A @ 10'	10 Feet	02/01/10	In-Situ	-	-	-	-	-	-	-	-	-	224
NMOCD REGULATORY STANDARD				**10**				**50**				**100**	**1,000**

TABLE 2

GROUNDWATER ELEVATION DATA

BOPCO, LP
JOSEPHINE RODKE FEDERAL #1
EDDY COUNTY, NEW MEXICO

WELL NUMBER	DATE MEASURED	TOTAL WELL DEPTH	CASING WELL ELEVATION	DEPTH TO WATER	CORRECTED GROUNDWATER ELEVATION	VOLUME RECOVERED (gallons)
MW -1	01/04/10	128.31	3,523.34	97.54	3,425.80	12.00
MW-1	01/07/10	128.31	3,523.34	102.75	3,420.59	
MW-1	01/12/10		3,523.34	98.11	3,425.23	
MW-1	01/18/10		3,523.34	98.44	3,424.90	10.00
MW-1	01/19/10		3,523.34	112.18	3,411.16	
MW-1	02/08/10		3,523.34	97.07	3,426.27	
MW-1	02/15/10		3,523.34	97.23	3,426.11	
MW-1	02/23/10		3,523.34	97.11	3,426.23	
MW-1	03/02/10		3,523.34	97.18	3,426.16	
MW-1	03/09/10		3,523.34	97.04	3,426.30	
MW-1	03/16/10		3,523.34	97.16	3,426.18	
MW-1	03/24/10		3,523.34	97.11	3,426.23	
MW-2	01/04/10	118.30	3,527.08	100.36	3,426.72	12.00
MW-2	01/07/10	118.30	3,527.08	100.40	3,426.68	
MW-2	01/12/10		3,527.08	100.35	3,426.73	
MW-2	01/18/10		3,527.08	99.94	3,427.14	15.00
MW-2	01/19/10		3,527.08	99.90	3,427.18	
MW-2	02/08/10		3,527.08	99.82	3,427.26	
MW-2	02/15/10		3,527.08	100.21	3,426.87	
MW-2	02/23/10		3,527.08	100.07	3,427.01	
MW-2	03/02/10		3,527.08	100.19	3,426.89	
MW-2	03/09/10		3,527.08	99.81	3,427.27	
MW-2	03/16/10		3,527.08	100.44	3,426.64	
MW-2	03/24/10		3,527.08	99.93	3,427.15	
MW-3	01/04/10	119.10	3,528.86	102.08	3,426.78	13.00
MW-3	01/07/10	119.10	3,528.86	102.13	3,426.73	
MW-3	01/12/10		3,528.86	102.50	3,426.36	
MW-3	01/18/10		3,528.86	101.67	3,427.19	8.00
MW-3	01/19/10		3,528.86	101.57	3,427.29	
MW-3	02/08/10		3,528.86	101.51	3,427.35	
MW-3	02/15/10		3,528.86	102.04	3,426.82	
MW-3	02/23/10		3,528.86	101.94	3,426.92	
MW-3	03/02/10		3,528.86	102.00	3,426.86	
MW-3	03/09/10		3,528.86	101.51	3,427.35	
MW-3	03/16/10		3,528.86	102.26	3,426.60	
MW-3	03/24/10	118.76	3,528.86	101.48	3,427.38	6.00
MW-3	03/24/10		3,528.86	102.15	3,426.71	
MW-3	03/25/10		3,528.86	101.48	3,427.38	
MW-4	01/04/10	100.58	3,510.60	82.78	3,427.82	8.00
MW-4	01/07/10	100.58	3,510.60	82.97	3,427.63	

TABLE 2

GROUNDWATER ELEVATION DATA

BOPCO, LP
JOSEPHINE RODKE FEDERAL #1
EDDY COUNTY, NEW MEXICO

WELL NUMBER	DATE MEASURED	TOTAL WELL DEPTH	CASING WELL ELEVATION	DEPTH TO WATER	CORRECTED GROUNDWATER ELEVATION	VOLUME RECOVERED (gallons)
MW-4	01/12/10		3,510.60	82.87	3,427.73	
MW-4	01/18/10		3,510.60	82.95	3,427.65	6.00
MW-4	01/19/10		3,510.60	82.48	3,428.12	
MW-4	02/08/10		3,510.60	82.48	3,428.12	
MW-4	02/15/10		3,510.60	82.91	3,427.69	
MW-4	02/23/10		3,510.60	82.70	3,427.90	
MW-4	03/02/10		3,510.60	82.85	3,427.75	
MW-4	03/09/10		3,510.60	82.46	3,428.14	
MW-4	03/16/10		3,510.60	83.12	3,427.48	
MW-4	03/24/10		3,510.60	82.47	3,428.13	

Yellow Highlight indicates results from gauging 5hrs 36min after bailing MW-3 dry
Note MW-3 had fully recovered within 24 hrs as seen on MW-3 03/25/10 data

TABLE 3

CONCENTRATIONS OF CHLORIDES AND TOTAL DISSOLVED SOLIDS IN GROUNDWATER
BOPCO, LP
JOESPHINE RODKE FEDERAL #1
EDDY COUNTY, NEW MEXICO

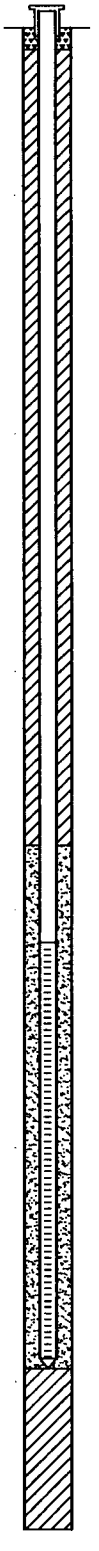
SAMPLE LOCATION	SAMPLE DATE	CHLORIDES (mg/L)	TDS (mg/L)
MW-1	01/12/10	112	708
MW-2	01/12/10	136	598
MW-3	01/12/10	**24,500**	**39,300**
MW-4	01/12/10	196	687
MW-1	01/19/10	108	639
MW-2	01/19/10	128	541
MW-3	01/19/10	**46,000**	**72,800**
MW-4	01/19/10	136	603
MW-3	03/24/10	61,000	-
NMOCD CRITERIA		**250**	**10,000**

Appendices

Appendix A
Soil Boring Logs

Monitor Well MW-1

Depth below ground surface	Chloride Field Test	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description
0	ND	10.6	None	None	
			None	None	Surface - 5' - Sand, reddish brown, some organics, dry
5	ND	2.8			
			None	None	5 - 10' - Sand, reddish brown, dry
10	180	32.6			
			None	None	10 - 15' - Sand, brown to tan with caliche nodules, dry
15	924	5.6			
			None	None	
20	180	2.1			15 - 25' - Sand, brown with sandstone, dry
			None	None	
25	ND	2.6			
			None	None	25 - 30' - Clay, reddish brown, sandy with sandstone, dry
30	ND	2.1			
			None	None	30 - 35' - Sand, brown with limited clay, dry
35	ND	3.8			
			None	None	35 - 40' - Sand, brown with sandstone nodules and limited clay, dry
40	ND	2.4			
			None	None	
45	ND	2.1			
			None	None	40 - 55' - Sand, brown with sandstone nodules, dry
50	ND	2.7			
			None	None	
55	ND	7.5			
			None	None	55 - 60' - Sand, reddish brown with sandstone nodules, dry
60	ND	2.6			
			None	None	60 - 65' - Clay, dark reddish brown, silty, dry
65	ND	2.9			
			None	None	65 - 70' - Sand, dark brown, dry
70	ND	3.1			
			None	None	
75	ND	3.3			
			None	None	70 - 85' - Sand, brown, dry, hard at 74 feet
80	ND	3.1			
			None	None	
85	ND	1.9			
			None	None	85 - 95' - Clay, dark red, silty with sandstone nodules, dry
90	ND	3.2			
			None	None	
95	ND	4.0			
			None	None	95 - 100' - Sand, dark red with sandstone nodules and cemented sandstone
100	ND	3.0			
			None	None	100 - 110' - Sand, reddish brown, fine grained with sandstone nodules, some tan, fine grained sand at 112 feet
105	ND	4.2			
			None	None	
110	ND	3.4			
			None	None	110 - 115' - Sand, brownish tan, fine grained with sandstone nodules, dry
115	ND	3.8			
			None	None	
120	ND	5.7			
			None	None	115 - 130' - Sand, brown, fine grained with sandstone nodules, dry
125	ND	4.4			
			None	None	
130	ND	5.2			
			None	None	
135	ND	4.0			130 - 140' - Sand, tannish brown, fine grained with sandstone nodules, dry
			None	None	
140 TD	ND	4.2			



Monitor Well MW-1

Date Drilled: December 16, 2009
Thickness of Bentonite Seal: 72 Ft
Depth of Exploratory Boring: 140 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.

Grout Surface Seal
Bentonite Pellet Seal
Sand Pack
Screen

Completion Notes

1.) The monitor well was advanced on date using air rotary drilling techniques.
2.) The well was constructed with 2" ID, 0.010 inch factory slotted, threaded joint, schedule 40 PVC pipe.
3.) The well is protected with a locked stick up steel cover and compression cap.
4.) The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.

Monitor Well Details
MW-1
Soil Boring SB-4

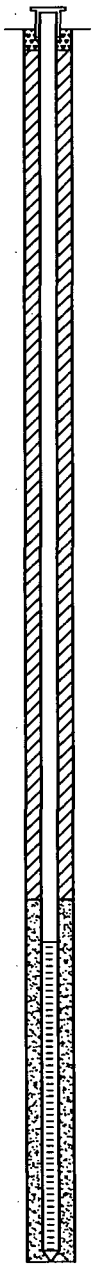
BOPCO
Joesphine Rodke Fed #1
Eddy County, New Mexico

Basin Environmental Consulting

Prep By: CDS	Checked By: CJB
April 5, 2010	

Monitor Well MW-2

Depth below ground surface	Soil Columns	Chloride Field Test	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description
0		ND	29.7	Slight	Slight	Surface - Sand, dark brown with caliche, dry
				Slight	None	
5		(152)	29.9			0 - 10' - Caliche, tan, dry
				Slight	None	
10		520	30.0			
				None	None	10 - 15' - Sand, tan, fine grained with caliche nodules
15		(468)	30.7			
				None	None	15 - 20' - Sand, tannish red with caliche nodules, dry
20		644	31.9			
				None	None	20 - 25' - Sand, red, very fine grained with sandstone nodules, dry
25		(644)	33.7			
				None	None	25 - 30' - Sand, red with sandstone nodules and gypsum stringers, dry
30		924	32.7			
				None	None	30 - 35' - Sand, red with sandstone nodules, dry
35		(280)	34.8			
				None	None	35 - 40' - Sand, red with sandstone nodules and limited clay, dry
40		416	34.0			
				None	None	
45		(708)	34.2			
				None	None	40 - 60' -Sand, red with sandstone nodules, dry
50		2,196	35.9			
				None	None	
55		(1,556)				
				None	None	
60		(4,092)	35.5			
				None	None	
65		(324)	36.7			
				None	None	60 - 75' - Sand, red with sandstone nodules in a clay matrix, dry
70		368	35.8			
				None	None	
75		(212)	38.4			
				None	None	75 - 80' - Sand and Sandstone, red, dry
80		180	39.8			
				None	None	
85		(ND)	38.2			
				None	None	
90		128				80 - 100' - Sandstone, red, white, rose and grey with some red clay, all soils are thin layered
				None	None	
95		(128)				
				None	None	
100		(180)				
				None	None	100 - 105' - Clay, dark red, silty with gypsum stringers
105				None	None	
110						
				None	None	105 - 115' - Sand and sandstone, dark red, silty with limited clay, dry
115	TD					



Monitor Well MW-2

Date Drilled December 17, 2009
Thickness of Bentonite Seal 79 Ft
Depth of Exploratory Boring 115 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.

Grout Surface Seal
Bentonite Pellet Seal
Sand Pack
Screen

Completion Notes

1.) The monitor well was advanced on date using air rotary drilling techniques.
2.) The well was constructed with 2" ID, 0.010 inch factory slotted, threaded joint, schedule 40 PVC pipe.
3.) The well is protected with a locked stick up steel cover and compression cap.
4.) The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.

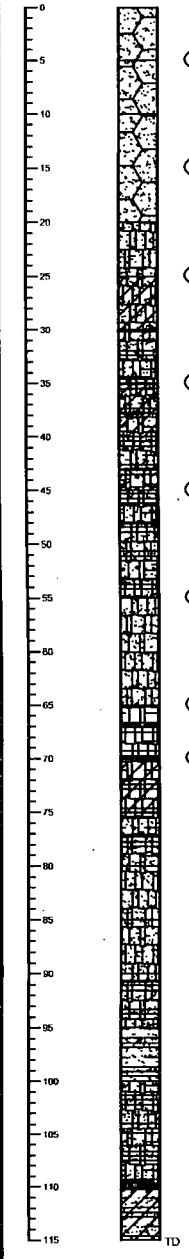
Monitor Well Details
MW-2
Soil Boring SB-7

BOPCO
Joesphine Rodke Fed #1
Eddy County, New Mexico

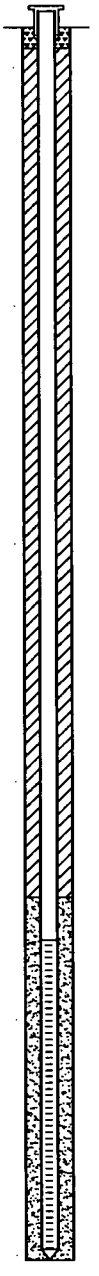
Basin Environmental Consulting

Prep By: CDS	Checked By: CJB
April 5, 2010	

Monitor Well MW-3



Depth below ground surface	Chloride Field Test	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description
	ND	62.8	Moderate	Slight	Surface - Sand, brown with caliche nodules and organics, dry
			Slight	None	0 - 5' - Caliche, tan, sandy with organics, dry
5	ND	35.7			
			Slight	None	5 - 10' - Caliche, tan, sandy, dry
10	ND	28.2			
			None	None	
15	ND	5.7			10 - 20' - Sand, tannish red, fine grained with caliche nodules
			None	None	
20	128	3.6			
			None	None	20 - 25' - Sand, reddish brown with sandstone layers, dry
25	152	2.5			
			None	None	25 - 30' - Sand, brown with sandstone and gypsum stringers, dry
30	152	7.4			
			None	None	30 - 35' - Sand, brown with sandstone and limited clay, dry
35	520	4.9			
			None	None	35 - 40' - Sand, reddish brown with sandstone and clay, dry, a gypsum layer at 42' bgs
40	1,084	5.8			
			None	None	40 - 45' - Clay, brown, sandy with sandstone, dry
45	708	8.4			
			None	None	45 - 55' - Sand, brown with limited clay and sandstone, dry
50	924	6.8			
			None	None	
55	1,556	5.2			
			None	None	
60	2,356	5.7			55 - 65' - Sand, brown, silty with sandstone, dry
			None	None	
65	368	5.2			
			None	None	65 - 70' - Clay, red, silty with sandstone nodules, dry
70	ND	3.1			
			None	None	70 - 75' - Clay, dark red, silty with sandstone nodules and gypsum layering, dry
75	1,452	2.5			
			None	None	75 - 80' - Sand, reddish brown, silty with sandstone and limited clay, dry
80	212	2.9			
			None	None	80 - 85' - Sand, brown, silty with sandstone, dry
85	212	3.7			
			None	None	85 - 90' - Sand, tannish brown, fine grained with sandstone, dry
90	ND	5.2			
			None	None	90 - 95' - Clay, reddish brown, sandy, with sandstone, dry
95	212	6.5			
			None	None	95 - 100' - Sand, reddish brown, with limited clay, dry
100	ND	3.7			
			None	None	100 - 110' - Sand, dark red, silty, with limited clay and cemented sandstone, dry
105	128	6.5			
			None	None	
110	ND	2.7			
			None	None	110 - 115' - Sand, dark red, silty with clay and some gypsum, dry
115					



Monitor Well MW-3

Date Drilled: December 16, 2009
Thickness of Bentonite Seal: 79 Ft
Depth of Exploratory Boring: 115 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.

Grout Surface Seal
Bentonite Pellet Seal
Sand Pack
Screen

Completion Notes

1.) The monitor well was advanced on date using air rotary drilling techniques.
2.) The well was constructed with 2" ID, 0.010 inch factory slotted, threaded joint, schedule 40 PVC pipe.
3.) The well is protected with a locked stick up steel cover and compression cap.
4.) The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.

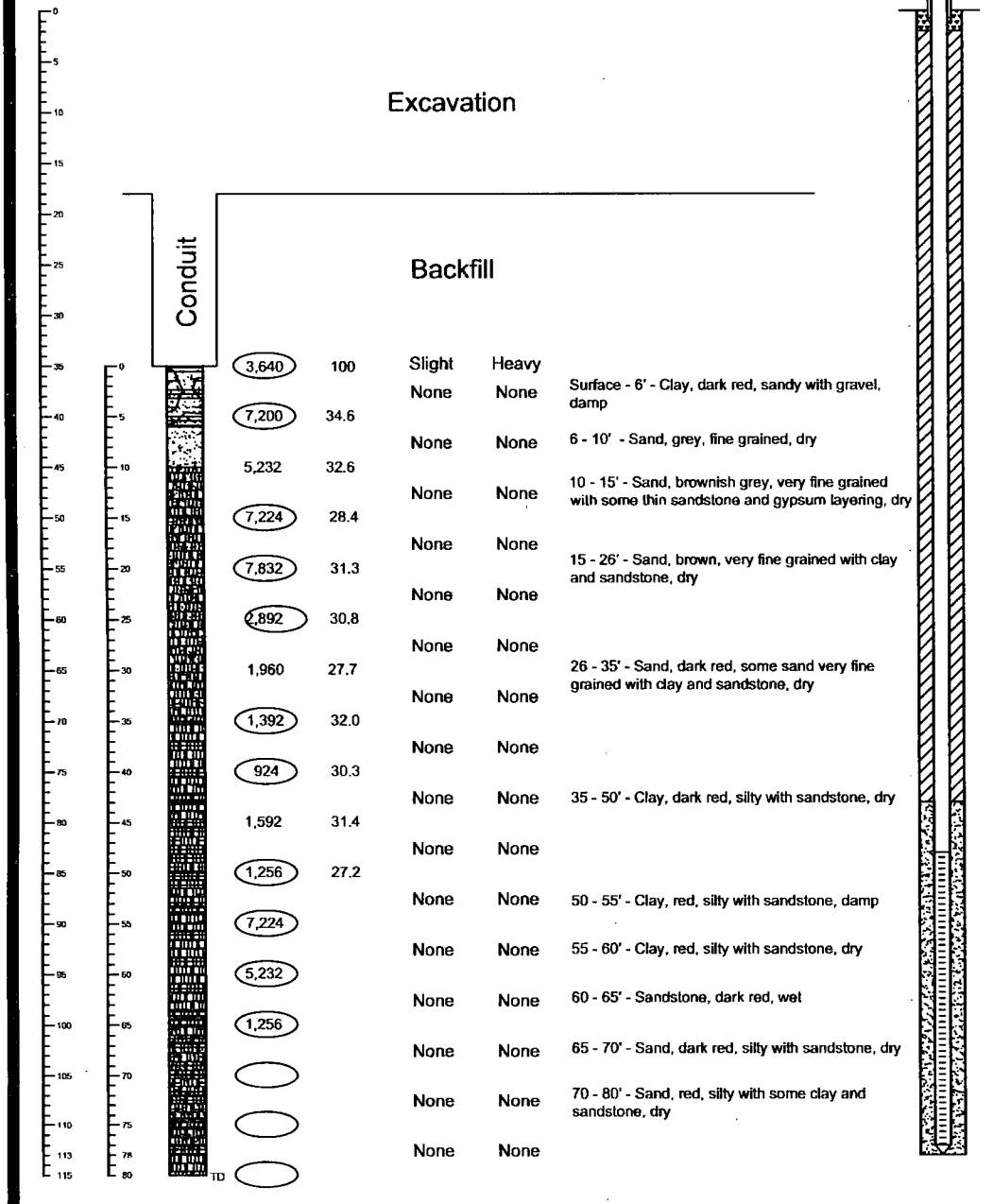
Monitor Well Details
MW-3
Soil Boring SB-9

BOPCO
Joesphine Rodke Fed #1
Eddy County, New Mexico

Basin Environmental Consulting

Prep By: CDS	Checked By: CJB
April 5, 2010	

Monitor Well MW-4



Monitor Well MW-4

Date Drilled: December 11, 2009
Thickness of Bentonite Seal: 76 Ft
Depth of Exploratory Boring: 115 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.

- Grout Surface Seal
- Bentonite Pellet Seal
- Sand Pack
- Screen

Completion Notes

1.) The monitor well was advanced on date using air rotary drilling techniques.
2.) The well was constructed with 2" ID, 0.010 inch factory slotted, threaded joint, schedule 40 PVC pipe.
3.) The well is protected with a locked stick up steel cover and compression cap.
4.) The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.

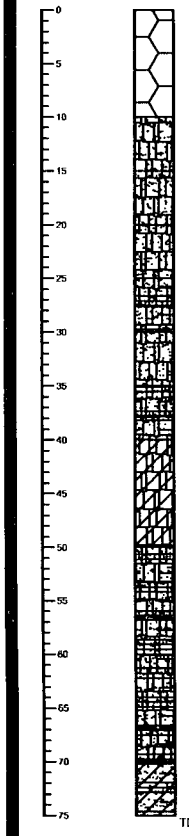
Monitor Well Details
MW-4
Soil Boring SB-1

BOPCO
Joesphine Rodke Fed #1
Eddy County, New Mexico

Basin Environmental Consulting

Prep By: CDS	Checked By: CJB
April 5, 2010	

Soil Boring SB-2



Depth below ground surface	Chloride Field Test	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description
0	ND	0.3	Slight	None	Surface - Sand, reddish brown with caliche and organics, dry
			Slight	None	
5	1,630	1.0			0 - 10' - Caliche, tan, soft, dry
			Slight	None	
10	1,000	1.3			
			None	None	10 - 15' - Sand, tan to reddish with sandstone, dry
15	416	1.6			
			None	None	15 - 20' - Sand, red with sandstone, dry
20	212	8.1			
			None	None	20 - 25' - Sand, reddish brown, with sandstone, dry
25	580	7.7			
			None	None	25 - 30' - Clay, dark reddish brown, sandy with sandstone, dry
30	180	6.8			
			None	None	30 - 35' - Sand, dark reddish brown with sandstone, dry
35	128	6.9			
			None	None	35 - 40' - Sand, brown with sandstone and limited clay, dry
40	180	4.9			
			None	None	
45	152	5.5			40 - 50' - Sandstone, brown with interbedded gypsum layering
			None	None	
50	368	3.0			
			None	None	
55	5,232	3.3			50 - 60' - Sand, dark reddish brown with limited clay and sandstone, dry
			None	None	
60	520	3.1			
			None	None	
65	152	2.8			60 - 70' - Sand, red with clay and some sandstone (silty clay), dry
			None	None	
70	152	2.1			
			None	None	70 - 75' - Sand, grey with gypsum and some clay, dry
75	924 (TD)	2.4			

Soil Boring SB-2

Date Drilled: December 14, 2009
Thickness of Bentonite Seal: 75 Ft
Depth of Exploratory Boring: 75 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

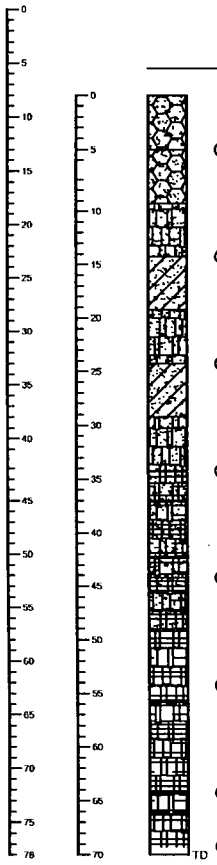
1.) The monitor well was advanced on date using air rotary drilling techniques.
2.) The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.

Soil Boring SB-2
BOPCO
Joesphine Rodke Fed #1
Eddy County, New Mexico

Basin Environmental Consulting

Prep By: CDS	Checked By: CJB
April 5, 2010	

Soil Boring SB-3



Depth below ground surface	Drilling Depth	Soil Columns	Chloride Field Test	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description
							Excavation
			128	2.8	Slight	None	Surface - Caliche, tan, dry
					None	None	0 - 5' - Sand, tan with caliche nodules, dry
			(128)	1.4			
					None	None	5 - 10' - Sand, light red with caliche nodules, dry
			128	1.4			
					None	None	10 - 15' - Sand, red with sandstone nodules, dry
			(152)	1.6			
					None	None	15 - 20' - Sand, reddish brown and gypsum, grey, layered, dry
			128	1.9			
					None	None	20 - 25' - Sand, reddish brown, with sandstone, dry
			(ND)	1.9			
					None	None	25 - 30' - Sand, dark reddish brown, with gypsum, dry
			ND	1.9			
					None	None	30 - 35' - Sand, brown with sandstone, dry
			(ND)	0.9			
					None	None	35 - 40' - Sand, brown with sandstone and clay with gypsum, dry
			1,556	1.9			
					None	None	40 - 45' - Sand, brown with sandstone and clay, dry
			(217)	1.9			
					None	None	45 - 50' - Clay, dark red, sandy with sandstone, dry
			180	2.1			
					None	None	50 - 55' - Clay, dark reddish brown with clay, sandstone and gypsum stringers, dry
			(244)	1.8			
					None	None	55 - 60' - Sandstone, brown with clay, dry
			ND	2.5			
					None	None	60 - 65' - Clay, dark red, silty with limited sandstone, dry
			(ND)	1.9			
					None	None	65 - 70' - Clay, reddish brown, silty with limited sandstone, dry
		TD	(ND)	2.9			

Soil Boring SB-3

Date Drilled December 15, 2009
Thickness of Bentonite Seal 70 Ft
Depth of Exploratory Boring 70 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 monitor well 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
Joesphine Rodke Fed #1
Eddy County, New Mexico

Basin Environmental Consulting

Prep By: CDS	Checked By: CJB
April 5, 2010	

Soil Boring SB-5

Depth below ground surface	Drilling Depth	Soil Columns	Chloride Field Test	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description
							Excavation
			128	2.9	None	None	Surface - Sand, red, dry
					None	None	1' - 5 - Caliche, tan, dry
			(212)	3.5			
					None	None	5 - 10' - Sand, tannish brown with caliche nodules, dry
			212	3.4			
					None	None	10 - 15' - Sand, (sandstone), reddish brown with sandstone nodules, dry, gypsum layer at 19'
			(238)	2.4			
					None	None	15 - 20' - Gypsum, grey, sandy, dry
			ND	13.2			
					None	None	20 - 25' - Clay, reddish brown, sandy with sandstone, dry
			(180)	4.3			
					None	None	25 - 30' - Sand, brown, silty with sandstone, dry
			152	1.4			
					None	None	30 - 35' - Sand, reddish brown, fine grained with sandstone, dry
			(ND)	11.2			
					None	None	35 - 40' - Clay, reddish brown, sandy with sandstone, dry
			(ND)	5.7			
					None	None	40 - 45' - Clay, dark reddish brown, sandy, with sandstone, damp
			(2,892)	3.7			
					None	None	45 - 50' - Clay, dark red, sandy, with sandstone, damp
			1,168	3.9			
					None	None	50 - 55' - Clay, dark red, sandy, dry
			(520)	4.2			
					None	None	55 - 60' - Clay, dark red, sandy with gypsum stringer, dry
			416	5.0			
					None	None	60 - 65' - Clay, red, sandy with gypsum
			(416)	7.2			
					None	None	65 - 70' - Sand, brown with sandstone, dry
		TD	(212)	7.5			

Soil Boring SB-5

Date Drilled: December 16, 2009
Thickness of Bentonite Seal: 70 Ft
Depth of Exploratory Boring: 70 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

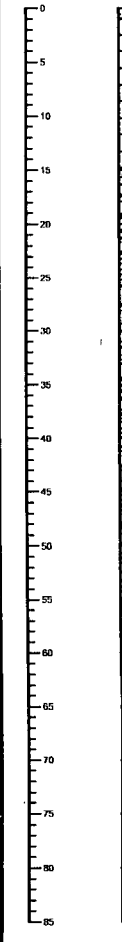
1.) The monitor well was advanced on date using air rotary drilling techniques.
2.) The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.

Soil Boring SB-5
BOPCO
Joesphine Rodke Fed #1
Eddy County, New Mexico

Basin Environmental Consulting

Prep By: CDS	Checked By: CJB
April 5, 2010	

Soil Boring SB-6



Depth below ground surface	Chloride Field Test	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description
0	ND	8.2	Slight	None	Surface - Sand, reddish brown with caliche nodules and organics dry
			None	None	
5	152	10.5			
			None	None	1' - 15 - Caliche, tan, dry
10	128	10.8			
			None	None	
15	238	2.4			
			None	None	15 - 20' - Sand, tannish red with caliche nodules, dry, sandstone at 22'
20	152	11.8			
			None	None	
25	ND	13.4			20 - 30' - Sand, reddish brown with sandstone, dry
			None	None	
30	152	1.4			
			None	None	30 - 35' - Sand, dark red with sandstone and gypsum stringer, dry
35	1,084	16.9			
			None	None	35 - 40' - Sand, red with sandstone and limited clay, dry
40	2,196	16.6			
			None	None	40 - 45' - Sand, brown with sandstone, dry
45	280	20.6			
			None	None	45 - 50' - Sand, dark red with sandstone and limited clay, dry
50	128	45.8			
			None	None	
55	8,500	21.7			50 - 60' - Clay, dark brown, sandy with sandstone, damp
			None	None	
60	416	5.0			
			None	None	60 - 65' - Clay, dark red, silty with sandstone, dry
65	1,084	11.1			
			None	None	65 - 70' - Clay, dark red, silty with sandstone, dry
70	2,636	16.1			
			None	None	70 - 75' - Clay, red, silty with sandstone, dry
75	1,556	14.6			
			None	None	75 - 80' - Clay, dark red, with gypsum, damp
80	1,256				
			None	None	85 - 85' - Sand, brown with sandstone, dry
85 TD	1,084				

Soil Boring SB-6

Date Drilled: December 17, 2009
Thickness of Bentonite Seal: 85Ft
Depth of Exploratory Boring: 85 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

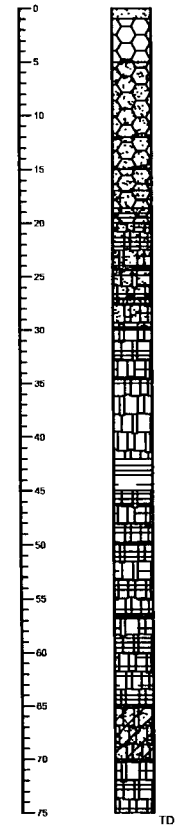
1.) The monitor well was advanced on date using air rotary drilling techniques.
2.) The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.

Soil Boring SB-6
BOPCO
Joesphine Rodke Fed #1
Eddy County, New Mexico

Basin Environmental Consulting

Prep By: CDS	Checked By: CJB
April 5, 2010	

Soil Boring SB-8



Depth below ground surface	Chloride Field Test	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description
	ND	32.4	None	None	Surface - Sand, brown with some organics
			None	None	1 - 5' - Caliche, white, soft, dry
5	ND	26.8			
			None	None	5 -12' - Caliche, white, soft with some brown sand
10	468	31.1			
			None	None	12 - 15' - Sand, light brown, very fine grained with some caliche
15	580	30.0			
			None	None	15 - 17' - Caliche, white, with brown sand, soft, dry. harder at 16'
20	1,256	33.7			17 - 20' - Sand, brown to red with some white caliche, clayey
			None	None	20 - 27' - Sand, dark red with white sandstone, clayey
25	>2,532	29.0			
			None	None	27 - 30' - Sand, dark red with white to red to grey sandstone, increasing clay content
30	2,892	33.4			30 - 31' - Sandstone, dark red to grey, hard
			None	None	31 - 35' - Sandstone, dark red to grey, clayey
35	1,084	35.0			
			None	None	35 - 42' - Sandstone, rose to dark red to light brown to grey with some harder intervals, dry
40	520	34.4			
			None	None	42 - 45' - Clay, dark red, dry
45	580	36.3			
			None	None	45 - 50' - Sandstone, light brown to white to grey, layered intervals, clayey at 48'
50	212	34.6			
			None	None	50 - 60' - Sandstone, light brown to brown with some harder intervals and some clay
55	2,052	35.2			
			None	None	
60	2,196	27.6			
			None	None	60 - 65' - Clay, dark red, silty with sandstone, dry
65	280	36.2			
			None	None	65 - 70' - Sand, reddish brown, silty with sandstone and gypsum stringers
70	152	36.0			
			None	None	70 - 75' - Clay, dark red, silty with sandstone, dry
TD	280	35.0			

Soil Boring SB-8

Date Drilled: December 18, 2009
Thickness of Bentonite Seal: 75 Ft
Depth of Exploratory Boring: 75 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 monitor well 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.

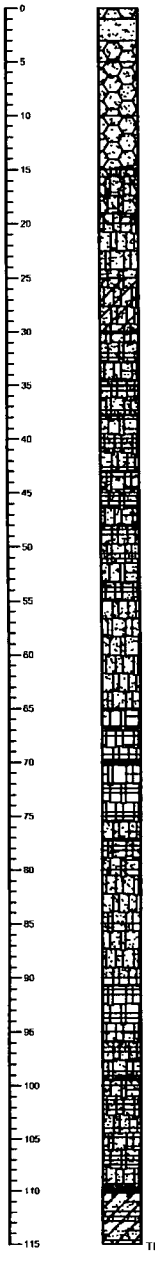
Soil Boring SB-8

BOPCO
Joesphine Rodke Fed #1
Eddy County, New Mexico

Basin Environmental Consulting

Prep By: CDS	Checked By: CJB
April 5, 2010	

Soil Boring SB-9



Depth below ground surface	Chloride Field Test	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description
0	ND	17.3	Moderate	Slight	Surface - Sand, brown with caliche nodules and organics, red sand at 1' and caliche at 3'
			Slight	None	1 - 5' - Caliche and sand, tan with organics, dry
5	ND	10.5			
			None	None	5 -10' - Caliche and sand, tan, dry
10	ND	9.2			
			None	None	10 - 15' - Sand, red, fine grained with caliche, dry
15	ND	8.3			
			None	None	15 - 20' - Sand, tannish red with caliche and sandstone
20	128	7.2			
			None	None	20 - 25' - Sand, reddish brown with sandstone layering, dry
25	152	4.5			
			None	None	25 - 30' - Sand and sandstone, brown with a gypsum stringer, dry
30	152	7.6			
			None	None	30 - 35' - Sand and sandstone, brown with limited clay and sandstone
35	520	7.2			
			None	None	35 - 40' - Sand, reddish brown with sandstone and clay, dry with a gypsum layer at 42'
40	1,084	7.1			
			None	None	40 - 45' - Clay, brown, sandy with sandstone and clay, dry
45	1,556	6.3			
			None	None	45 - 55' - Sand and sandstone, brown with limited clay
50	924	6.2			
			None	None	
55	416	5.6			
			None	None	55 - 65' - Sand, brown, silty with sandstone, dry
60	2,356	5.1			
			None	None	
65	368	4.8			
			None	None	65 - 70' - Clay, red, silty with sandstone, dry
70	ND	4.5			
			None	None	70 - 75' - Clay, dark red, with sandstone and gypsum layer, dry
75	1,452	4.1			
			None	None	75 - 80' - Sand, reddish brown, silty with limited clay and sandstone
80	212	3.5			
			None	None	80 - 85' - Sand, brown, silty with sandstone, dry
85	212	3.9			
			None	None	85 - 90' - Sand, tannish brown with sandstone, dry
90	ND	3.7			
			None	None	90 - 95' - Clay, reddish brown, sandy with sandstone, dry
95	212	3.9			
			None	None	95 - 100' - Sand, reddish brown with limited sandstone and clay, dry
100	ND	3.6			
			None	None	
105	128	2.7			100 - 110' - Sand, dark red, silty with cemented sandstone and limited clay, dry
			None	None	
110	ND	3.1			
			None	None	110 - 115' - Sand, dark red, silty with clay and some gypsum, dry
115 TD		3.3			

Soil Boring SB-9

Date Drilled_____
Thickness of Bentonite Seal 115 Ft
Depth of Exploratory Boring 115 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 monitor well 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-9

BOPCO
Joesphine Rodke Fed #1
Eddy County, New Mexico

Basin Environmental Consulting

Prep By: CDS	Checked By: CJB
April 5, 2010	

Appendix B
Analytical Reports

CARDINAL LABORATORIES

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

December 23, 2009

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

Re: BOPCO (Josephine Rodke Federal #1)

Enclosed are the results of analyses for sample number H18910, received by the laboratory on 12/18/09 at 11:07 am.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

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

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

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

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 14 (includes Chain of Custody)

Sincerely,

Celey D. Keene
Laboratory Director

This report conforms with NELAP requirements.

CARDINAL LABORATORIES

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

ANALYTICAL RESULTS FOR
BASIN ENVIRONMENTAL CONSULTING, LLC
ATTN: CAMILLE BRYANT
P.O. BOX 381
LOVINGTON, NM 88260
FAX TO: (575) 396-1429

Receiving Date: 12/18/09
Reporting Date: 12/22/09
Project Owner: 24 510 (BOPCO)
Project Name: JOSEPHINE RODKE FEDERAL #1
Project Location: EDDY CO., NM

Analysis Date: 12/22/09
Sampling Date: 12/11/09 & 12/14/09
Sample Type: SOIL
Sample Condition: COOL & INTACT @ 1°C
Sample Received By: NF
Analyzed By: HM

LAB NUMBER	SAMPLE ID	Cl^- (mg/kg)
H18910-1	SB-1 SURFACE	3,640
H18910-2	SB-1 @ 5'	7,200
H18910-3	SB-1 @ 15'	8,160
H18910-4	SB1 @ 20'	8,000
H18910-5	SB-1 @ 25'	2,960
H18910-6	SB-1 @ 35'	1,380
H18910-7	SB-2 @ 5'	1,630
H18910-8	SB-2 @ 15'	480
H18910-9	SB-2 @ 25'	576
H18910-10	SB-2 @ 35'	160
H18910-11	SB-2 @ 45'	224
H18910-12	SB-2 @ 55'	7,300
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		< 0.1

METHOD: Standard Methods	4500-Cl^-B

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

Chemist

12/23/09
Date

H18910 Basin Environmental

CARDINAL LABORATORIES

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

ANALYTICAL RESULTS FOR
BASIN ENVIRONMENTAL CONSULTING, LLC
ATTN: CAMILLE BRYANT
P.O. BOX 381
LOVINGTON, NM 88260
FAX TO: (575) 396-1429

Receiving Date: 12/18/09
Reporting Date: 12/22/09
Project Owner: 24 510 (BOPCO)
Project Name: JOSEPHINE RODKE FEDERAL #1
Project Location: EDDY CO., NM

Analysis Date: 12/22/09
Sampling Date: 12/14/09 & 12/15/09
Sample Type: SOIL
Sample Condition: COOL & INTACT @ 1°C
Sample Received By: NF
Analyzed By: HM

LAB NUMBER	SAMPLE ID	Cl^- (mg/kg)
H18910-13	SB-2 @ 65'	32
H18910-14	SB-2 @ 70	272
H18910-15	SB-2 @ 75'	832
H18910-16	SB-3 @ 5'	160
H18910-17	SB-3 @ 15'	224
H18910-18	SB-3 @ 25'	80
H18910-19	SB-3 @ 35'	48
H18910-20	SB-3 @ 40'	1,630
H18910-21	SB-3 @ 45'	144
H18910-22	SB-3 @ 55'	416
H18910-23	SB-3 @ 65'	16
H18910-24	SB-3 @ 70'	96
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		< 0.1

METHOD: Standard Methods	4500-Cl^-B

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

Chemist

12/23/09
Date

H18910 Basin Environmental

CARDINAL LABORATORIES

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

ANALYTICAL RESULTS FOR
BASIN ENVIRONMENTAL CONSULTING, LLC
ATTN: CAMILLE BRYANT
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FAX TO: (575) 396-1429

Receiving Date: 12/18/09
Reporting Date: 12/22/09
Project Owner: 24 510 (BOPCO)
Project Name: JOSEPHINE RODKE FEDERAL #1
Project Location: EDDY CO., NM

Analysis Date: 12/22/09
Sampling Date: 12/15/09 & 12/16/09
Sample Type: SOIL
Sample Condition: COOL & INTACT @ 1°C
Sample Received By: NF
Analyzed By: HM

LAB NUMBER	SAMPLE ID	Cl^- (mg/kg)
H18910-25	SB-4 @ 5'	16
H18910-26	SB-4 @ 15'	1,020
H18910-27	SB-4 @ 25'	144
H18910-28	SB-4 @ 35'	80
H18910-29	SB-4 @ 45'	64
H18910-30	SB-4 @ 55'	32
H18910-31	SB-4 @ 65'	< 16
H18910-32	SB-4 @ 75'	48
H18910-33	SB-4 @ 85'	32
H1810-34	SB-4 @ 95'	48
H18910-35	SB-4 @ 105'	32
H18910-36	SB-4 @ 115'	32
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		< 0.1

METHOD: Standard Methods	4500-Cl^-B

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

Chemist

Date 12/23/09

H18910 Basin Environmental

CARDINAL LABORATORIES

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

ANALYTICAL RESULTS FOR
BASIN ENVIRONMENTAL CONSULTING, LLC
ATTN: CAMILLE BRYANT
P.O. BOX 381
LOVINGTON, NM 88260
FAX TO: (575) 396-1429

Receiving Date: 12/18/09
Reporting Date: 12/22/09
Project Owner: 24 510 (BOPCO)
Project Name: JOSEPHINE RODKE FEDERAL #1
Project Location: EDDY CO., NM

Analysis Date: 12/22/09
Sampling Date: 12/16/09 & 12/17/09
Sample Type: SOIL
Sample Condition: COOL & INTACT @ 1°C
Sample Received By: NF
Analyzed By: HM

LAB NUMBER	SAMPLE ID	Cl^- (mg/kg)
H18910-37	SB-4 @ 125'	16
H18910-38	SB-4 @ 135'	32
H18910-39	SB-4 @ 140'	48
H18910-40	SB-5 @ 5'	224
H18910-41	SB-5 @ 15'	400
H18910-42	SB-5 @ 25'	176
H18910-43	SB-5 @ 35'	80
H18910-44	SB-5 @ 45'	3,040
H18910-45	SB-5 @ 50'	1,710
H18910-46	SB-5 @ 55'	464
H18910-47	SB-5 @ 65'	1,820
H18910-48	SB-5 @ 70'	496
H18910-49	SB-6 @ 5'	160
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		< 0.1

METHOD: Standard Methods	4500-ClˉB

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

Chemist

12/23/09
Date

H18910 Basin Environmental

CARDINAL LABORATORIES

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

ANALYTICAL RESULTS FOR
BASIN ENVIRONMENTAL CONSULTING, LLC
ATTN: CAMILLE BRYANT
P.O. BOX 381
LOVINGTON, NM 88260
FAX TO: (575) 396-1429

Receiving Date: 12/18/09
Reporting Date: 12/22/09
Project Owner: 24 510 (BOPCO)
Project Name: JOSEPHINE RODKE FEDERAL #1
Project Location: EDDY CO., NM

Analysis Date: 12/22/09
Sampling Date: 12/17/09
Sample Type: SOIL
Sample Condition: COOL & INTACT @ 1°C
Sample Received By: NF
Analyzed By: HM

LAB NUMBER	SAMPLE ID	Cl^- (mg/kg)
H18910-50	SB-6 @ 15'	224
H18910-51	SB-6 @ 25'	144
H18910-52	SB-6 @ 35'	1,140
H18910-53	SB-6 @ 45'	272
H18910-54	SB-6 @ 55'	9,600
H18910-55	SB-6 @ 65'	2,200
H18910-56	SB-6 @ 75'	4,360
H18910-57	SB-6 @ 80'	6,480
H18910-58	SB-6 @ 85'	1,360
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		< 0.1

METHOD: Standard Methods	4500-Cl⁻B

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

Chemist

12/23/09
Date

H18910 Basin Environmental

CARDINAL LABORATORIES

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

ANALYTICAL RESULTS FOR
BASIN ENVIRONMENTAL CONSULTING, LLC
ATTN: CAMILLE BRYANT
P.O. BOX 381
LOVINGTON, NM 88260
FAX TO: (575) 396-1429

Receiving Date: 12/18/09
Reporting Date: 12/23/09
Project Owner: BOPCO (24510)
Project Name: JOSEPHINE RODKE FEDERAL #1
Project Location: EDDY COUNTY, NM

Sampling Date: 12/11/09 - 12/17/09
Sample Type: SOIL
Sample Condition: COOL & INTACT @ 1°C
Sample Received By: NF
Analyzed By: AB/CK

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/kg)	DRO (>C_{10}-C_{28}) (mg/kg)	DRO ext. (>C_{28}-C_{35}) (mg/kg)
ANALYSIS DATE		12/20/09	12/20/09	12/20/09
H18910-1	SB-1 SURFACE	<10.0	18.5	<10.0
H18910-2	SB-1 @ 5'	<10.0	<10.0	<10.0
H18910-7	SB-2 @ 5'	<10.0	<10.0	<10.0
H18910-16	SB-3 @ 5'	<10.0	<10.0	<10.0
H18910-25	SB-4 @ 5'	<10.0	<10.0	<10.0
H18910-40	SB-5 @ 5'	<10.0	<10.0	<10.0
H18910-49	SB-6 @ 5'	<10.0	<10.0	<10.0
Quality Control		574	583	-
True Value QC		500	500	-
% Recovery		115	117	-
Relative Percent Difference		3.7	8.1	-

METHODS: TPH GRO & DRO: EPA SW-846 8015 M extended. Reported on wet weight.
Not accredited for GRO/DRO/EXT. DRO.

Lab Director

Date 12/23/09

H18910 TPHEXT BASIN

CARDINAL LABORATORIES

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

ANALYTICAL RESULTS FOR
BASIN ENVIRONMENTAL CONSULTING, LLC
ATTN: CAMILLE BRYANT
P.O. BOX 381
LOVINGTON, NM 88260
FAX TO: (575) 396-1429

Receiving Date: 12/18/09
Reporting Date: 12/22/09
Project Owner: BOPCO (24510)
Project Name: JOSEPHINE RODKE FEDERAL #1
Project Location: EDDY CO., NM

Sampling Date: 12/11/09 - 12/17/09
Sample Type: SOIL
Sample Condition: COOL & INTACT @ 1 °C
Sample Received By: NF
Analyzed By: ZL

LAB NO.	SAMPLE ID	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)
ANALYSIS DATE:		12/21/09	12/21/09	12/21/09	12/21/09
H18910-1	SB-1 SURFACE	<0.050	<0.100	<0.050	<0.300
H18910-2	SB-1 @ 5'	<0.050	<0.100	<0.050	<0.300
H18910-7	SB-2 @ 5'	<0.050	<0.100	<0.050	<0.300
H18910-16	SB-3 @ 5'	<0.050	<0.100	<0.050	<0.300
H18910-25	SB-4 @ 5'	<0.050	<0.100	<0.050	<0.300
H18910-40	SB-5 @ 5'	<0.050	<0.100	<0.050	<0.300
H18910-49	SB-6 @ 5'	<0.050	<0.100	<0.050	<0.300
Quality Control		0.050	0.050	0.049	0.137
True Value QC		0.050	0.050	0.050	0.150
% Recovery		100	100	98.0	91.3
Relative Percent Difference		3.9	2.0	4.2	3.6

METHODS: BTEX - SW-846 8021B
Reported on wet weight.
TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE, AND TOTAL XYLENES.

Lab Director

12/22/09
Date

H18910 BTEX BASIN

CARDINAL LABORATORIES

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

Company Name:	Basin Env. Consulting	**BILL TO**	
Project Manager:	Camille Bryant	P.O. #:	
Address:	2800 Plains Hwy	Company:	BOPCO
City:	Lovington State: NM Zip: 88260	Attn:	Tony Savoie
Phone #:	677-1605-7210 Fax #: 575-396-1429	Address:	
Project #:	24.610 Project Owner: BOPCO	City:	
Project Name:	Josephine Radke Federal #1	State: Zip:	
Project Location:	Eddy Co, NM	Phone #:	
Sampler Name:	Camille Bryant	Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		Chloride 4500	TPH 8015 MM 3 x frac	BTEX 8021B									
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME												
H18910-1	SB-1 Surface	G	1			X					X		12/11	1345	X	X	X									
-2	SB-1 @ 5'												12/11	1400	X	X	X									
-3	SB-1 @ 15'												12/11	1430	X											
-4	SB-1 @ 20'												12/11	1445	X											
-5	SB-1 @ 25'												12/11	1500	X											
-6	SB-1 @ 35'												12/11	1545	X											
-7	SB-2 @ 5'												12/14	1000	X	X	X									
-8	SB-2 @ 15'												12/14	1030	X											
-9	SB-2 @ 25'												12/14	1100	X											
-10	SB-2 @ 35'	↓	↓			↓					↓		12/14	1130	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.

Sampler Relinquished:	Camille Bryant	Date: 12/10/09	Received By:	Phone Result: ☐	No Add'l Phone #:
		Time: 1107		Fax Result: ☐	No Add'l Fax #:
Relinquished By:		Date:	Received By:	REMARKS:	
		Time:			

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

Temp.	Sample Condition		CHECKED BY: (Initials)
	Cool	Intact	
1°C	☑ Yes ☐ No	☑ Yes ☐ No	MS

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

#26

CARDINAL LABORATORIES

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

Company Name:	Basin Env. Consulting	**BILL TO**	
Project Manager:	Camille Bryant	P.O. #:	
Address:	2800 Plains Hwy	Company:	BOPCO
City:	Lovington State: NM Zip: 88260	Attn:	Tony Savoie
Phone #:	575 605 7210 Fax #: 396-1429	Address:	
Project #:	24510 Project Owner: BOPCO	City:	
Project Name:	Josephine Radke Federal #1	State: Zip:	
Project Location:	Eddy Co, NM	Phone #:	
Sampler Name:	Camille Bryant	Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING DATE (2009)	TIME	Chloride 4500	TPH 8015M Extended	BTEX 8021B
H18910-11	SB-2 @ 45'	G	1			X					X		12/14	1200	X		
-12	SB-2 @ 55'												12/14	1230	X		
-13	SB-2 @ 65'												12/14	1300	X		
-14	SB-2 @ 70'												12/14	1330	X		
-15	SB-2 @ 75'												12/14	1400	X		
-16	SB-3 @ 5'												12/14	1520	X	X	X
-17	SB-3 @ 15'												12/14	1540	X		
-18	SB-3 @ 25'												12/14	1555	X		
-19	SB-3 @ 35'												12/14	1620	X		
-20	SB-3 @ 40'	↓	↓			↓					↓		12/15	0830	X		

Sampler Relinquished:	Camille Bryant	Date:	12/18/09	Received By:	
		Time:	1107		
Relinquished By:		Date:		Received By:	
		Time:			

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

Temp. 1°C

Sample Condition: Cool ☐ Yes ☐ No; Intact ☒ Yes ☐ No

CHECKED BY: (Initials)

Phone Result:	☐	No	Add'l Phone #:
Fax Result:	☐	No	Add'l Fax #:

REMARKS:

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

CARDINAL LABORATORIES

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

Company Name:	Basin ENV Consulting	**BILL TO**	
Project Manager:	Camille Bryant	P.O. #:	
Address:	2800 Plains Hwy.	Company:	BOPCO
City:	Lovington State: NM Zip: 88260	Attn:	Tony Savoie
Phone #:	575 396 7210 Fax #: 575 396 1429	Address:	
Project #:	24 516 Project Owner: BOPCO	City:	
Project Name:	Joaquin Rocke Federal #1	State: Zip:	
Project Location:	Eddy Co, NM	Phone #:	
Sampler Name:	Camille Bryant	Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING DATE (2009)	TIME	Chloride 4500	TPH 8015M 3x Tender	BTEX 8021B									
H16910 -21	SB-3 @ 45'	G	1			X					X		12/15	0850	X											
-22	SB-3 @ 55'												12/15	0910	X											
-23	SB-3 @ 65'												12/15	0940	X											
-24	SB-3 @ 70'												12/15	1000	X											
-25	SB-4 @ 5'												12/15	1100	X	X	X									
-26	SB-4 @ 15'												12/15	1120	X											
-27	SB-4 @ 25'												12/15	1140	X											
-28	SB-4 @ 35'												12/15	1240	X											
-29	SB-4 @ 45'												12/15	1300	X											
-30	SB-4 @ 65'												12/15	1320	X											

Sampler Relinquished:	Camille Bryant	Date:	12/18/09	Received By:	
		Time:	1107		
Relinquished By:		Date:		Received By:	
		Time:			

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

Temp. 1°C

Sample Condition: Cool ☒ Yes ☐ No; Intact ☒ Yes ☐ No

CHECKED BY: (Initials)

Phone Result: ☐ No Add'l Phone #:
Fax Result: ☐ No Add'l Fax #:
REMARKS:

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

CARDINAL LABORATORIES

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

Company Name:	Basin Env Consulting	**BILL TO**	
Project Manager:	Camille Bryant	P.O. #:	
Address:	2800 Plains Hwy	Company:	BOPCO
City:	Lovington State: NM Zip: 88260	Attn:	Tony Savoie
Phone #:	575 605-7210 Fax #: 575 396-1429	Address:	
Project #:	24 543 Project Owner: BOPCO	City:	
Project Name:	Josephine Roche Federal #1	State: Zip:	
Project Location:	Eddy Co, NM	Phone #:	
Sampler Name:	Camille Bryant	Fax #:	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE (2009)	TIME	ANALYSIS REQUEST: Chloride 4500	TPH 8015M Extended	BTEX 8021B
H18910-31	SB-4 @ 65'	G	1			X					X		12/15	1400	X		
-32	SB-4 @ 75'												12/15	1500	X		
-33	SB-4 @ 85'												12/15	1540	X		
-34	SB-4 @ 95'												12/15	1680	X		
-35	SB-4 @ 105'												12/16	0920	X		
-36	SB-4 @ 115'												12/16	0955	X		
-37	SB-4 @ 125'												12/16	1040	X		
-38	SB-4 @ 135'												12/16	1110	X		
-39	SB-4 @ 140'												12/16	1140	X		
-40	SB-5 @ 5'	↓	↓			↓					↓		12/16	1350	X	X	X

Sampler Relinquished: Camille Bryant	Date: 12/18/09	Received By:	
	Time: 1107		
Relinquished By:	Date:	Received By:	
	Time:		

Phone Result: ☐ No Add'l Phone #:
Fax Result: ☐ No Add'l Fax #:
REMARKS:

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

Temp. 1 °C

Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No

CHECKED BY: (Initials)

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

CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240

(575) 393-2326 Fax (575) 393-2476

Company Name:	Basin Env. Consulting	**BILL TO**	
Project Manager:	Camille Bryant	P.O. #:	
Address:	2800 Plains Hwy	Company:	BOPCO
City:	Lovington State: NM Zip: 88260	Attn:	Tony Savoie
Phone #:	575 396-7210 Fax #: 575 396-1429	Address:	
Project #:	24 510 Project Owner: BOPCO	City:	
Project Name:	Josephine Radke Federal #1	State: Zip:	
Project Location:	Eddy Co NM	Phone #:	
Sampler Name:	Camille Bryant	Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING DATE (2009)	TIME	Chloride 4500	TPH 8015 M extended	BTEX 8021B							
H18910-41	SB-5 @ 15'	G	1			X					X		12/16	1410	X									
-42	SB-5 @ 25'												12/16	1420	X									
-43	SB-5 @ 35'												12/16	1500	X									
-44	SB-5 @ 45'												12/16	1520	X									
-45	SB-5 @ 50'												12/16	1535	X									
-46	SB-5 @ 55'												12/16	1555	X									
-47	SB-5 @ 65'												12/16	1620	X									
-48	SB-5 @ 70'												12/16	1640	X									
-49	SB-6 @ 5'												12/17	0830	X	X	X							
-50	SB-6 @ 15'	↓	↓			↓					↓		12/17	0850	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.

Sampler Relinquished: Camille Bryant	Date: 12/18/09 Time: 1107	Received By:	
Relinquished By:	Date: Time:	Received By:	
Delivered By: (Circle One)	Temp. 1°C	Sample Condition cool & intact	CHECKED BY:

Phone Result: ☐ No Add'l Phone #:

Fax Result: ☐ No Add'l Fax #:

REMARKS:

CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240

(575) 393-2326 Fax (575) 393-2476

Company Name:	Basin Env. Consulting	**BILL TO**	
Project Manager:	Camille Bryant	P.O. #:	
Address:	2800 Plains Hwy	Company:	BOPCO
City:	Lovington State: NM Zip: 88260	Attn:	Tony Savoie
Phone #:	575 605-7210 Fax #: 575 396 1429	Address:	
Project #:	24510 Project Owner: BOPCO	City:	
Project Name:	Josephine Radke Federal #1	State: Zip:	
Project Location:	Eddy Co, NM	Phone #:	
Sampler Name:	Camille Bryant	Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		Chloride 4500	TPH 8015M extended	BTEX 8021B							
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME										
H18910-51	SB-6 @ 25'	G	1			X					X		12/17	0910	X									
-52	SB-6 @ 35'												12/17	0940	X									
-53	SB-6 @ 45'												12/17	1000	X									
-54	SB-6 @ 55'												12/17	1040	X									
-55	SB-6 @ 65'												12/17	1100	X									
-56	SB-6 @ 75'												12/17	1140	X									
-57	SB-6 @ 80'												12/17	1210	X									
-58	SB-6 @ 85'												12/17	1250	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.

Sampler Relinquished: Camille Bryant	Date: 12/18/09 Time: 1107	Received By:	
Relinquished By:	Date: Time:	Received By:	
Delivered By: (Circle One)	Temp. 1°C	Sample Condition Iced intact	CHECKED BY:

Phone Result: ☐ No Add'l Phone #:

Fax Result: ☐ No Add'l Fax #:

REMARKS:

CARDINAL LABORATORIES

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

December 30, 2009

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

Re: BOPCO 24 510 (Josephine Rodke Federal #1)

Enclosed are the results of analyses for sample number H18938, received by the laboratory on 12/22/09 at 4:50 pm.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

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

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

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

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 12 (includes Chain of Custody)

Sincerely,

Celey D. Keene
Laboratory Director

This report conforms with NELAP requirements.

CARDINAL LABORATORIES

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

ANALYTICAL RESULTS FOR
BASIN ENVIRONMENTAL CONSULTING, LLC
ATTN: CAMILLE BRYANT
P.O. BOX 381
LOVINGTON, NM 88260
FAX TO: (575) 396-1429

Receiving Date: 12/22/09
Reporting Date: 12/29/09
Project Owner: 24 510 (BOPCO)
Project Name: JOSEPHINE RODKE FEDERAL #1
Project Location: EDDY CO., NM

Analysis Date: 12/28/09
Sampling Date: 12/14/09, 12/17/09 & 12/18/09
Sample Type: SOIL
Sample Condition: COOL & INTACT @ 6°C
Sample Received By: HM
Analyzed By: HM

LAB NUMBER	SAMPLE ID	Cl^- (mg/kg)
H18938-1	SB-2 @ 60'	384
H18938-2	SB-6 @ 40'	2,080
H18938-3	SB-6 @ 60'	656
H18938-4	SB-7 @ 5'	192
H18938-5	SB-7 @ 15'	480
H18938-6	SB-7 @ 25'	672
H18938-7	SB-7 @ 35'	336
H18938-8	SB-7 @ 45'	752
H18938-9	SB-7 @ 55'	1,760
H18938-10	SB-7 @ 60'	4,480
H18938-11	SB-7 @ 65'	208
H18938-12	SB-7 @ 75'	16
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		< 0.1

METHOD: Standard Methods	4500-ClˉB

Note: Analyses performed on 1:4 w:v aqueous extracts.
Not accredited for Chloride.

Chemist

12/30/09
Date

H18938 Basin Environmental

CARDINAL LABORATORIES

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

ANALYTICAL RESULTS FOR
BASIN ENVIRONMENTAL CONSULTING, LLC
ATTN: CAMILLE BRYANT
P.O. BOX 381
LOVINGTON, NM 88260
FAX TO: (575) 396-1429

Receiving Date: 12/22/09
Reporting Date: 12/29/09
Project Owner: 24 510 (BOPCO)
Project Name: JOSEPHINE RODKE FEDERAL #1
Project Location: EDDY CO., NM

Analysis Date: 12/28/09
Sampling Date: 12/18/09 & 12/21/09
Sample Type: SOIL
Sample Condition: COOL & INTACT @ 6°C
Sample Received By: HM
Analyzed By: HM

LAB NUMBER	SAMPLE ID	Cl^- (mg/kg)
H18938-13	SB-7 @ 85'	160
H18938-14	SB-7 @ 95'	176
H18938-15	SB-7 @ 100'	240
H18938-16	SB-8 @ 5'	96
H18938-17	SB-8 @ 15'	640
H18938-18	SB-8 @ 25'	3,080
H18938-19	SB-8 @ 35'	1,310
H18938-20	SB-8 @ 40'	640
H18938-21	SB-8 @ 45'	544
H18938-22	SB-8 @ 55'	1,730
H18938-23	SB-8 @ 60'	2,120
H18938-24	SB-3 @ 65'	336
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		< 0.1

METHOD: Standard Methods	4500-ClˉB

Note: Analyses performed on 1:4 w:v aqueous extracts.
Not accredited for Chloride.

Chemist

12/30/09
Date

H18938 Basin Environmental

CARDINAL LABORATORIES

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

ANALYTICAL RESULTS FOR
BASIN ENVIRONMENTAL CONSULTING, LLC
ATTN: CAMILLE BRYANT
P.O. BOX 381
LOVINGTON, NM 88260
FAX TO: (575) 396-1429

Receiving Date: 12/22/09
Reporting Date: 12/29/09
Project Owner: 24 510 (BOPCO)
Project Name: JOSEPHINE RODKE FEDERAL #1
Project Location: EDDY CO., NM

Analysis Date: 12/28/09 & 12/29/09
Sampling Date: 12/21/09
Sample Type: SOIL
Sample Condition: COOL & INTACT @ 6°C
Sample Received By: HM
Analyzed By: HM

LAB NUMBER	SAMPLE ID	Cl^- (mg/kg)
H18938-25	SB-8 @ 70'	176
H18938-26	SB-8 @ 75'	592
H18938-27	SB-9 @ 5'	80
H18938-28	SB-9 @ 15'	80
H18938-29	SB-9 @ 25'	144
H18938-30	SB-9 @ 35'	624
H18938-31	SB-9 @ 45'	736
H18938-32	SB-9 @ 50'	1,070
H18938-33	SB-9 @ 55'	480
H18938-34	SB-9 @ 60'	2,440
H18938-35	SB-9 @ 65'	448
H18938-36	SB-9 @ 75'	1,300
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		< 0.1

METHOD: Standard Methods	4500-ClˉB

Note: Analyses performed on 1:4 w:v aqueous extracts.
Not accredited for Chloride.

Chemist

12/30/09
Date

H18938 Basin Environmental

CARDINAL LABORATORIES

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

ANALYTICAL RESULTS FOR
BASIN ENVIRONMENTAL CONSULTING, LLC
ATTN: CAMILLE BRYANT
P.O. BOX 381
LOVINGTON, NM 88260
FAX TO: (575) 396-1429

Receiving Date: 12/22/09
Reporting Date: 12/29/09
Project Owner: 24 510 (BOPCO)
Project Name: JOSEPHINE RODKE FEDERAL #1
Project Location: EDDY CO., NM

Analysis Date: 12/28/09 & 12/29/09
Sampling Date: 12/21/09
Sample Type: SOIL
Sample Condition: COOL & INTACT @ 6°C
Sample Received By: HM
Analyzed By: HM

LAB NUMBER	SAMPLE ID	Cl^- (mg/kg)
H18938-37	SB-9 @ 80'	240
H18938-38	SB-9 @ 85'	240
H18938-39	SB-9 @ 95'	512
H18938-40	SB-9 @ 105'	144
H18938-41	SB-9 @ 110'	112
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		< 0.1

METHOD: Standard Methods	4500-Cl B

Note: Analyses performed on 1:4 w:v aqueous extracts.
Not accredited for Chloride.

Chemist

12/30/09
Date

H18938 Basin Environmental

CARDINAL LABORATORIES

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

ANALYTICAL RESULTS FOR
BASIN ENVIRONMENTAL CONSULTING, LLC
ATTN: CAMILLE BRYANT
P.O. BOX 381
LOVINGTON, NM 88260
FAX TO: (575) 396-1429

Receiving Date: 12/22/09
Reporting Date: 12/28/09
Project Owner: BOPCO (24510)
Project Name: JOSEPHINE RODKE FEDERAL #1
Project Location: EDDY COUNTY, NM

Sampling Date: 12/17/09, 12/18/09, & 12/21/09
Sample Type: SOIL
Sample Condition: COOL & INTACT @ 6°C
Sample Received By: HM
Analyzed By: AB/CK

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/kg)	DRO (>C_{10}-C_{28}) (mg/kg)	DRO ext. (>C_{28}-C_{35}) (mg/kg)
ANALYSIS DATE		12/24/09	12/24/09	12/24/09
H18938-4	SB-7 @ 5'	<10.0	77.1	<10.0
H18938-16	SB-8 @ 5'	<10.0	192	<10.0
H18938-27	SB-9 @ 5'	<10.0	67.5	<10.0
Quality Control		474	441	-
True Value QC		500	500	-
% Recovery		94.8	88.2	-
Relative Percent Difference		0.5	0.2	-

METHODS: TPH GRO & DRO: EPA SW-846 8015 M extended. Reported on wet weight.
Not accredited for GRO/DRO/EXT. DRO.

Lab Director

12/30/09
Date

H18938 TPHEXT BASIN

CARDINAL LABORATORIES

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

ANALYTICAL RESULTS FOR
BASIN ENVIRONMENTAL CONSULTING, LLC
ATTN: CAMILLE BRYANT
P.O. BOX 381
LOVINGTON, NM 88260
FAX TO: (575) 396-1429

Receiving Date: 12/22/09
Reporting Date: 12/30/09
Project Owner: BOPCO (24510)
Project Name: JOSEPHINE RODKE FEDERAL #1
Project Location: EDDY CO., NM

Sampling Date: 12/17/09, 12/18/09 & 12/21/09
Sample Type: SOIL
Sample Condition: COOL & INTACT @ 6 °C
Sample Received By: HM
Analyzed By: ZL

LAB NO.	SAMPLE ID	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)
ANALYSIS DATE:		12/28/09	12/28/09	12/28/09	12/28/09
H18938-4	SB-7 @ 5'	<0.050	<0.050	<0.050	<0.300
H18938-16	SB-8 @ 5'	<0.050	<0.050	<0.050	<0.300
H18938-27	SB-9 @ 5'	<0.050	<0.050	<0.050	<0.300
Quality Control		0.047	0.047	0.047	0.148
True Value QC		0.050	0.050	0.050	0.150
% Recovery		94.0	94.0	94.0	98.7
Relative Percent Difference		1.2	<1.0	<1.0	1.2

METHODS: BTEX - SW-846 8021B
Reported on wet weight.
TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE, AND TOTAL XYLENES.

Chris D. Keene
Lab Director

12/30/09
Date

H18938 BTEX BASIN

CARDINAL LABORATORIES

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

Company Name:	Basin Env Consulting	BILL TO	
Project Manager:	Camille Bryant	P.O. #:	
Address:	2800 Plains Hwy	Company:	Bopco LP
City:	Lovington State: NM Zip: 88260	Attn:	Tony Savoie
Phone #:	575 396 7210 Fax #: 575 396 1429	Address:	
Project #:	24510 Project Owner: Bopco	City:	
Project Name:	Josephine Radke Federal #1	State: Zip:	
Project Location:	Eddy Co	Phone #:	
Sampler Name:	Camille Bryant	Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING DATE	TIME	Chlorides 4500	TPH 8015M + extended	BTEX 8021B
H19938-1	SB-2 @ 60'	G	1			X					X		12/17	1345	X		
-2	SB-6 @ 40'												12/17	0950	X		
-3	SB-6 @ 60'												12/17	1050	X		
-4	SB-7 @ 5'												12/17	1350	X	X	X
-5	SB-7 @ 15'												12/17	1420	X		
-6	SB-7 @ 25'												12/17	1450	X		
-7	SB-7 @ 35'												12/17	1530	X		
-8	SB-7 @ 45'												12/17	1610	X		
-9	SB-7 @ 55'												12/18	0840	X		
-10	SB-7 @ 60'												12/18	0930	X		

Sampler Relinquished: Camille Bryant	Date: 12/22/09 Time: 4:50	Received By:	
Relinquished By:	Date: 12/22/09 Time: 4:50	Received By: Tope S. Moreno	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Temp. 6°C	Sample Condition Cool: Yes / No Intact: Yes / No	CHECKED BY: (Initials) HSM

Phone Result: ☐ No Add'l Phone #:
Fax Result: ☐ No Add'l Fax #:
REMARKS:

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

#26

CARDINAL LABORATORIES

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

Company Name: Basin Env. Consulting	BILL TO		
Project Manager: Camille Bryant	P.O. #:		
Address: 2300 Plum Hwy	Company: BOPCO, LP		
City: Lovington State: NM Zip: 88260	Attn: Tony Savoie		
Phone #: 575 605 7210 Fax #: 575 396 1429	Address:		
Project #: 24 516 Project Owner: BOPCO LP	City:		
Project Name: Josephine Rodke Federal #1	State: Zip:		
Project Location: Eddy Co	Phone #:		
Sampler Name: Camille Bryant	Fax #:		

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING DATE	SAMPLING TIME	Chlorides 4500	TPH 8015M GRO + DRO ext'ed	BTEX 8021B
H18938-11	SB-7 @ 65'	G	1			X					X		12/18	1000	X		
-12	SB-7 @ 75'												12/18	1050	X		
-13	SB-7 @ 85'												12/18	1130	X		
-14	SB-7 @ 95'												12/18	1220	X		
-15	SB-7 @ 100'												12/18	1300	X		
-16	SB-8 @ 5'												12/18	1330	X	X	X
-17	SB-8 @ 15'												12/18	1350	X		
-18	SB-8 @ 25'												12/18	1430	X		
-19	SB-8 @ 35'												12/18	1400	X		
-20	SB-8 @ 40'												12/18	1510	X		

Sampler Relinquished: Camille Bryant	Date: 12/22/09 Time: 4:50	Received By: Tyler S Mcsorley	Phone Result: ☐	No	Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	Fax Result: ☐	No	Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Temp. 6°C	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials) HSM	REMARKS: CJ Bryant@Basin-Consulting.com	

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

#26

CARDINAL LABORATORIES

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

Company Name:	Basin Env. Consulting
Project Manager:	Camilla Bryant
Address:	2800 Plains Hwy
City:	Lovington State: NM Zip: 88260
Phone #:	575 610 7210 Fax #: 575 396 1429
Project #:	24510 Project Owner: BOPCO LP
Project Name:	Josephine Radke Federal #1
Project Location:	Eddy Co
Sampler Name:	Camilla Bryant

BILL TO

P.O. #:	
Company:	BOPCO LP
Attn:	Tony Savoie
Address:	
City:	
State:	Zip:
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING DATE	SAMPLING TIME	Chlorides 4500	TPH 8015M extended	BTEX 8021B
H18938-21	SB-8 @ 45'	C	1			X					X		12/18	1530	X		
-22	SB-8 @ 55'												12/18	1550	X		
-23	SB-8 @ 60'												12/18	1620	X		
-24	SB-8 @ 65'												12/21	0830	X		
-25	SB-8 @ 70'												12/21	0900	X		
-26	SB-8 @ 75'												12/21	0980	X		
-27	SB-9 @ 0'												12/21	1030	X	X	X
-28	SB-9 @ 15'												12/21	1000	X		
-29	SB-9 @ 25'												12/21	1120	X		
-30	SB-9 @ 35'												12/21	1150	X		

Sampler Relinquished:	Date: 12/22/09	Received By:	
Camilla Bryant	Time: 7:50	Dana S. Moore	
Relinquished By:	Date:	Received By:	
	Time:		

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

Temp. | Sample Condition: Cool ☐ Yes ☐ No, Intact ☐ Yes ☐ No | CHECKED BY: (Initials)

Phone Result: ☐ No Add'l Phone #:
Fax Result: ☐ No Add'l Fax #:
REMARKS:

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

CARDINAL LABORATORIES

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

Company Name:	Basin Env. Consulting
Project Manager:	Camille Bryant
Address:	2800 Plaza Hwy
City:	Lovington State: NM Zip: 88260
Phone #:	575 605 7210 Fax #: 575 396-1429
Project #:	24 510 Project Owner: BOPCO, LP
Project Name:	Josephine Ralke Federal #1
Project Location:	Eddy Co
Sampler Name:	Camille Bryant

BILL TO

P.O. #:	
Company:	BOPCO, LP
Attn:	Tony Savoie
Address:	
City:	
State:	Zip:
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: 2009 DATE	TIME	Chlorides	TPH 8015M extended	BTEX 8021B
H18938-31	SB-9 @ 45'	G	1			X					X		12/21	1230	X		
-32	SB-9 @ 50'												12/21	1250	X		
-33	SB-9 @ 55'												12/21	1330	X		
-34	SB-9 @ 60'												12/21	1350	X		
-35	SB-9 @ 65'												12/21	1440	X		
-36	SB-9 @ 75'												12/21	1540	X		
-37	SB-9 @ 80'												12/21	1610	X		
-38	SB-9 @ 85'												12/21	1630	X		
-39	SB-9 @ 95'												12/21	1650	X		
-40	SB-9 @ 105'												12/21	1700	X		

Sampler Relinquished:	Date: 12/22/09	Received By:	
Relinquished By: Camille Bryant	Time: 14:50		
	Date:	Received By: Jose J. Morales	
	Time:		

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

Temp.	Sample Condition: Cool	Intact	CHECKED BY: (Initials)
6.0C	☑ Yes ☐ No	☑ Yes ☐ No	HM

Phone Result: ☐ No Add'l Phone #:
Fax Result: ☐ No Add'l Fax #:
REMARKS:

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

CARDINAL LABORATORIES

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

Company Name: Basin ENV. Consulting
Project Manager: Camille Bryant
Address: 2800 Plains Hwy
City: Lovington State: NM Zip: 88260
Phone #: 575 396 7210 Fax #: 575 396 1429
Project #: 24 510 Project Owner: BOPCO LP
Project Name: Josephine Ralke Federal #1
Project Location: Eddy Co
Sampler Name: Camille Bryant

BILL TO

P.O. #:
Company: BOPCO, LP
Attn: Tony Savoie
Address:
City:
State: Zip:
Phone #:
Fax #:

ANALYSIS REQUEST

Chlorides 4500

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING DATE	TIME	Chlorides 4500
H18938-41	SB9 @ 110'	G	1			X					X		12/21	1720	X

2009

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.

Sampler Relinquished: Camille Bryant Date: 12/22/09 Time: 4:55 Received By: Hope S. Moran
Relinquished By: Date: Time: Received By:

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

Temp. 6.0 Sample Condition: Cool ☑ Yes ☐ No; Intact ☐ Yes ☐ No CHECKED BY: (Initials) HSM

Phone Result: ☐ No Add'l Phone #:
Fax Result: ☐ No Add'l Fax #:
REMARKS:

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

H20

CARDINAL LABORATORIES

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

January 5, 2010

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

Re: BOPCO 24 510 (Josephine Rodke Federal #1)

Enclosed are the results of analyses for sample number H18967, received by the laboratory on 12/31/09 at 9:50 am.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

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

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

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

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 3 (includes Chain of Custody)

Sincerely,

Celey D. Keene
Laboratory Director

This report conforms with NELAP requirements.

CARDINAL LABORATORIES

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

ANALYTICAL RESULTS FOR
BASIN ENVIRONMENTAL CONSULTING, LLC
ATTN: CAMILLE BRYANT
P.O. BOX 381
LOVINGTON, NM 88260
FAX TO: (575) 396-1429

Receiving Date: 12/31/09
Reporting Date: 01/04/10
Project Number: 24 510 (BOPCO, LP)
Project Name: JOSEPHINE RODKE FEDERAL #1
Project Location: EDDY CO., NM

Analysis Date: 01/04/10
Sampling Date: 12/28/09
Sample Type: SOIL
Sample Condition: COOL & INTACT @ 4°C
Sample Received By: HM
Analyzed By: HM

LAB NO.	SAMPLE ID	Cl^- (mg/kg)
H18967-1	SB-1 @ 55'	16,000
H18967-2	SB-1 @ 60'	11,600
H18967-3	SB-1 @ 65'	320
H18967-4	SB-1 @ 70'	1,870
H18967-5	SB-1 @ 75'	1,100
H18967-6	SB-1 @ 80'	1,230
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		<0.1

METHOD: Standard Methods	4500-Cl B

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

Chemist

01/05/10
Date

H18967 Basin Environmental

CARDINAL LABORATORIES

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

Company Name:	Basin Env. Consultants	**BILL TO**	
Project Manager:	Camille Bryant	P.O. #:	
Address:	2800 Plains Hwy	Company:	BOPCO, LP
City:	Lovington State: NM Zip: 88260	Attn:	Tony Savoie
Phone #:	(575) 605-7210 Fax #: (575) 396-1429	Address:	
Project #:	24 510 Project Owner: BOPCO, LP	City:	
Project Name:	Josephine Radke Federal #1	State: Zip:	
Project Location:	Eddy Co, NM	Phone #:	
Sampler Name:	Camille Bryant	Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING DATE	SAMPLING TIME	Chlorides 4500
H18967-1	SB-1 @ 55'	G	1			X					X		12/28	1300	X
-2	SB-1 @ 60'												12/28	1320	X
-3	SB-1 @ 65'												12/28	1350	X
-4	SB-1 @ 70'												12/28	1410	X
-5	SB-1 @ 75'												12/28	1440	X
-6	SB-1 @ 80'												12/28	1520	X

Sampler Relinquished: Camille Bryant	Date: 12/30/09 Time: 0900	Received By:	Phone Result: ☐ Yes ☐ No	Add'l Phone #:	
Relinquished By:	Date: 12/31/09 Time: 9:50	Received By:	Fax Result: ☐ Yes ☐ No	Add'l Fax #:	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Temp: 4°C	Sample Condition: Cool ☑ Yes ☐ No, Intact ☑ Yes ☐ No	CHECKED BY: (Initials)	REMARKS:	

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

II26

CARDINAL LABORATORIES

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

February 4, 2010

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

Re: Josephine Rodke Federal #1 (BOPCO 24510)

Enclosed are the results of analyses for sample number H19203, received by the laboratory on 02/02/10 at 4:50 pm.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

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

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

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

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 3 (includes Chain of Custody)

Sincerely,

Celey D. Keene
Laboratory Director

This report conforms with NELAP requirements.

CARDINAL LABORATORIES

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

ANALYTICAL RESULTS FOR
BASIN ENVIRONMENTAL CONSULTING, LLC
ATTN: CAMILLE BRYANT
P.O. BOX 381
LOVINGTON, NM 88260
FAX TO: (575) 396-1429

Receiving Date: 02/02/10
Reporting Date: 02/03/10
Project Number: 24-510 (BOPCO, LP)
Project Name: JOSEPHINE RODKE FEDERAL #1
Project Location: EDDY CO., NM

Analysis Date: 02/03/10
Sampling Date: 02/01/10
Sample Type: SOIL
Sample Condition: COOL & INTACT @ 3.5°C
Sample Received By: JH
Analyzed By: HM

LAB NO.	SAMPLE ID	Cl^- (mg/kg)
H19203-1	WEST S/WA @ 10'	112
H19203-2	SOUTHWEST CORNER A @ 10'	496
H19203-3	NORTHWEST CORNER A @ 10'	224
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		< 0.1

METHOD: Standard Methods	4500-ClˉB

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

Chemist

02/04/10
Date

H19203 Basin Environmental

CARDINAL LABORATORIES

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

Company Name:	Basin Env. Consulting	**BILL TO**	
Project Manager:	Camille Bryant	P.O. #:	
Address:	2300 Plains Hwy	Company:	BOPCO, LP
City:	Lovington State: NM Zip: 88260	Attn:	Tony Savoie
Phone #:	(575) 610-7210 Fax #: (575) 396-1429	Address:	
Project #:	24-510 Project Owner: BOPCO, LP	City:	
Project Name:	Josephine Rodke Federal #1	State: Zip:	
Project Location:	Eddy Co, NM	Phone #:	
Sampler Name:	Troy Hahn	Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	Chlorides 4500
H19203-1	West SWA @ 10'	G	1			X					X		2/1	1000	X
-2	SouthwestCornerA@10'	G	1			X					X		2/1	1300	X
-3	NorthwestCornerA@10'	G	1			X					X		2/1	1430	X

2010

Sampler Relinquished:	for Troy Hahn	Date: 2/2/10	Received By:	Phone Result: ☐ No	Add'l Phone #:
Camille Bryant		Time: 1650		Fax Result: ☐ No	Add'l Fax #:
Relinquished By:		Date: 2/2/10	Received By: Jodi Henson	REMARKS:	
		Time: 1650			
Delivered By: (Circle One)		Temp.	Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No	CHECKED BY: (Initials)	
Sampler - UPS - Bus - Other:		3.5°C		JA	

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

#26

CARDINAL LABORATORIES

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

January 15, 2010

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

Re: BOPCO 24 510 (Josephine Federal Rodke #1)

Enclosed are the results of analyses for sample number H19040, received by the laboratory on 01/12/10 at 4:50 pm.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

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

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

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

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 3 (includes Chain of Custody)

Sincerely,

Celey D. Keene
Laboratory Director

This report conforms with NELAP requirements.

CARDINAL LABORATORIES

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

ANALYTICAL RESULTS FOR
BASIN ENVIRONMENTAL CONSULTING, LLC
ATTN: CAMILLE BRYANT
P.O. BOX 381
LOVINGTON, NM 88260
FAX TO: (575) 396-1429

Receiving Date: 01/12/10
Reporting Date: 01/14/10
Project Number: 24 510
Project Name: JOSHEPHINE RODKE FEDERAL #1
Project Location: EDDY CO., N.M.

Sampling Date: 01/12/10
Sample Type: GROUNDWATER
Sample Condition: INTACT @ 15°C
Sample Received By: JH
Analyzed By: HM

LAB NO.	SAMPLE ID	Cl^- (mg/L)	TDS (mg/L)
Analysis Date:		01/14/10	01/13/10
H19040-1	MW-1	112	708
H19040-2	MW-2	136	598
H19040-3	MW-3	24,500	39,300
H19040-4	MW-4	196	687
Quality Control		500	NR
True Value QC		500	NR
% Recovery		100	NR
Relative Percent Difference		< 0.1	3.0
METHOD: Standard Methods, EPA		4500-Cl B	160.1

Chemist

01/15/10
Date

H19040 Basin Environmental

CARDINAL LABORATORIES

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

Page 1 of 1

		BILL TO	
Company Name:	Basin Consulting	P.O. #:	24510
Project Manager:	Camille Bryant	Company:	BOPCO, LP
Address:	2800 Plains Hwy	Attn:	Tony Savoie
City:	Lovington State: NM Zip: 88260	Address:	
Phone #:	(575) 605-7210 Fax #: 575 396-1429	City:	
Project #:	24510 Project Owner:	State:	Zip:
Project Name:	Josephine Rodke Federal #1	Phone #:	
Project Location:	Eddy Co. NM	Fax #:	
Sampler Name:	Cobi Reynolds		

ANALYSIS REQUEST

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		Chloride 4500	TDS 160.1										
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME												
H19040-1	MW-1		1	X							X		1/12	1310	X	X										
-2	MW-2		1	X							X		1/12	1240	X	X										
-3	MW-3		1	X							X		1/12	1340	X	X										
-4	MW-4		1	X							X		1/12	1410	X	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.

Sampler Relinquished:	Date:	Received By:		Phone Result: ☐	No Add'l Phone #:
	Time:			Fax Result: ☐	No Add'l Fax #:
Relinquished By:	Date: 1/12/10	Received By: Jodi Henson		REMARKS:	
	Time: 4:50				
Delivered By: (Circle One)	Temp.	Sample Condition	CHECKED BY:		
Sampler - UPS - Bus - Other:	15°C	Cool: ☐ Yes ☑ No	Intact: ☑ Yes ☐ No	(Initials) JH	

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

#26

CARDINAL LABORATORIES

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

January 27, 2010

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

Re: Josephine Rodke Fed #1 (BOPCO)

Enclosed are the results of analyses for sample number H19134, received by the laboratory on 01/22/10 at 4:40 pm.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

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

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

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

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 3 (includes Chain of Custody)

Sincerely,

Celey D. Keene
Laboratory Director

This report conforms with NELAP requirements.

CARDINAL LABORATORIES

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

ANALYTICAL RESULTS FOR
BASIN ENVIRONMENTAL CONSULTING, LLC
ATTN: CAMILLE BRYANT
P.O. BOX 381
LOVINGTON, NM 88260
FAX TO: (575) 396-1429

Receiving Date: 01/22/10
Reporting Date: 01/25/10
Project Number: AFE # (BOPCO)
Project Name: JOSEPHINE RODKE FED #1
Project Location: EDDY, N.M.

Sampling Date: 01/19/10
Sample Type: WATER
Sample Condition: COOL & INTACT @ 5.5°C
Sample Received By: AB
Analyzed By: HM

LAB NO.	SAMPLE ID	Cl^- (mg/L)	TDS (mg/L)
Analysis Date:		01/25/10	01/23/10
H19134-1	MW-1	108	639
H19134-2	MW-2	128	541
H19134-3	MW-3	46,000	72,800
H19134-4	MW-4	136	603
Quality Control		500	NR
True Value QC		500	NR
% Recovery		100	NR
Relative Percent Difference		< 0.1	2.4
METHOD: Standard Methods, EPA		4500-Cl B	160.1

Chemist

01/27/10
Date

H19134 Bsin Environmental

CARDINAL LABORATORIES

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

Company Name: ~~BOPCO~~ BASIN	BILL TO
Project Manager: CAMILLE BRYANT	P.O. #:
Address: 2900 PLAINS HWY	Company:
City: LOVINGTON State: NM Zip: 88260	Attn:
Phone #: 575 396-2378 Fax #: 575 396-1429	Address:
Project #: AFE # Project Owner: BOPCO	City:
Project Name: JOSEPHINE ROOKE FED #1	State: Zip:
Project Location: EDDY NM	Phone #:
Sampler Name: LANCE REYNOLDS	Fax #:

ANALYSIS REQUEST: CHLORIDES 4500; TDS

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	CHLORIDES 4500	TDS
H191394-1	MW-1		1	X							X		1/19/10	9:30	✓	✓
-2	MW-2		1											10:30	✓	✓
-3	MW-3		1											12:00	✓	✓
-4	MW-4		1											11:15	✓	✓

Sampler Relinquished: Lance Reynolds	Date: 1/22/10 Time: 4:00	Received By: Eb	Phone Result: ☐ No Add'l Phone #:
Relinquished By: Eb	Date: 1/22/10 Time: 4:40	Received By: CBJ	Fax Result: ☐ No Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other: #765.5C	Temp.	Sample Condition: Cool ☒ Yes ☐ No Intact ☒ Yes ☐ No	CHECKED BY: (Initials) AB

REMARKS:

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

CARDINAL LABORATORIES

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

March 30, 2010

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

Re: Josephine Rodke Federal #1 (BOPCO)

Enclosed are the results of analyses for sample number H19551, received by the laboratory on 03/26/10 at 1:32 pm.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

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

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

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

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 3 (includes Chain of Custody)

Sincerely,

Celey D. Keene
Laboratory Director

This report conforms with NELAP requirements.

CARDINAL LABORATORIES

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

ANALYTICAL RESULTS FOR
BASIN ENVIRONMENTAL CONSULTING, LLC
ATTN: CAMILLE BRYANT
P.O. BOX 381
LOVINGTON, NM 88260
FAX TO: (575) 396-1429

Receiving Date: 03/26/10
Reporting Date: 03/26/10
Project Number: 24510 (BOPCO)
Project Name: JOSEPHINE RODKE FEDERAL #1
Project Location: EDDY CO., NM

Analysis Date: 03/26/10
Sampling Date: 03/24/10
Sample Type: GROUNDWATER
Sample Condition: COOL & INTACT @ 3.5°C
Sample Received By: JH
Analyzed By: HM

LAB NO.	SAMPLE ID	Cl^- (mg/L)
H19551-1	MW-3	61,000
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		< 0.1

METHOD: Standard Methods	4500-Cl⁻B

Chemist

03/30/10
Date

H19551 Basin Environmental

CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240
(505) 393-2326 FAX (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Basin Consulting	BILL TO	
Project Manager:	Camille Bryant	P.O. #:	24510
Address:	2800 Plains Hwy	Company:	BOPCO
City:	Lovington State: NM Zip: 88260	Attn:	Tony Savoie
Phone #:	575.605.7210 Fax #: 575.396-1429	Address:	
Project #:	24510 Project Owner: BOPCO	City:	
Project Name:	Josephine Radke Federal #1	State: Zip:	
Project Location:	Eddy Co, NM	Phone #:	
Sampler Name:	Toby Reynolds	Fax #:	

ANALYSIS REQUEST: Chlorides 4500

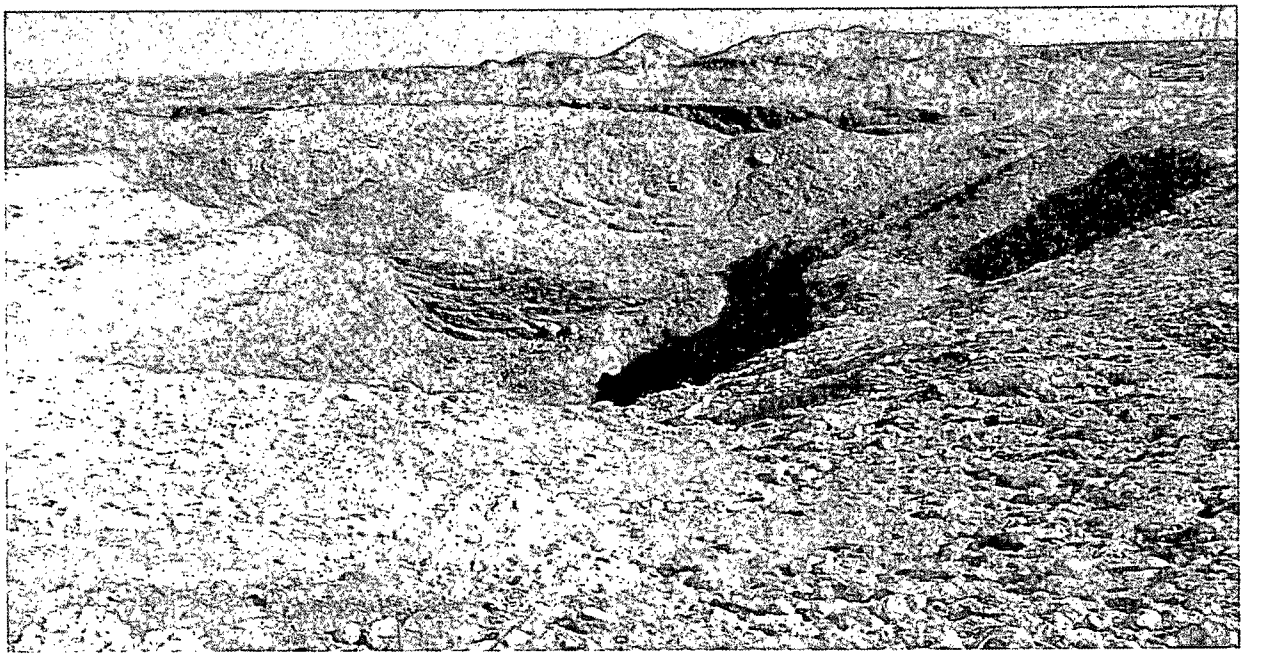
FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	Chlorides 4500
H19551-1	MW-3		1	X									3/24	8:45	X

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.

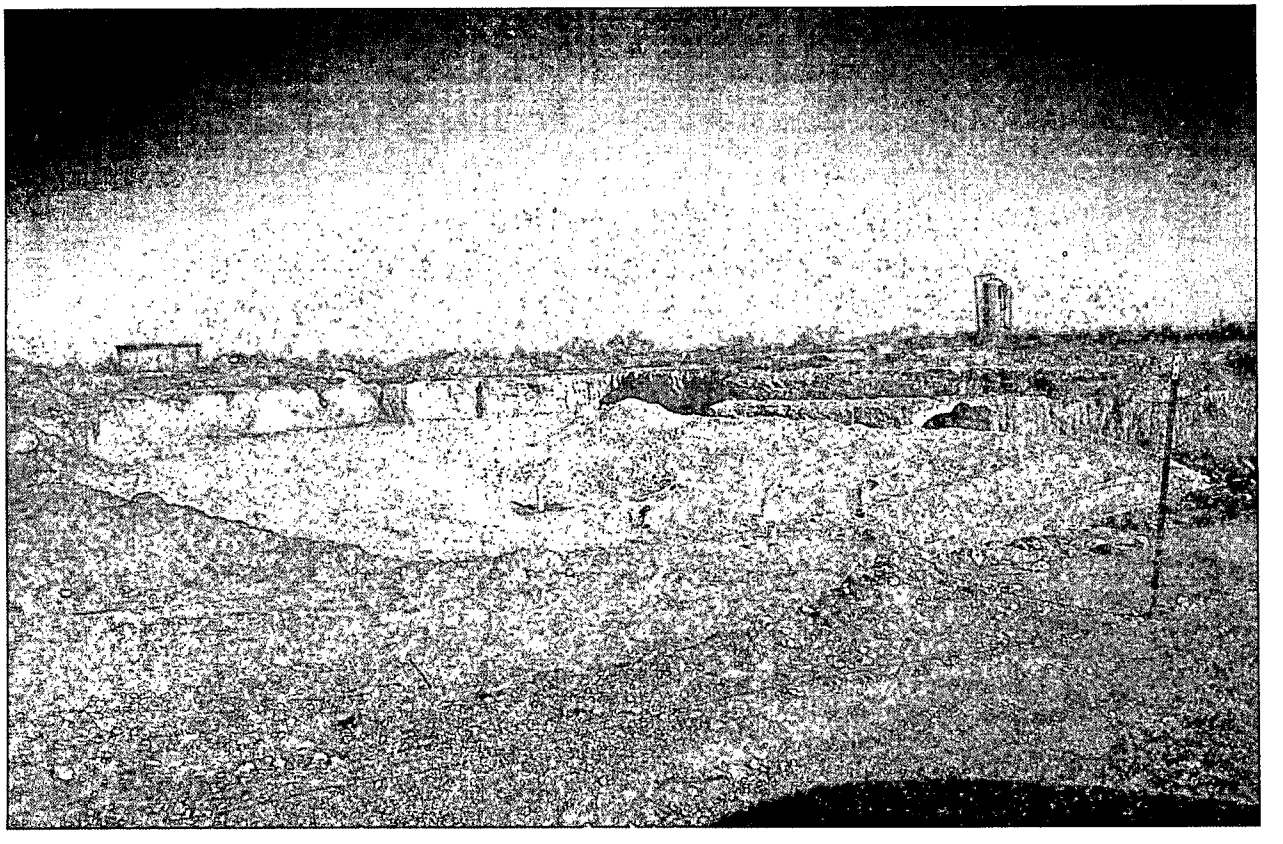
Relinquished By:	Date: 3-26-10	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 1:32		Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By: Jodi Henson	REMARKS:
	Time:		
Delivered By: (Circle One)	Sample Condition: Cool ☑ Yes ☐ No; Intact ☐ Yes ☐ No	CHECKED BY: (Initials)	
Sampler - UPS - Bus - Other:	3.5°C		

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

#26



Josephine Rodke Federal #1 Site Prior to Backfilling



Josephine Rodke Federal #1 Site

Appendix D
Release Notification and Corrective Action (Form C-141) and Pit, Closed-Loop System, Below-Grade Tank, or Proposed Alternative Method Permit or Closure Plan Application (Form C-144)

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 116 on back side of form

30-015-05833

Release Notification and Corrective Action

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: Josephine Rodke Federal #1	Facility Type E&P

Surface Owner Federal	Mineral Owner Federal	Lease No. API 30-015-05833

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	27	20S	31E					Eddy

RECEIVED
DEC - 7 2009
NMOCD ARTESIA

Latitude N 32.32'45.132 Longitude W 103.51'15.048

NATURE OF RELEASE

Type of Release: Produced water, and crude oil sediment	Volume of Release: Un-known	Volume Recovered: 0
Source of Release: Un-lined evaporation pit	Date and Hour of Occurrence Pre 2009	Date and Hour of Discovery 7/1/09
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* Operation of the pit ceased prior to 7/1/09, approximately 5000 cubic yards of soil has been removed

Describe Area Affected and Cleanup Action Taken.*Pasture land measuring approximately 100 ft. by 100ft.
A remediation closure plan was submitted to the NMOCD on 11/20/09. The area will be partially backfilled, an air rotary rig will be used to define the vertical and horizontal extent of the pit area. A complete remediation and closure plan will be submitted based on the results of the core samples. The pit will be closed under the guidance of the NMOCD pit closure guidelines.

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

Signature: Tony Savoie	OIL CONSERVATION DIVISION
Printed Name: Tony Savoie	Approved by District Supervisor: Signed By Mike Bratcher
Title: Waste Mgmt.& Remediation Specialist	Approval Date: MAR 24 2010 Expiration Date:
E-mail Address: TASavoie@BassPet.com	Conditions of Approval: REMEDIATION per OCD Rules and Guidelines. SUBMIT REMEDIATION PROPOSAL BY: Investigation is ongoing as of 3/4/10 Attached ☐
Date: 12/7/09 Phone:432-556-8730	2RP-370

* Attach Additional Sheets If Necessary

pMLB0934852161

District I
1625 N. French Dr., Hobbs, NM 88240
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1000 Rio Brazos Road, Aztec, NM 87410
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1220 S. St. Francis Dr., Santa 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
DEC 21 2011
NMOCD ARTESIA

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

OPERATOR

Initial Report X Final Report

Name of Company BOPCO, LP	Contact Tony Savoie
Address 522 W. Mermod, Suite 704, Carlsbad, NM 88220	Telephone No. (432)556-8730
Facility Name Josephine Rodke Federal #1	Facility Type E&P

Surface Owner Federal	Mineral Owner Federal	Lease No. API 30-015-05833

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	27	20S	31E					Eddy

Latitude 32° 32' 45.132" North **Longitude** 103° 51' 15.048" West

NATURE OF RELEASE

Type of Release Produced water and crude oil sediment	Volume of Release Unknown	Volume Recovered 0
Source of Release Un-lined evaporation pit	Date and Hour of Occurrence Pre 2009	Date and Hour of Discovery 7/1/09
Was Immediate Notice Given? Yes X No Not Required	If YES, To Whom?	
By Whom? Tony Savoie	Date and Hour	
Was a Watercourse Reached? ☐ Yes X No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken:* Operation of the pit ceased prior to 7/1/09. Approximately 5000 cubic yards of soil has been removed.

Describe Area Affected and Cleanup Action Taken.* Pasture land measuring approximately 80 ft. by 80 ft. The site was remediated as per NMOCD recommended guidelines. Please reference the attached *Remediation Summary & Soil 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: Tony Savoie	OIL CONSERVATION DIVISION	
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: Phone: (432)556-8730		

District I
1625 N. French Dr., Hobbs, NM 88240
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1301 W. Grand Avenue, Artesia, NM 88210
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1220 S. St. Francis Dr., Santa Fe, NM 87505

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

Form C-144
July 21, 2008

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office.
For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

Pit, Closed-Loop System, Below-Grade Tank, or Proposed Alternative Method Permit or Closure Plan Application

Type of action:
- ☐ Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method
- ☐ Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method
- ☐ Modification to an existing permit
- ☒ Closure plan only submitted for an existing permitted or non-permitted pit, closed-loop system, below-grade tank, or proposed alternative method

Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, below-grade tank or alternative request

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1.
Operator: BOPCO, L.P. OGRID #: 001801
Address: P.O. Box 2760, Midland, Texas 79702
Facility or well name: Josephine Rodke Federal Battery #1
API Number: 30-015-05833 OCD Permit Number:
U/L or Qtr/Qtr C Section 27 Township 20S Range 31E County: Eddy
Center of Proposed Design: Latitude N32°32'45.132 Longitude W103°51'15.048 NAD: ☐1927 ☐ 1983
Surface Owner: ☒ Federal ☐ State ☐ Private ☐ Tribal Trust or Indian Allotment

2.
☒ **Pit:** Subsection F or G of 19.15.17.11 NMAC
Temporary: ☐ Drilling ☐ Workover
☒ Permanent ☐ Emergency ☐ Cavitation ☐ P&A
☐ Lined ☒ Unlined Liner type: Thickness _____mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other _____
☐ String-Reinforced
Liner Seams: ☐ Welded ☐ Factory ☐ Other _____ Volume: _____bbl Dimensions: L_____ x W_____ x D_____

3.
☐ **Closed-loop System:** Subsection H of 19.15.17.11 NMAC
Type of Operation: ☐ P&A ☐ Drilling a new well ☐ Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent)
☐ Drying Pad ☐ Above Ground Steel Tanks ☐ Haul-off Bins ☐ Other _____
☐ Lined ☐ Unlined Liner type: Thickness _____mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other _____
Liner Seams: ☐ Welded ☐ Factory ☐ Other _____

4.
☐ **Below-grade tank:** Subsection I of 19.15.17.11 NMAC
Volume: _____bbl Type of fluid: _____
Tank Construction material: _____
☐ Secondary containment with leak detection ☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off
☐ Visible sidewalls and liner ☐ Visible sidewalls only ☐ Other _____
Liner type: Thickness _____mil ☐ HDPE ☐ PVC ☐ Other _____

5.
☐ **Alternative Method:**
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

Closure project transferred to Dist Office Riana Stes 3/09

6

Fencing: Subsection D of 19.15.17.11 NMAC *(Applies to permanent pits, temporary pits, and below-grade tanks)*

☐ Chain link, six feet in height, two strands of barbed wire at top *(Required if located within 1000 feet of a permanent residence, school, hospital, institution or church)*

☐ Four foot height, four strands of barbed wire evenly spaced between one and four feet

☐ Alternate. Please specify_____

7.

Netting: Subsection E of 19.15.17.11 NMAC *(Applies to permanent pits and permanent open top tanks)*

☐ Screen ☐ Netting ☐ Other_____

☐ Monthly inspections (If netting or screening is not physically feasible).

8.

Signs: Subsection C of 19.15.17.11 NMAC

☒ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers

☒ Signed in compliance with 19.15.3.103 NMAC

9.

Administrative Approvals and Exceptions:

Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.

Please check a box if one or more of the following is requested, if not leave blank:

☐ Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau office for consideration of approval.

☐ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

10.

Siting Criteria (regarding permitting): 19.15.17.10 NMAC

Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. **Siting criteria does not apply to drying pads or above-grade tanks associated with a closed-loop system.**

Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application *(Applies to temporary, emergency, or cavitation pits and below-grade tanks)* - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No ☐ NA
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. *(Applies to permanent pits)* - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No ☐ NA
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	☐ Yes ☐ No
Within a 100-year floodplain. - FEMA map	☐ Yes ☐ No

11.
Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
- ☐ Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

☐ Previously Approved Design (attach copy of design) API Number: _____ or Permit Number: _____

12.
Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9
- ☐ Siting Criteria Compliance Demonstrations (only for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

☐ Previously Approved Design (attach copy of design) API Number: _____

☐ Previously Approved Operating and Maintenance Plan API Number: _____ *(Applies only to closed-loop system that use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)*

13.
Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Climatological Factors Assessment
- ☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Quality Control/Quality Assurance Construction and Installation Plan
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Nuisance or Hazardous Odors, including H_2S, Prevention Plan
- ☐ Emergency Response Plan
- ☐ Oil Field Waste Stream Characterization
- ☐ Monitoring and Inspection Plan
- ☐ Erosion Control Plan
- ☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

14.
Proposed Closure: 19.15.17.13 NMAC
Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.

Type: ☐ Drilling ☐ Workover ☐ Emergency ☐ Cavitation ☐ P&A ☒ Permanent Pit ☐ Below-grade Tank ☐ Closed-loop System ☐ Alternative

Proposed Closure Method: ☒ Waste Excavation and Removal
- ☐ Waste Removal (Closed-loop systems only)
- ☐ On-site Closure Method (Only for temporary pits and closed-loop systems)
  - ☐ In-place Burial ☐ On-site Trench Burial
- ☐ Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)

15.
Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) ***Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.***

- ☒ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☒ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
- ☒ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)
- ☒ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☒ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
- ☒ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

16.

Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: (19.15.17.13.D NMAC)

***Instructions:** Please indentify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.*

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Will any of the proposed closed-loop system operations and associated activities occur on or in areas that *will not* be used for future service and operations?

☐ Yes (If yes, please provide the information below) ☐ No

Required for impacted areas which will not be used for future service and operations:

☐ Soil Backfill and Cover Design Specifications - - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC

☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

17.

Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC

***Instructions:** Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.*

Ground water is less than 50 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS, Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Ground water is between 50 and 100 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	☐ Yes ☐ No
Within a 100-year floodplain. - FEMA map	☐ Yes ☐ No

18.

On-Site Closure Plan Checklist: (19.15.17.13 NMAC) ***Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.***

☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC

☐ Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC

☐ Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.11 NMAC

☐ Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.11 NMAC

☐ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC

☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC

☐ Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC

☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)

☐ Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC

☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

19.
Operator Application Certification:

I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief

Name (Print): Steve Johnson Title: SR. Production Foreman

Signature: [signature] Date: 7/1/09

e-mail address: _____ Telephone: (432) 683 2277

20.
OCD Approval: ☐ Permit Application (including closure plan) ☒ Closure Plan (only) ☐ OCD Conditions (see attachment)

OCD Representative Signature: Signed By Mike Bratcher **Approval Date:** MAR 24 2010

Title: Env. Spec. **OCD Permit Number:** N/A

21.
Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC

Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.

☐ **Closure Completion Date:** _____

22.
Closure Method:

☒ Waste Excavation and Removal ☐ On-Site Closure Method ☐ Alternative Closure Method ☐ Waste Removal (Closed-loop systems only)

☐ If different from approved plan, please explain.

23.
Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:

Instructions: Please indentify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized.

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Were the closed-loop system operations and associated activities performed on or in areas that *will not* be used for future service and operations?

☐ Yes (If yes, please demonstrate compliance to the items below) ☐ No

Required for impacted areas which will not be used for future service and operations:

☐ Site Reclamation (Photo Documentation)
☐ Soil Backfilling and Cover Installation
☐ Re-vegetation Application Rates and Seeding Technique

24.
Closure Report Attachment Checklist: ***Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached.***

☐ Proof of Closure Notice (surface owner and division)
☐ Proof of Deed Notice (required for on-site closure)
☐ Plot Plan (for on-site closures and temporary pits)
☐ Confirmation Sampling Analytical Results (if applicable)
☐ Waste Material Sampling Analytical Results (required for on-site closure)
☐ Disposal Facility Name and Permit Number
☐ Soil Backfilling and Cover Installation
☐ Re-vegetation Application Rates and Seeding Technique
☐ Site Reclamation (Photo Documentation)

On-site Closure Location: Latitude _____ Longitude _____ NAD: ☐ 1927 ☐ 1983

25.
Operator Closure Certification:

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

Name (Print): Annette Childers Title: Regulatory Clerk

Signature: _____ Date: _____

e-mail address: machilders@basspet.com Telephone: (432) 683-2277

BOPCO, L.P.
Josephine Rodke Federal #1
Section 27, T-20-S, R-31-E
Eddy County, NM

API# 30-015-05833

CLOSURE PLAN

The New Mexico OCD and Bureau of Land Management were both sent notification of closure on June 15, 2009. BOPCO, L.P. will excavate to ten feet below ground surface to the bottom of the pit removing any dried sludge. The pit was unlined so no liner will need to be removed. No free liquids are presently in the pit and there is not any associated equipment in or around the pit that will need to be removed. All excavated dried sludge will be hauled and disposed of at CRI (Controlled Recovery Incorporated - Permit R-9166). BOPCO, L.P. will test the soils beneath the permanent pit to determine whether a release has occurred. BOPCO, L.P. will collect, at a minimum, a five point, composite sample; collect individual grab samples from any area that is wet, discolored or showing other evidence of a release; and analyze for BTEX, TPH and chlorides to demonstrate that the benzene concentration, as determined by EPA SW-846 methods 8021B or 8260B or other EPA method that the division approves, does not exceed 0.2 mg/kg; total BTEX concentration, as determined by EPA SW-846 methods 8021B or 8260B or other EPA method that the division approves, does not exceed 50 mg/kg; the TPH concentration, as determined by EPA method 418.1 or other EPA method that the division approves, does not exceed 100 mg/kg; and the chloride concentration, as determined by EPA method 300.1 or other EPA method that the division approves, does not exceed 250 mg/kg, or the background concentration, whichever is greater. BOPCO, L.P. will notify the division of its results on form C-141 in accordance with NMAC 19.15.17.13(c) *Closure method for permanent pits.* If the BOPCO or the division determines that a release has occurred, then the BOPCO shall comply with 19.15.29 NMAC and 19.15.30 NMAC, as appropriate. If the sampling program demonstrates that a release has not occurred or that any release does not exceed the concentrations specified in Paragraph (3) of Subsection C of 19.15.17.13 NMAC, then the BOPCO, L.P. will backfill the excavation with compacted, non-waste containing, earthen material; construct a division-prescribed soil cover; recontour and re-vegetate the site. The division-prescribed soil cover, recontouring and re-vegetation requirements will comply with Subsections G, H and I of 19.15.17.13 NMAC per our Site Reclamation Plan. BOPCO, L.P. will commence closure of the site within one week of approval from the NMOCD. It will take BOPCO, L.P. approximately 2 days to excavate to ten feet and one day to sample the excavation. It will take five days to receive the results from the lab. Approximately three days to backfill the excavation and recontour the site with the existing topography. It will take one day to reseed the area. Within 60 days of closure completion, BOPCO, L.P. will submit a closure report on form C-144, with necessary attachments to document all closure activities including sampling results; information required by 19.15.17 NMAC; a plot plan; and details on back-filling, capping and covering, where applicable. In the closure report, BOPCO, L.P. will certify that all information in the report and attachments is correct and that BOPCO, L.P. has complied with all applicable closure requirements and conditions specified in the approved closure plan.