

# *Basin Environmental Service Technologies, LLC*

3100 Plains Highway  
P. O. Box 301  
Lovington, New Mexico 88260

**bjarguijo@basinenv.com**

Office: (575) 396-2378 Fax: (575) 396-1429



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

**BOPCO, LP**  
**INDIAN FLATS BASS FEDERAL #1 SWD**  
**Eddy County, New Mexico**  
**Unit Letter "J" (NW/SE), Section 35, Township 21 South, Range 28 East**  
**Latitude 32.433905° North, Longitude 104.055425° West**  
**NMOCD Reference #'s: 2RP-1037, 2RP-1208,**  
**2RP-1209, 2RP-1207 & 2RP-1457**  
**2RP-1656**

Prepared For:

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

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

**August 2013**

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**Ben J. Arguijo**  
Project Manager

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## 1.0 INTRODUCTION & BACKGROUND INFORMATION

Basin Environmental Service Technologies, LLC (Basin Environmental), on behalf of BOPCO, LP (BOPCO), has prepared this *Remediation Summary & Risk-Based Site Closure Request* for the release site known as Indian Flats Bass Federal #1 SWD (Indian Flats SWD). The legal description of the release site is Unit Letter "J" (NW/SE), Section 35, Township 21 South, Range 28 East, in Eddy County, New Mexico. The geographic coordinates of the release site are 32.433905° North latitude and 104.055425° West longitude. The property affected by the release is owned by the United States Department of the Interior - Bureau of Land Management (BLM). Please reference Figure 1 for a "Site Location Map".

2RP-1037  
On February 8, 2012, BOPCO discovered a release had occurred at the Indian Flats Salt Water Disposal (SWD). A half-inch (1/2") fitting on the discharge line of a salt water disposal pump failed, resulting in a release of produced water. The release was immediately reported to the New Mexico Oil Conservation Division (NMOCD) Artesia District Office. The "Release Notification and Corrective Action" (Form C-141) indicated approximately two hundred barrels (200 bbls) of produced water were released. During initial response activities, the fitting was replaced, and a vacuum truck was utilized to recover approximately one hundred and sixty barrels (160 bbls) of produced water. Heavily impacted soil was scraped up and stockpiled on-site, pending final disposition. The release affected an area measuring approximately ten thousand, eight hundred and seventy-five square feet (10,875 ft<sup>2</sup>), which included the area around the pump, the caliche pad surrounding the Indian Flats SWD, and a nearby lease road.

2RP-1208  
On May 23, 2012, BOPCO discovered a second release had occurred at the Indian Flats SWD. A one-inch (1") valve on a salt water disposal pump was inadvertently left open, causing the sump to overflow. The release was immediately reported to the NMOCD Artesia District Office. The Form C-141 indicated approximately fifty barrels (50 bbls) of produced water were released. During initial response activities, a vacuum truck was utilized to recover approximately ten barrels (10 bbls) of produced water. Heavily impacted soil was scraped up and stockpiled on-site, pending final disposition. The release affected an area measuring approximately eight thousand square feet (8,000 ft<sup>2</sup>) and commingled with the areas impacted by the February 8, 2012, release.

2RP-1209  
On May 25, 2012, BOPCO discovered a third release had occurred at the Indian Flats SWD. A gauge on a salt water disposal pump failed, resulting in a release of produced water. The release was immediately reported to the NMOCD Artesia District Office. The Form C-141 indicated approximately eighty barrels (80 bbls) of produced water were released. During initial response activities, the faulty gauge was replaced, and a vacuum truck was utilized to recover approximately twenty barrels (20 bbls) of produced water. The release affected an area measuring approximately five thousand square feet (5,000 ft<sup>2</sup>) and commingled with the areas impacted by the February 8 and May 23, 2012, releases.

2RP-1207  
On June 21, 2012, BOPCO discovered a fourth release had occurred at the Indian Flats SWD. During installation of a new heater treater at the site, a three-inch (3") line from the flow line header to the on-site storage tanks broke, resulting in a release of crude oil. The release was immediately reported to the NMOCD Artesia District Office. The Form C-141 indicated approximately fifteen barrels (15 bbls) of produced water were released. During initial response activities, a vacuum truck was utilized to recover approximately five barrels (5 bbls) of crude oil.

The release affected an area measuring approximately one thousand, five hundred square feet (1,500 ft<sup>2</sup>) and was confined to the earthen containment surrounding the tank battery.

2RP-1457  
On November 27, 2012, BOPCO discovered a fifth release had occurred at the Indian Flats SWD. A back-pressure valve on an SWD pump failed, resulting in a release of produced water. The release was immediately reported to the NMOCD Artesia District Office. The Form C-141 indicated approximately eighty barrels (80 bbls) of produced water were released. During initial response activities, the faulty back-pressure valve was replaced, and a vacuum truck was utilized to recover approximately seventy barrels (70 bbls) of produced water. The release affected an area measuring approximately four thousand, five hundred square feet (4,500 ft<sup>2</sup>) and commingled with the areas impacted by the February 8, May 23, and May 25, 2012, releases.

2RP-1656  
On April 25, 2013, BOPCO discovered a sixth release had occurred at the Indian Flats SWD. The strainer on the suction to the SWD clogged, causing the pump to discharge at a rate that was insufficient to keep up with the incoming produced water. The alarm system failed to report both high tank levels and high discharge pressure, resulting in an overflow of produced water. The release was immediately reported to the NMOCD Artesia District Office. The Form C-141 indicated approximately three hundred and seventy-five barrels (375 bbls) of produced water were released. During initial response activities, the strainer was removed and cleaned, and a vacuum truck was utilized to recover approximately ten barrels (10 bbls) of produced water. The release commingled with the areas impacted by the February 8, May 23, May 25, June 21, and November 27, 2012, releases.

The six (6) releases were remediated concurrently. The Forms C-141 are provided as Appendix A. General photographs of the release site(s) are provided as Appendix B.

## 2.0 NMOCD SITE CLASSIFICATION

A search of the New Mexico Water Rights Reporting System (NMWRRS) database maintained by the New Mexico Office of the State Engineer (NMOSE) indicated information was unavailable for Section 35, Township 21 South, Range 28 East. A depth-to-groundwater reference map utilized by the NMOCD indicates groundwater should be encountered approximately one hundred and forty feet (140') below ground surface (bgs). Based on the NMOCD ranking system, zero (0) points will be assigned to the site as a result of this criterion.

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

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

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

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

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

### 3.0 SUMMARY OF SOIL REMEDIATION ACTIVITIES

On February 23, 2012, delineation of the February 8, 2012, release commenced. A series of delineation trenches were advanced at the site to investigate the horizontal and vertical extent of impacted soil. The delineation trenches were advanced to total depths of approximately five feet (5') bgs. Soil samples collected from the floors of the delineation trenches were field-screened with a chloride test kit. Field-screen test results indicated further vertical delineation of the release site would be required.

On March 6, 2012, two (2) soil borings were advanced at the site to further delineate the vertical extent of soil impacted by the February 8, 2012, release. Soil samples were collected at five-foot (5') drilling intervals and field-screened using a Photo-Ionization Detector (PID) and/or chloride test kit. Selected soil samples were submitted to Cardinal Laboratories in Hobbs, New Mexico, for analysis of BTEX, TPH, and/or chloride concentrations in accordance with Environmental Protection Agency (EPA) Methods SW-846 8021b, SW-846 8015M, and 4500 Cl-B, respectively. Table 1 summarizes the "Concentrations of Benzene, BTEX, TPH & Chloride in Soil". A "Site & Sample Location Map" is provided as Figure 2. Soil boring logs are provided as Appendix C. Laboratory analytical reports are provided as Appendix E.

Soil boring SB-1 was advanced at the terminus of the flow path of the release. The soil boring was advanced to a total depth of approximately thirty feet (30') bgs. Soil samples collected at drilling depths of five feet (5'), ten feet (10'), twenty-five feet (25'), and thirty feet (30') bgs were submitted to the laboratory for analysis of BTEX, TPH, and/or chloride concentrations. Laboratory analytical results indicated BTEX constituent concentrations were less than the appropriate laboratory method detection limit (MDL) in all submitted soil samples. TPH concentrations ranged from less than the laboratory MDL in soil sample SB-1 @ 30' to 68.2 mg/kg in soil sample SB-1 @ 5'. Chloride concentrations ranged from 320 mg/kg in soil sample SB-1 @ 30' to 3,320 mg/kg in soil sample SB-1 @ 10'.

Soil boring SB-2 was advanced near the release point, approximately one hundred and eighty-four feet (184') to the east-northeast of soil boring SB-1. The soil boring was advanced to a total depth of approximately thirty-five feet (35') bgs. Soil samples collected at drilling depths of five feet (5'), ten feet (10'), twenty feet (20'), thirty feet (30'), and thirty-five feet (35') bgs were submitted to the laboratory for analysis of BTEX, TPH, and/or chloride concentrations. Laboratory analytical results indicated BTEX and TPH constituent concentrations were less than the appropriate laboratory MDL in all submitted soil samples. Chloride concentrations ranged from 336 mg/kg in soil sample SB-1 @ 35' to 3,880 mg/kg in soil sample SB-1 @ 5'.

On December 12, 2012, after having procured both permission from the landowner (BLM) and the proper permit from the NMOSE (File #CP-01118), five (5) soil borings (SB-3 through SB-7) were advanced at the site to further delineate the vertical extent of soil impacted by the May 23, May 25, June 21, and November 27, 2012, releases. Soil samples were collected at five-foot (5') drilling intervals and field-screened using a PID and/or chloride test kit. Selected soil samples were submitted to the laboratory for analysis of BTEX, TPH, and/or chloride concentrations. BLM and NMOSE permits (which had not been required for the March 6, 2012, drilling event) are provided in Appendix D.

Soil boring SB-3 (Background) was advanced to the southeast of the release site(s), in order to establish the baseline concentration of chlorides in the area. The soil boring was advanced to a total depth of approximately twenty-five feet (25') bgs. Soil samples collected at the ground surface and at drilling depths of five feet (5'), ten feet (10'), fifteen feet (15'), twenty feet (20'), and twenty-five feet (25') bgs were submitted to the laboratory for analysis of chloride and/or TPH concentrations. Soil sample SB-3 (Background) @ 10' was also analyzed for concentrations of BTEX. Laboratory analytical results indicated chloride concentrations ranged from 32.0 mg/kg in soil sample SB-3 (Background) @ Surface, SB-3 (Background) @ 15', SB-3 (Background) @ 20', and SB-3 (Background) @ 25' to 64.0 mg/kg in soil sample SB-3 (Background) @ 5'. TPH and BTEX constituent concentrations were less than the appropriate laboratory MDL in all submitted soil samples.

Soil boring SB-4 was advanced inside the earthen containment area surrounding the Indian Flats SWD, to the west of the two (2) on-site production tanks. The soil boring was advanced to a total depth of approximately fifty-six feet (56') bgs. Soil samples collected at the ground surface and at drilling depths of five feet (5'), ten feet (10'), twenty feet (20'), thirty feet (30'), forty feet (40'), fifty feet (50'), and fifty-five feet (55') bgs were submitted to the laboratory for analysis of BTEX, TPH, and/or chloride concentrations. Laboratory analytical results indicated BTEX constituent concentrations were less than the appropriate laboratory MDL in all submitted soil samples. TPH concentrations ranged from less than the laboratory MDL in soil sample SB-4 @ 50' to 316 mg/kg in soil sample SB-4 @ 30'. Chloride concentrations ranged from 848 mg/kg in soil sample SB-4 @ 50' to 3,520 mg/kg in soil sample SB-4 @ Surface.

Soil boring SB-5 was advanced in the approximate center of the earthen containment area surrounding the Indian Flats SWD, between the two (2) on-site production tanks and the gun barrel tank. The soil boring was advanced to a total depth of approximately fifty feet (50') bgs. Soil samples collected at the ground surface and at drilling depths of five feet (5'), ten feet (10'), fifteen feet (15'), twenty feet (20'), thirty feet (30'), forty-five feet (45'), and fifty feet (50') bgs were submitted to the laboratory for analysis of BTEX, TPH, and/or chloride concentrations. Laboratory analytical results indicated BTEX constituent concentrations were less than the appropriate laboratory MDL in all submitted soil samples. TPH concentrations ranged from less than the laboratory MDL in soil samples SB-5 @ 10', SB-5 @ 45', and SB-5 @ 50' to 116 mg/kg in soil sample SB-5 @ 30'. Chloride concentrations ranged from 688 mg/kg in soil sample SB-5 @ 50' to 2,440 mg/kg in soil sample SB-5 @ 20'.

Soil boring SB-6 was advanced at the terminus of the comingled flow paths of the February 8, May 23, May 25, and November 27, 2012, releases, approximately fifteen feet (15') to the east of soil boring SB-1. The soil boring was advanced to a total depth of approximately forty-feet (40') bgs. Soil samples collected at the ground surface and at drilling depths of five feet (5'), ten feet

(10'), fifteen feet (15'), twenty-five feet (25'), thirty-five feet (35'), and forty feet (40') bgs were submitted to the laboratory for analysis of BTEX, TPH, and/or chloride concentrations. Laboratory analytical results indicated BTEX and TPH constituent concentrations were less than the appropriate laboratory MDL in all submitted soil samples. Chloride concentrations ranged from 112 mg/kg in soil sample SB-6 @ 40' to 3,680 mg/kg in soil sample SB-6 @ Surface.

Soil boring SB-7 was advanced along the comingled flow paths of the February 8, May 23, May 25, and November 27, 2012, releases, approximately seventy feet (70') to the west-southwest of soil boring SB-2. The soil boring was advanced to a total depth of approximately sixty-five feet (65') bgs. Soil samples collected at the ground surface and at drilling depths of five feet (5'), ten feet (10'), twenty feet (20'), thirty feet (30'), forty feet (40'), fifty feet (50'), sixty feet (60'), and sixty-five feet (65') bgs were submitted to the laboratory for analysis of BTEX, TPH, and/or chloride concentrations. Laboratory analytical results indicated BTEX and TPH constituent concentrations were less than the appropriate laboratory MDL in all submitted soil samples. Chloride concentrations ranged from 288 mg/kg in soil sample SB-7 @ 30' to 13,200 mg/kg in soil sample SB-7 @ Surface.

On May 31 and June 3, 2013, after having procured both permission from the landowner (BLM) and the proper permit from the NMOSE (File #CP-01171), three (3) soil borings (SB-8 through SB-10) were advanced at the site to further delineate the vertical extent of impacted soil from the April 25, 2013 release. Soil samples were collected at five-foot (5') drilling intervals and field-screened using a PID and/or chloride test kit. Selected soil samples were submitted to the laboratory for analysis of BTEX, TPH, and/or chloride concentrations. BLM and NMOSE permits are provided in Appendix D.

Soil boring SB-8 was advanced at the terminus of the flow path of the release, approximately forty feet (40') to the east of soil boring SB-6 and approximately fifty-five feet (55') to the east of soil boring SB-1. The soil boring was advanced to a total depth of approximately seventy feet (70') bgs. Soil samples collected at drilling depths of five feet (5'), ten feet (10'), twenty-five feet (25'), forty feet (40'), fifty-five feet (55'), sixty-five feet (65'), and seventy feet (70') bgs were submitted to the laboratory for analysis of BTEX, TPH, and/or chloride concentrations. No surface sample was collected, as the in-situ soil had been disturbed by construction activities at the site. Laboratory analytical results indicated BTEX constituent concentrations were less than the appropriate laboratory MDL in all submitted soil samples. TPH concentrations ranged from less than the laboratory MDL in soil samples SB-8 @ 10', SB-8 @ 40', SB-8 @ 55', and SB-8 @ 65' to 32.9 mg/kg in soil sample SB-8 @ 5'. Chloride concentrations ranged from 256 mg/kg in soil sample SB-8 @ 65' to 2,400 mg/kg in soil sample SB-8 @ 10'.

Soil boring SB-9 was advanced inside the earthen containment area surrounding the Indian Flats SWD, to the east of the on-site produced water storage tanks. The soil boring was advanced to a total depth of one hundred and ten feet (110') bgs. Soil samples collected at drilling depths of five feet (5'), ten feet (10'), twenty-five feet (25'), forty-five feet (45'), sixty feet (60'), seventy-five feet (75'), eighty-five feet (85'), ninety-five feet (95'), one hundred feet (100'), one hundred and five feet (105'), and one hundred and ten feet (110') bgs were submitted to the laboratory for analysis of BTEX, TPH, and/or chloride concentrations. No surface sample was collected, as the in-situ soil had been disturbed by construction activities at the site. Laboratory analytical results indicated BTEX and TPH constituent concentrations were less than the appropriate laboratory

MDL in all submitted soil samples. Chloride concentrations ranged from 336 mg/kg in soil sample SB-9 @ 105' to 3,680 mg/kg in soil sample SB-9 @ 5'.

Soil boring SB-10 was advanced inside the earthen containment area surrounding the Indian Flats SWD, to the east of the on-site produced water storage tanks, and approximately fifteen feet (15') to the north of soil boring SB-9. The soil boring was advanced to a total depth of approximately one hundred and fifteen feet (115') bgs. Soil samples collected at drilling depths of five feet (5'), ten feet (10'), twenty-five feet (25'), forty feet (40'), fifty feet (50'), seventy feet (70'), eighty feet (80'), ninety feet (90'), one hundred feet (100'), one hundred and ten feet (110'), and one hundred and fifteen feet (115') bgs were submitted to the laboratory for analysis of BTEX, TPH, and/or chloride concentrations. No surface sample was collected, as the in-situ soil had been disturbed by construction activities at the site. Laboratory analytical results indicated BTEX and TPH constituent concentrations were less than the appropriate laboratory MDL in all submitted soil samples. Chloride concentrations ranged from 608 mg/kg in soil sample SB-10 @ 100' to 7,440 mg/kg in soil sample SB-10 @ 10'.

On June 5, 2013, approximately one hundred and twenty cubic yards (120 yd<sup>3</sup>) of stockpiled material on-site was transported to Lea Land, Inc. (NMOCD Permit # WM-01-035), for disposal.

On June 6, 2013, excavation of impacted soil commenced at the site. A chloride test kit was used to field-screen the horizontal extent of impacted soil and to guide the excavation. From June 6 through July 11, 2013, approximately three thousand, two hundred and sixty cubic yards (3,260 yd<sup>3</sup>) of impacted soil was excavated and transported to Lea Land, Inc., for disposal.

On June 14, 2013, two (2) soil samples (North Wall #1 and South Wall #1) were collected from the sidewalls of the excavation and submitted to the laboratory for analysis of TPH and chloride concentrations. Laboratory analytical results indicated TPH concentrations were less than the laboratory MDL in all submitted soil samples. Chloride concentrations ranged from 864 mg/kg in soil sample South Wall #1 to 960 mg/kg in soil sample North Wall #1.

On June 24, 2013, four (4) soil samples (North Wall #2, South Wall #2, East Wall #1, and West Wall #1) were collected from the sidewalls of the excavation and submitted to the laboratory for analysis of TPH and chloride concentrations. Laboratory analytical results indicated TPH concentrations were less than the laboratory MDL in all submitted soil samples. Chloride concentrations ranged from 304 mg/kg in soil sample South Wall #2 to 640 mg/kg in soil sample West Wall #1.

On July 3, 2013, two (2) soil samples (South Wall #3 and South Wall #4) were collected from the sidewalls of the excavation and submitted to the laboratory for analysis of TPH and chloride concentrations. Laboratory analytical results indicated TPH concentrations were less than the laboratory MDL in all submitted soil samples. Chloride concentrations ranged from 512 mg/kg in soil sample South Wall #3 to 576 mg/kg in soil sample South Wall #4.

On July 10, 2013, two (2) soil samples (North Wall #3 and North Wall #4) were collected from the sidewalls of the excavation and submitted to the laboratory for analysis of TPH and chloride concentrations. Laboratory analytical results indicated TPH concentrations were less than the laboratory MDL in all submitted soil samples. Chloride concentrations ranged from 2,800 mg/kg in soil sample North Wall #3 to 3,680 mg/kg in soil sample North Wall #4.

Further excavation in the areas represented by soil samples North Wall #3 and North Wall #4 was deemed impracticable due to the presence of an active truck lane and load line adjacent to the excavation. The truck lane represents the only thoroughfare to two (2) active production wells to the west of the Indian Flats SWD. Limiting access to both the production wells and the Indian Flats SWD would have placed an undue financial burden on BOPCO and introduced an environmental hazard due to the increased risk for subsequent releases.

On the morning of July 16, 2013, a representative of BOPCO met with a representative of the NMOCD Artesia District Office to request permission to leave soil represented by soil samples North Wall #3 and North Wall #4 in-situ. Permission was also requested to install a twenty (20) mil polyurethane liner on the floor of the excavation. The requests were approved by the NMOCD representative.

On the afternoon of July 16, 2013, a twenty (20) mil polyurethane liner was installed on the floor excavation at approximately four feet (4') bgs. A cushion of sand was installed approximately one foot (1') both above and below the liner to protect the liner from damage during installation and backfilling activities.

Based on laboratory analytical results, and with NMOCD approval, from July 19 through July 24, 2013, the excavation was backfilled in eighteen-inch (18") lifts, compacted, and contoured to fit the surrounding topography. Prior to backfilling, the final dimensions of the excavation were approximately two hundred and sixty feet (260') in length, varying in width from approximately forty feet (40') to approximately eighty feet (80'), and approximately five feet (5') in depth.

To mitigate future releases, a new, steel-walled containment area has been constructed around the Indian Flats SWD. A felt liner has been installed in the floor of the new containment area, and the floor and perimeter walls have been coated with an impermeable, spray-on polyurethane liner. The steel perimeter walls extend approximately two feet (2') above ground surface.

## **4.0 QA/QC PROCEDURES**

### **4.1 Soil Sampling**

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

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

### **4.2 Decontamination of Equipment**

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

### **4.3 Laboratory Protocol**

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

### **5.0 SITE CLOSURE REQUEST**

Soil samples collected from the sidewalls of the Indian Flats SWD excavation were analyzed by an NMOCD-approved laboratory, and concentrations of benzene, BTEX, and TPH were below the regulatory remediation action levels established for the site by the NMOCD.

The release site was excavated to the extent practicable. A twenty (20) mil polyurethane liner was installed on the floor of the excavation, and the floor and perimeter walls of the new steel containment area surrounding the Indian Flats SWD were coated with a spray-on polyurethane liner. These engineered controls will help mitigate future releases and effectively inhibit vertical migration of contaminants to groundwater. In-situ soil exhibiting chloride contamination above the regulatory remediation action levels established for the site will be remediated upon decommission and/or abandonment of the currently salt water disposal system.

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

### **6.0 LIMITATIONS**

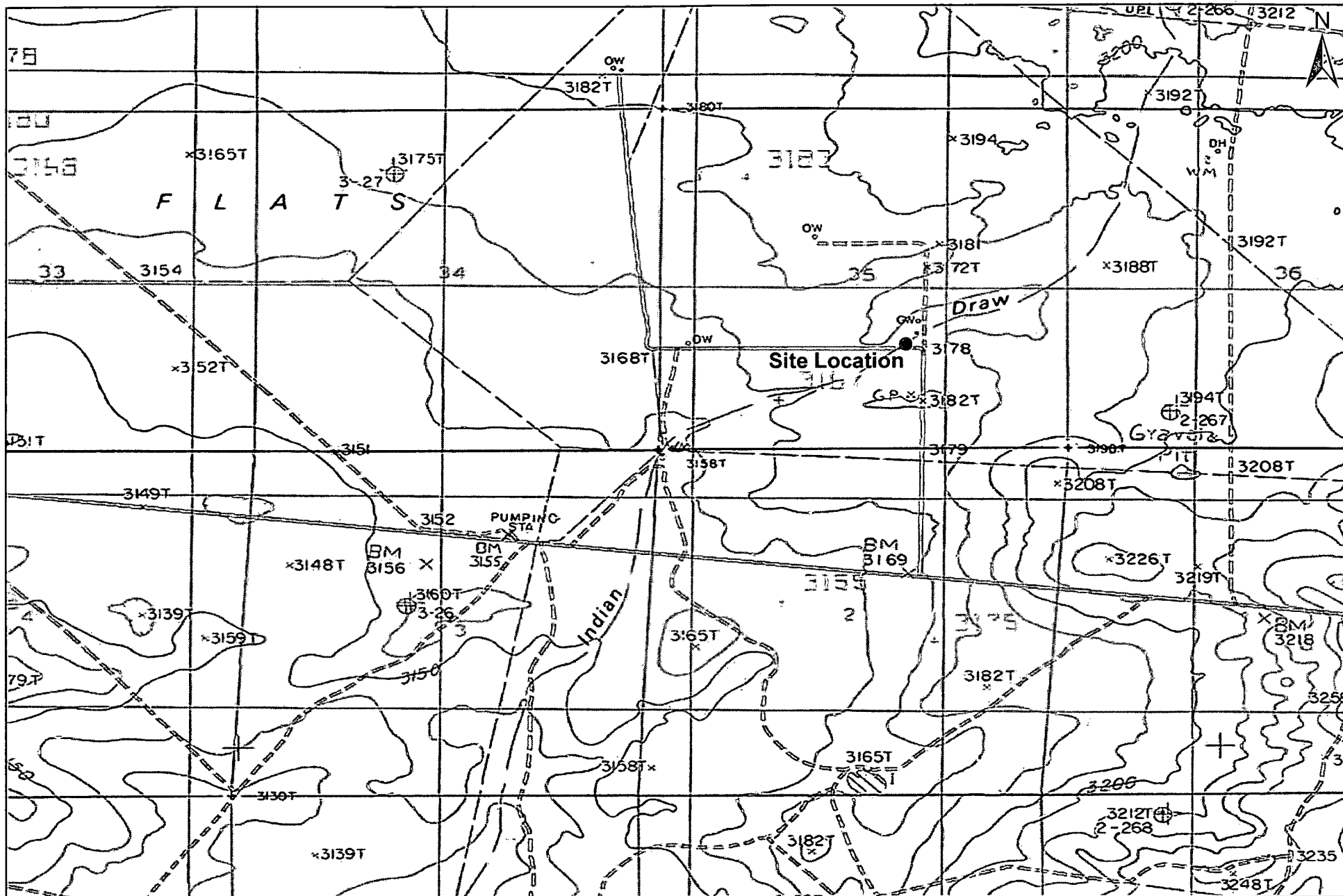
Basin Environmental Service Technologies, LLC, has prepared this *Remediation Summary & Risk-Based Site Closure Request* to the best of its ability. No other warranty, expressed or implied, is made or intended. Basin Environmental has examined and relied upon documents referenced in the report and on oral statements made by certain individuals. Basin Environmental has not conducted an independent examination of the facts contained in referenced materials and statements. Basin Environmental has presumed the genuineness of these documents and statements and that the information provided therein is true and accurate. Basin Environmental has prepared this report in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Basin Environmental notes that the facts and conditions referenced in this report may change over time, and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of BOPCO, LP. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the express consent of Basin Environmental Service Technologies, LLC, and/or BOPCO, LP.

## **7.0 DISTRIBUTION:**

- Copy 1: Mike Bratcher  
New Mexico Energy, Minerals and Natural Resources Department  
Oil Conservation Division (District 2)  
1301 E. Grand Avenue  
Artesia, NM 88210
- Copy 2: James Amos  
Bureau of Land Management  
602 E. Greene Street  
Carlsbad, NM 88220
- Copy 3: Tony Savoie  
BOPCO, LP  
522 W. Mermod, Suite 704  
Carlsbad, NM 88220
- Copy 4: Basin Environmental Service Technologies, LLC  
P.O. Box 301  
Lovington, NM 88260

# Figures



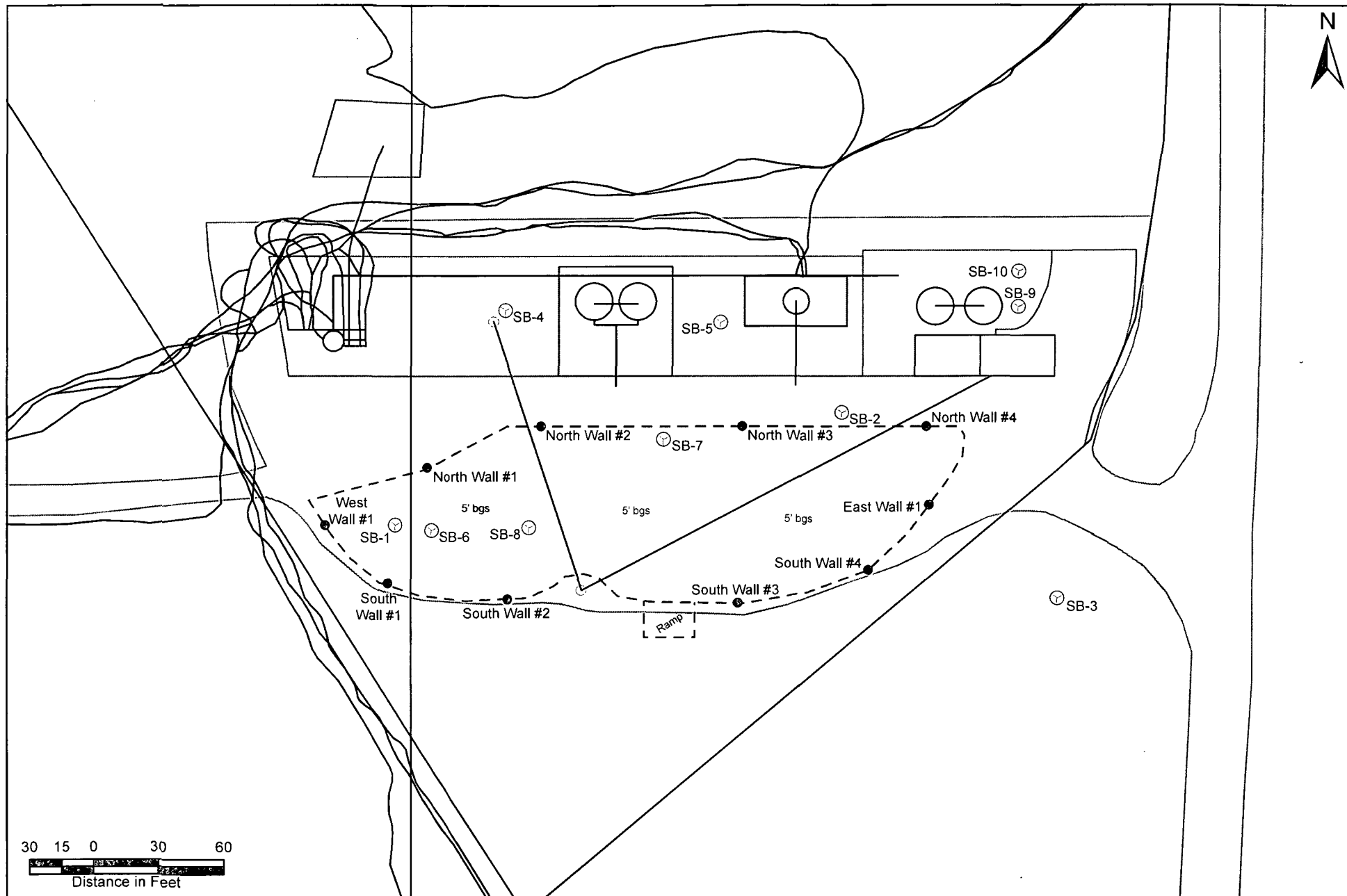
1,000 500 0 1,000 2,000  
Distance in Feet

Figure 1  
Site Location Map  
BOPCO, LP  
Indian Flats Bass Federal #1 SWD  
Eddy County, New Mexico



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

Drawn By: BJA	Checked By: BRB
June 26, 2012	Scale: 1" = 2000'



Legend	
— Pipeline	— Electrical Conduit
- - - Excavation Extent	⊙ Soil Boring
— Caliche Pad/Road	● Sample Location
— Steel Berm	
— Earthen Berm	

**Figure 2**  
**Site & Sample Location Map**  
**BOPCO, LP**  
**Indian Flats Bass Federal SWD**  
**Eddy County, New Mexico**



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

Drawn By: BJA	Checked By: BRB
July 15, 2013	Scale: 1" = 60'

# **Tables**

TABLE 1

## CONCENTRATIONS OF BENZENE, BTEX, TPH &amp; CHLORIDE IN SOIL

BOPCO, LP  
INDIAN FLATS BASS FEDERAL SWD  
EDDY COUNTY, NEW MEXICO

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030					METHOD: 8015M			TOTAL TPH C <sub>6</sub> -C <sub>35</sub> (mg/Kg)	4500 CI-B CHLORIDE (mg/Kg)
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL- BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C <sub>6</sub> -C <sub>12</sub> (mg/Kg)	DRO C <sub>12</sub> -C <sub>28</sub> (mg/Kg)	ORO C <sub>28</sub> -C <sub>35</sub> (mg/Kg)		
SB-1 @ 5'	5'	3/6/2012	Excavated	-	-	-	-	-	<50.0	68.2	<50.0	68.2	2,440
SB-1 @ 10'	10'	3/6/2012	In-Situ	<0.050	<0.050	<0.050	<0.150	-	<10.0	15.4	10.1	25.5	3,320
SB-1 @ 25'	25'	3/6/2012	In-Situ	-	-	-	-	-	-	-	-	-	512
SB-1 @ 30'	30'	3/6/2012	In-Situ	<0.050	<0.050	<0.050	<0.150	-	<10.0	<10.0	<10.0	<10.0	320
SB-2 @ 5'	5'	3/6/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	3,880
SB-2 @ 10'	10'	3/6/2012	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.150	<10.0	<10.0	<10.0	<10.0	2,760
SB-2 @ 20'	20'	3/6/2012	In-Situ	-	-	-	-	-	-	-	-	-	3,720
SB-2 @ 30'	30'	3/6/2012	In-Situ	-	-	-	-	-	-	-	-	-	768
SB-2 @ 35'	35'	3/6/2012	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.150	<10.0	<10.0	<10.0	<10.0	336
SB-3 (Background) @ Surface	Surface	12/12/2012	In-Situ	-	-	-	-	-	-	-	-	-	32.0
SB-3 (Background) @ 5'	5'	12/12/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	64.0
SB-3 (Background) @ 10'	10'	12/12/2012	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	48.0
SB-3 (Background) @ 15'	15'	12/12/2012	In-Situ	-	-	-	-	-	-	-	-	-	32.0
SB-3 (Background) @ 20'	20'	12/12/2012	In-Situ	-	-	-	-	-	-	-	-	-	32.0
SB-3 (Background) @ 25'	25'	12/12/2012	In-Situ	-	-	-	-	-	-	-	-	-	32.0
SB-4 @ Surface	Surface	12/12/2012	In-Situ	-	-	-	-	-	-	-	-	-	3,520
SB-4 @ 5'	5'	12/12/2012	In-Situ	-	-	-	-	-	<10.0	123	34.9	158	928
SB-4 @ 10'	10'	12/12/2012	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	63.1	18.2	81.3	1,620
SB-4 @ 20'	20'	12/12/2012	In-Situ	-	-	-	-	-	-	-	-	-	1,950
SB-4 @ 30'	30'	12/12/2012	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	256	60.4	316	2,880
SB-4 @ 40'	40'	12/12/2012	In-Situ	-	-	-	-	-	-	-	-	-	1,620
SB-4 @ 50'	50'	12/12/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	848
SB-4 @ 55'	55'	12/12/2012	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	33.2	<10.0	33.2	896
SB-5 @ Surface	Surface	12/12/2012	In-Situ	-	-	-	-	-	-	-	-	-	976
SB-5 @ 5'	5'	12/12/2012	In-Situ	-	-	-	-	-	-	-	-	-	736
SB-5 @ 10'	10'	12/12/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	1,230
SB-5 @ 15'	15'	12/12/2012	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	20.9	<10.0	20.9	2,000
SB-5 @ 20'	20'	12/12/2012	In-Situ	-	-	-	-	-	-	-	-	-	2,440
SB-5 @ 30'	30'	12/12/2012	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	104	12.4	116	1,040
SB-5 @ 45'	45'	12/12/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	992
SB-5 @ 50'	50'	12/12/2012	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	688

TABLE 1

## CONCENTRATIONS OF BENZENE, BTEX, TPH &amp; CHLORIDE IN SOIL

BOPCO, LP  
INDIAN FLATS BASS FEDERAL SWD  
EDDY COUNTY, NEW MEXICO

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030					METHOD: 8015M			TOTAL TPH C <sub>6</sub> -C <sub>35</sub> (mg/Kg)	4500 CI-B CHLORIDE (mg/Kg)
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL- BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C <sub>6</sub> -C <sub>12</sub> (mg/Kg)	DRO C <sub>12</sub> -C <sub>28</sub> (mg/Kg)	ORO C <sub>28</sub> -C <sub>35</sub> (mg/Kg)		
SB-6 @ Surface	Surface	12/12/2012	Excavated	-	-	-	-	-	-	-	-	-	3,680
SB-6 @ 5'	5'	12/12/2012	Excavated	-	-	-	-	-	-	-	-	-	192
SB-6 @ 10'	10'	12/12/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	1,520
SB-6 @ 15'	15'	12/12/2012	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	2,000
SB-6 @ 25'	25'	12/12/2012	In-Situ	-	-	-	-	-	-	-	-	-	304
SB-6 @ 35'	35'	12/12/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	144
SB-6 @ 40'	40'	12/12/2012	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	112
SB-7 @ Surface	Surface	12/12/2012	Excavated	-	-	-	-	-	-	-	-	-	13,200
SB-7 @ 5'	5'	12/12/2012	Excavated	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	384
SB-7 @ 10'	10'	12/12/2012	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	784
SB-7 @ 20'	20'	12/12/2012	In-Situ	-	-	-	-	-	-	-	-	-	304
SB-7 @ 30'	30'	12/12/2012	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	288
SB-7 @ 40'	40'	12/12/2012	In-Situ	-	-	-	-	-	-	-	-	-	368
SB-7 @ 50'	50'	12/12/2012	In-Situ	-	-	-	-	-	-	-	-	-	704
SB-7 @ 60'	60'	12/12/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	576
SB-7 @ 65'	65'	12/12/2012	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	496
SB-8 @ 5'	5'	5/31/2013	Excavated	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	17.4	15.5	32.9	928
SB-8 @ 10'	10'	5/31/2013	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	2,400
SB-8 @ 25'	25'	5/31/2013	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	11.7	10.2	21.9	1,570
SB-8 @ 40'	40'	5/31/2013	In-Situ	-	-	-	-	-	-	-	-	<10.0	672
SB-8 @ 55'	55'	5/31/2013	In-Situ	-	-	-	-	-	-	-	-	<10.0	512
SB-8 @ 65'	65'	5/31/2013	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	256
SB-8 @ 70'	70'	5/31/2013	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	13.2	<10.0	13.2	352
SB-9 @ 5'	5'	5/31/2013	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	3,680
SB-9 @ 10'	10'	5/31/2013	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	3,600
SB-9 @ 25'	25'	5/31/2013	In-Situ	-	-	-	-	-	-	-	-	-	3,320
SB-9 @ 45'	45'	5/31/2013	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	1,090
SB-9 @ 60'	60'	5/31/2013	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	2,100
SB-9 @ 75'	75'	5/31/2013	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	1,680
SB-9 @ 85'	85'	5/31/2013	In-Situ	-	-	-	-	-	-	-	-	-	800
SB-9 @ 95'	95'	5/31/2013	In-Situ	-	-	-	-	-	-	-	-	-	512
SB-9 @ 100'	100'	5/31/2013	In-Situ	-	-	-	-	-	-	-	-	-	512
SB-9 @ 105'	105'	5/31/2013	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	336
SB-9 @ 110'	110'	5/31/2013	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	688

TABLE 1

## CONCENTRATIONS OF BENZENE, BTEX, TPH &amp; CHLORIDE IN SOIL

BOPCO, LP  
INDIAN FLATS BASS FEDERAL SWD  
EDDY COUNTY, NEW MEXICO

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030					METHOD: 8015M			TOTAL TPH C <sub>6</sub> -C <sub>35</sub> (mg/Kg)	4500 CI-B CHLORIDE (mg/Kg)
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL- BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C <sub>6</sub> -C <sub>12</sub> (mg/Kg)	DRO C <sub>12</sub> -C <sub>28</sub> (mg/Kg)	ORO C <sub>28</sub> -C <sub>35</sub> (mg/Kg)		
SB-10 @ 5'	5'	6/3/2013	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	5,120
SB-10 @ 10'	10'	6/3/2013	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	7,440
SB-10 @ 25'	25'	6/3/2013	In-Situ	-	-	-	-	-	-	-	-	-	704
SB-10 @ 40'	40'	6/3/2013	In-Situ	-	-	-	-	-	-	-	-	-	1,090
SB-10 @ 50'	50'	6/3/2013	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	3,520
SB-10 @ 70'	70'	6/3/2013	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	2,180
SB-10 @ 80'	80'	6/3/2013	In-Situ	-	-	-	-	-	-	-	-	-	768
SB-10 @ 90'	90'	6/3/2013	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	1,170
SB-10 @ 100'	100'	6/3/2013	In-Situ	-	-	-	-	-	-	-	-	-	608
SB-10 @ 110'	110'	6/3/2013	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	672
SB-10 @ 115'	115'	6/3/2013	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	1,060
South Wall #1	3.5'	6/14/2013	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	864
North Wall #1	3.5'	6/14/2013	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	960
North Wall #2	3.5'	6/24/2013	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	368
East Wall #1	3.5'	6/24/2013	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	416
South Wall #2	3.5'	6/24/2013	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	304
West Wall #1	3.5'	6/24/2013	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	640
South Wall #3	3.5'	7/3/2013	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	512
South Wall #4	3.5'	7/3/2013	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	576
North Wall #3	3.5'	7/10/2013	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	2,800
North Wall #4	3.5'	7/10/2013	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	3,680
NMOCD Criteria				10					50			5,000	1,000

- = Not analyzed.

# **Appendices**

**Appendix A**

**Release Notification &**

**Corrective Action (Form C-141)**

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District 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

Release Notification and Corrective Action

nmla1205242397

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: Indian Flats Bass Federal #1 SWD		Facility Type: E&P
Surface Owner Federal	Mineral Owner Federal	Lease No. LC-067144

30-015-24968

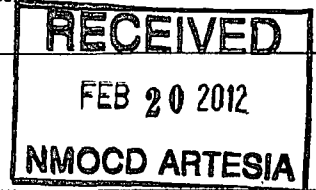
LOCATION OF RELEASE

Unit Letter J	Section 35	Township 21S	Range 28E	Feet from the	North/South Line	Feet from the	East/West Line	County Eddy
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Latitude N 32.433905 Longitude W 104.055425

NATURE OF RELEASE

Type of Release: Produced water	Volume of Release: 200 bbls	Volume Recovered: 160 bbls
Source of Release: 1/2' fitting on the pump discharge line.	Date and Hour of Occurrence 2/8/12 time unknown	Date and Hour of Discovery 2/8/12 9:00 a.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher	
By Whom? Tony Savoie	Date and Hour 2/8/12 11:44 a.m.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse	



If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* a 1/2' fitting on the discharge of the salt water disposal pump broke. The fitting was replaced.

Describe Area Affected and Cleanup Action Taken.\*The released fluid affected approximately 10,875 sq. ft. area around the pump, lease road and caliche well pad. The free standing fluid was picked up with a vacuum truck and the saturated soil was scraped up and stockpiled on-site. The Site remediation for the produced water will follow the NMOCD guidelines for leaks and spills.

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

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: FEB 21 2012	Expiration Date:
E-mail Address: TASavoie@BassPet.com	Conditions of Approval: Remediation per OCD Rules & Guidelines. SUBMIT REMEDIATION PROPOSAL NOT LATER THAN: 3/21/2012	Attached <input type="checkbox"/>
Date: 2/20/12	Phone: 432-556-8730	

\* Attach Additional Sheets If Necessary

2RA-1037

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
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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

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NMOCD ARTESIA

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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	Indian Flats Bass Federal #1 SWD	Facility Type	E&P
Surface Owner	Federal	Mineral Owner	Federal
		Lease No.	LC-067144
		API #	30-015-24968

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	35	21S	28E					Eddy

Latitude 32.433905° North

Longitude 104.055425° West

NATURE OF RELEASE

Type of Release	Produced water	Volume of Release	200 bbls of produced water	Volume Recovered	160 bbls
Source of Release	1/2" fitting on the pump discharge line	Date and Hour of Occurrence	2/8/12 time unknown	Date and Hour of Discovery	2/8/12 9:00 a.m.
Was Immediate Notice Given?	X Yes No Not Required	If YES, To Whom?	Mike Bratcher		
By Whom?	Tony Savoie	Date and Hour	2/8/12 11:44 a.m.		
Was a Watercourse Reached?	<input type="checkbox"/> Yes X No	If YES, Volume Impacting the Watercourse.			

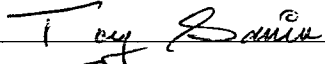
If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* A 1/2" fitting on the discharge line of the salt water disposal pump broke. The fitting was replaced.

Describe Area Affected and Cleanup Action Taken.\* The released fluid affected approximately 10,875 sq. ft. area around the pump, lease road, and caliche well pad. A vacuum truck was utilized to remove all of the free-standing liquid. Following initial response activities, the release was remediated as per NMOCD recommended guidelines. Please reference the attached *Remediation Summary & Risk-Based Site Closure Request* for remediation details.

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

OIL CONSERVATION DIVISION

Signature:			
Printed Name:	Tony Savoie		
Title:	Approval Date:	Expiration Date:	
E-mail Address:	Conditions of Approval:		
Date:	10/3/13	Phone:	

2RP-1037

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
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State of New Mexico  
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Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised October 10, 2003

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with Rule 116 on back  
side of form

Release Notification and Corrective Action

nJMW 1219350779 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: Indian Flats Bass Federal #1 SWD	Facility Type: E&P

Surface Owner Federal	Mineral Owner Federal	Lease No. LC-067144 API#
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Indian Flats Bass Fed #1

LOCATION OF RELEASE

30-015-24968

Unit Letter J	Section 35	Township 21S	Range 28E	Feet from the	North/South Line	Feet from the	East/West Line	County Eddy
------------------	---------------	-----------------	--------------	---------------	------------------	---------------	----------------	----------------

Latitude N 32.433905 Longitude W 104.055425

NATURE OF RELEASE

Type of Release: Produced water	Volume of Release: 50 bbls	Volume Recovered: 10 bbls
Source of Release: A SWD pump	Date and Hour of Occurrence 5/23/12 time unknown	Date and Hour of Discovery 5/23/12 9:00 a.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? NMOCD Emergency #104	
By Whom? Tony Savoie	Date and Hour 5/23/12 1:30 p.m.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* A 1" valve was left open on the pump causing the sump to overflow. The valve was closed.

Describe Area Affected and Cleanup Action Taken.\*The released fluid affected approximately 8,000 sq. ft. area around the pump, lease road and caliche well pad. The free standing fluid was picked up with a vacuum truck and the saturated soil was scraped up and stockpiled on-site. The spill covered the same area as another spill reported on 2/8/12.

The Site remediation for the produced water will follow the NMOCD guidelines for leaks and spills.

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

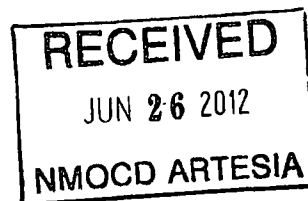
Signature: Tony Savoie		OIL CONSERVATION DIVISION	
Printed Name: Tony Savoie		Approved by District Supervisor:	
Title: Waste Mgmt. & Remediation Specialist		Signed By Mike Benavides	
E-mail Address: TASavoie@BassPet.com		Approval Date: JUL 11 2012 Expiration Date:	
Date: 6/24/12 Phone: 432-556-8730		Conditions of Approval:	
		Attached <input type="checkbox"/>	

\* Attach Additional Sheets If Necessary

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

8/11/12

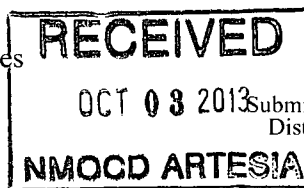
2RP-1208



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

## Release Notification and Corrective Action

### OPERATOR

Initial Report

☒ 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	Indian Flats Bass Federal #1 SWD	Facility Type	E&P
Surface Owner	Federal	Mineral Owner	Federal
		Lease No.	API #30-015-24968

### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	35	21S	28E					Eddy

Latitude 32.433905° North

Longitude 104.055425° West

### NATURE OF RELEASE

Type of Release	Produced water	Volume of Release	50 bbls of produced water	Volume Recovered	10 bbls
Source of Release	An SWD pump	Date and Hour of Occurrence	5/23/12 time unknown	Date and Hour of Discovery	5/23/12 9:00 a.m.
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	NMOCD Emergency #104		
By Whom?	Tony Savoie	Date and Hour	5/23/12 1:30 p.m.		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* A 1" valve was left open on the pump, causing the sump to overflow. The valve was closed.

Describe Area Affected and Cleanup Action Taken.\* The released fluid affected an approximately 8,000 sq. ft. area around the pump, lease road, and caliche well pad. A vacuum truck was utilized to remove all of the free-standing liquid. The spill covered the same area as another spill reported on 2/8/12. Following initial response activities, the releases were remediated as per NMOCD recommended guidelines. Please reference the attached *Remediation Summary & Risk-Based Site Closure Request* for remediation details.

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

Signature: <u>Tony Savoie</u>	<u>OIL CONSERVATION DIVISION</u>	
Printed Name: <u>Tony Savoie</u>	Approved by District Supervisor:	
Title:	Approval Date:	Expiration Date:
E-mail Address:	Conditions of Approval:	
Date: <u>10/3/13</u> Phone:		

2RP-1208

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

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District Office in accordance  
with Rule 116 on back  
side of form

**Release Notification and Corrective Action**

nJMW 1219352653

**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: Indian Flats Bass Federal #1 SWD		Facility Type: E&P

Surface Owner Federal	Mineral Owner Federal	Lease No. LC-067144-AMEH
-----------------------	-----------------------	--------------------------

Indian Flats Bass Fed #1

**LOCATION OF RELEASE** 30-015-24968

Unit Letter J	Section 35	Township 21S	Range 28E	Feet from the	North/South Line	Feet from the	East/West Line	County Eddy
------------------	---------------	-----------------	--------------	---------------	------------------	---------------	----------------	----------------

Latitude N 32.433905 Longitude W 104.055425

**NATURE OF RELEASE**

Type of Release: Produced water	Volume of Release: 80 bbls	Volume Recovered: 20 bbls
Source of Release: A salt water transfer pump.	Date and Hour of Occurrence 5/25/12 time unknown	Date and Hour of Discovery 5/25/12 9:00 a.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher	
By Whom? Tony Savoie	Date and Hour 5/25/12 11:40 a.m.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* A gauge broke on the pump, water was sprayed outside the containment area on the caliche pad and road at the facility. The gauge was replaced.

Describe Area Affected and Cleanup Action Taken.\* The released fluid affected approximately 5,000 sq. ft. area around the pump, lease road and caliche well pad. The free standing fluid was picked up with a vacuum truck. The release is in the same location as previous spills of 2/8/12 and 5/23/12. An air rotary rig was used to determine the vertical extent of the first release. A rig will be re-scheduled to delineate the recent spills. The Site remediation for the produced water will follow the NMOCD guidelines for leaks and spills.

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

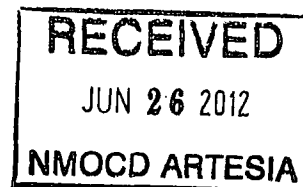
Signature: Tony Savoie		<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Tony Savoie		Approved by District Supervisor:	
Title: Waste Mgmt. & Remediation Specialist		Signed By Mike Bratcher	
E-mail Address: TASavoie@BassPet.com		Approval Date: 11 2012	Expiration Date:
Date: 6/24/12 Phone: 432-556-8730		Conditions of Approval:	Attached <input type="checkbox"/>

\* Attach Additional Sheets If Necessary

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

8/11/12

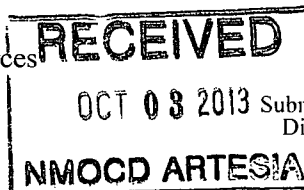
2RP-1209



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

### Release Notification and Corrective Action

#### OPERATOR

Initial Report

☒ 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	Indian Flats Bass Federal #1 SWD	Facility Type	E&P
Surface Owner	Federal	Mineral Owner	Federal
		Lease No.	API #30-015-24968

#### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	35	21S	28E					Eddy

Latitude 32.433905° North

Longitude 104.055425° West

#### NATURE OF RELEASE

Type of Release	Produced water	Volume of Release	80 bbls of produced water	Volume Recovered	20 bbls
Source of Release	An salt water transfer pump	Date and Hour of Occurrence	5/25/12 time unknown	Date and Hour of Discovery	5/25/12 9:00 a.m.
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Mike Bratcher		
By Whom?	Tony Savoie	Date and Hour	5/25/12 11:40 p.m.		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* A gauge broke on the pump. Water was sprayed outside the containment area on the caliche pad and road to the facility. The gauge was replaced.

Describe Area Affected and Cleanup Action Taken.\* The released fluid affected an approximately 5,000 sq. ft. area around the pump, lease road, and caliche well pad. A vacuum truck was utilized to remove all of the free-standing liquid. The spill covered the same area as spills reported on 2/8/12 and 5/23/12. Following initial response activities, the releases were remediated as per NMOCD recommended guidelines. Please reference the attached *Remediation Summary & Risk-Based Site Closure Request* for remediation details.

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

Signature: <u>Tony Savoie</u>		OIL CONSERVATION DIVISION	
Printed Name: <u>Tony Savoie</u>		Approved by District Supervisor:	
Title:	Approval Date:	Expiration Date:	
E-mail Address:	Conditions of Approval:		
Date: <u>10/31/13</u>	Phone:		

2RP-1209

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  
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side of form

**Release Notification and Corrective Action**

**OPERATOR**

☒ Initial Report ☐ Final Report

*nJMW 1219348842*  
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: Indian Flats Bass Federal #1 Tank Battery Facility Type: E&P

Surface Owner Federal Mineral Owner Federal ~~Lease No. LC-067144~~ *APZ #*

**LOCATION OF RELEASE**

*30-015-24968*

Unit Letter J	Section 35	Township 21S	Range 28E	Feet from the	North/South Line	Feet from the	East/West Line	County Eddy
------------------	---------------	-----------------	--------------	---------------	------------------	---------------	----------------	----------------

Latitude N 32.433905 Longitude W 104.055425

**NATURE OF RELEASE**

Type of Release: Crude oil	Volume of Release: 15 bbls	Volume Recovered: 5 bbls
Source of Release: 3" fill line to the tanks.	Date and Hour of Occurrence 6/21/12 time 1:00 p.m.	Date and Hour of Discovery 6/21/12 1:00 p.m.
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* Crews were installing a new heater treater at the location when a 3" line coming from the flow line header to the tanks broke. A vacuum truck was on-site removing oil from the separators and was used to recover the spilled fluid.

Describe Area Affected and Cleanup Action Taken.\* The released fluid affected approximately 1500 sq. ft. inside the tank battery earthen containment. The free standing fluid was picked up with a vacuum truck.

The Site remediation for the crude oil will follow the NMOCD guidelines for leaks and spills.

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

**OIL CONSERVATION DIVISION**

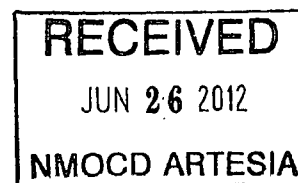
Signature: <i>Tony Savoie</i>	Approved by District Supervisor:	
Printed Name: Tony Savoie	Signed By <i>Mike Brannon</i>	
Title: Waste Mgmt. & Remediation Specialist	Approval Date: <b>JUL 11 2012</b>	Expiration Date:
E-mail Address: TASavoie@BassPet.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 6/24/12	Phone: 432-556-8730	

\* Attach Additional Sheets If Necessary

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

*8/11/12*

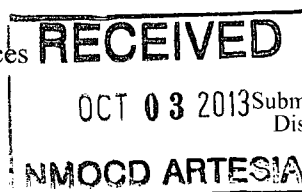
*2RP-1207*



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  
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with Rule 116 on back  
side of form

### Release Notification and Corrective Action

#### OPERATOR

Initial Report

☒ 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	Indian Flats Bass Federal #1 Tank Battery	Facility Type	E&P
Surface Owner	Federal	Mineral Owner	Federal
		Lease No.	API #30-015-24968

#### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	35	21S	28E					Eddy

Latitude 32.433905° North

Longitude 104.055425° West

#### NATURE OF RELEASE

Type of Release	Crude Oil	Volume of Release	15 bbls	Volume Recovered	5 bbls
Source of Release	An salt water transfer pump	Date and Hour of Occurrence	6/21/12 1:00 p.m.	Date and Hour of Discovery	6/21/12 1:00 p.m.
Was Immediate Notice Given?	Yes No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?			
By Whom?	Tony Savoie	Date and Hour			
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* Crews were installing a new heater treater at the location when a 3" line coming from the flow line header to the tanks broke. A vacuum truck was on-site removing oil from the separators and was used to recover the spilled fluid.

Describe Area Affected and Cleanup Action Taken.\* The released fluid affected an approximately 1,500 sq. ft. inside the tank battery earthen containment. Following initial response activities, the release was remediated as per NMOCD recommended guidelines. Please reference the attached *Remediation Summary & Risk-Based Site Closure Request* for remediation details.

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

Signature: <i>Tony Savoie</i>		<u>OIL CONSERVATION DIVISION</u>	
Printed Name: <i>Tony Savoie</i>		Approved by District Supervisor:	
Title:	Approval Date:	Expiration Date:	
E-mail Address:	Conditions of Approval:		
Date: <i>10/3/13</i>	Phone:		

2RP-1207

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

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side of form

**Release Notification and Corrective Action**

nJMW1235328868  
Name of Company BOPCO, L.P. 260737 OPERATOR ☒ Initial Report ☐ Final Report  
Address 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220 Contact Tony Savoie  
Facility Name: Indian Flats Bass Federal #1 SWD Telephone No. 432-556-8730  
Facility Type: E&P

Surface Owner Federal Mineral Owner Federal Lease No. LC-067144

**LOCATION OF RELEASE**

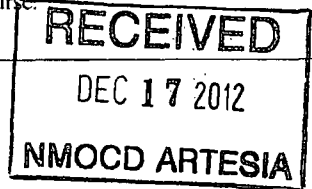
API# 30-015-24968

Unit Letter J	Section 35	Township 21S	Range 28E	Feet from the	North/South Line	Feet from the	East/West Line	County Eddy
------------------	---------------	-----------------	--------------	---------------	------------------	---------------	----------------	----------------

Latitude N 32.433905 Longitude W 104.055425

**NATURE OF RELEASE**

Type of Release: Produced water	Volume of Release: 80 bbls	Volume Recovered: 70 bbls
Source of Release: A salt water transfer pump.	Date and Hour of Occurrence 11/27/12 time unknown	Date and Hour of Discovery 11/27/12 1:00 p.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? NMOCD emergency #104	
By Whom? Tony Savoie	Date and Hour 11/27/12 2:30 p.m.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	



If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* A backpressure valve broke on the pump, water was sprayed outside the containment area on the caliche pad and road at the facility. The valve was replaced.

Describe Area Affected and Cleanup Action Taken.\* The released fluid affected approximately 4,500 sq. ft. area around the pump, lease road and caliche well pad. The free standing fluid was picked up with a vacuum truck. The release is in the same location as previous spills. An air rotary rig was used to determine the vertical extent of the first release. A rig was on location 12/12/12 and advanced 5 soil bores at various locations around the tank battery location, samples were collected to determine vertical extent. A remediation plan will be developed and submitted to the NMOCD. The Site remediation for the produced water will follow the NMOCD guidelines for leaks and spills.

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

Signature: <u>Tony Savoie</u>	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Tony Savoie	Approved by District Supervisor:	Signed By <u>Mike Brannon</u>
Title: Waste Mgmt. & Remediation Specialist	Approval Date: <b>DEC 18 2012</b>	Expiration Date:
E-mail Address: TASavoie@BassPet.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 12/17/12 Phone: 432-556-8730		

\* Attach Additional Sheets If Necessary

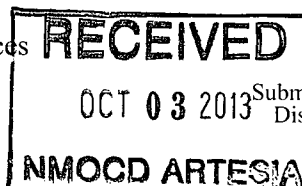
Remediation per OCD Rules &  
Guidelines. **SUBMIT REMEDIATION  
PROPOSAL NOT LATER THAN:  
January 18, 2013**

2RP-1457

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



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Revised October 10, 2003  
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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	Indian Flats Bass Federal #1 SWD	Facility Type	E&P
Surface Owner	Federal	Mineral Owner	Federal
		Lease No.	API #30-015-24968

**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	35	21S	28E					Eddy

**Latitude** 32.433905° North

**Longitude** 104.055425° West

**NATURE OF RELEASE**

Type of Release	Produced water	Volume of Release	80 bbls of produced water	Volume Recovered	70 bbls
Source of Release	A salt water transfer pump	Date and Hour of Occurrence	11/27/12 time unknown	Date and Hour of Discovery	11/27/12 1:00 p.m.
Was Immediate Notice Given?	X Yes No Not Required	If YES, To Whom?	NMOCD Emergency #104		
By Whom?	Tony Savoie	Date and Hour	11/27/12 2:30 p.m.		
Was a Watercourse Reached?	<input type="checkbox"/> Yes X No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* A back pressure valve broke on the pump. Water was sprayed outside the containment area on the caliche pad and road to the facility. The valve was replaced.

Describe Area Affected and Cleanup Action Taken.\* The released fluid affected an approximately 4,500 sq. ft. area around the pump, lease road, and caliche well pad. A vacuum truck was utilized to remove all of the free-standing liquid. The spill covered the same area as spills reported on 2/8/12, 5/23/12, and 5/25/12. Following initial response activities, the releases were remediated as per NMOCD recommended guidelines. Please reference the attached *Remediation Summary & Risk-Based Site Closure Request* for remediation details.

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

Signature:		<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Tony Savoie		Approved by District Supervisor:	
Title:	Approval Date:	Expiration Date:	
E-mail Address:	Conditions of Approval:		
Date: 10/3/13	Phone:		

2RP-1457

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

State of New Mexico  
Energy Minerals and Natural Resources

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

Form C-141  
Revised August 8, 2011

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

**Release Notification and Corrective Action**

*JMW* 1314055065

**OPERATOR**

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P. <i>260737</i>	Contact: Tony Savoie
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: Indian Flats Bass Federal SWD Tank Battery Battery is located 1340 ft, North of Well #6 API 30-015-22673	Facility Type: Exploration and Production

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-22673
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**LOCATION OF RELEASE**

Unit Letter J	Section 35	Township 21S	Range 28E	Feet from the 1652	North/South Line South	Feet from the 2150	East/West Line East	County Eddy
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Latitude N. 32.434001 Longitude W. 104.055557

**NATURE OF RELEASE**

Type of Release: Produced Water	Volume of Release: 375 Bbls.	Volume Recovered: 10 Bbls.
Source of Release: Produced water tank overflowed	Date and Hour of Occurrence: Date 4/25/13 time unknown	Date and Hour of Discovery: Date 4/25/13 5:00 p.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? NMOCD Emergency #104	
By Whom? Tony Savoie	Date and Hour: 4/26/13 at 8:00 a.m.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

**RECEIVED**  
MAY 17 2013  
NMOCD ARTESIA

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*  
The Strainer on the suction to the SWD plugged up causing the pump to discharge at a rate that was not sufficient to keep up with the incoming water. The alarm system failed to report high tank levels and high discharge pressure. The strainer was removed and cleaned.

Describe Area Affected and Cleanup Action Taken.\*  
The area was being remediated as a result of previous spills associated with the SWD pump failure. New impervious containment has been constructed around the SWD pump and oil production tanks. The area around the SWD tanks was scheduled for a soil boring event due to chloride levels that could not be delineated with a backhoe in that area. An air rotary rig has been scheduled to do the delineation. The area impacted was on top of several prior spills that stayed primarily around the SWD tanks and the caliche tank battery pad area.  
The remediation will continue as planned. The containment will be constructed around the SWD tanks upon achieving closure status for leaks and spills.

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

Signature: <i>Tony Savoie</i>		<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Tony Savoie		Approved by Environmental Specialist: Signed By <i>M. L. B...</i>	
Title: Waste Management and Remediation Specialist		Approval Date: <b>MAY 20 2013</b>	Expiration Date:
E-mail Address: tasavoie@basspet.com		Conditions of Approval: Remediation per OCD Rule & Guidelines. <b>SUBMIT REMEDIATION</b>	Attached <input type="checkbox"/>
Date: 5/16/13	Phone: 432-556-8730		

\* Attach Additional Sheets If Necessary

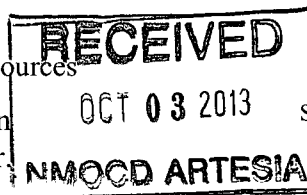
**PROPOSAL NO LATER THAN:**  
*June 20, 2013*

*2RP-1656*

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

## 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	Indian Flats Bass Federal #1 Tank Battery	Facility Type	E&P
Battery is located	1340 ft. north of Well #6 API 30-015-22673		

Surface Owner	Federal	Mineral Owner	Federal	Lease No.	API #30-015-22673
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### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	35	21S	28E	1652	South	2150	East	Eddy

Latitude 32.434001° North

Longitude 104.055557° West

### NATURE OF RELEASE

Type of Release	Produced water	Volume of Release	375 bbls	Volume Recovered	10 bbls
Source of Release	Produced water tank overflowed	Date and Hour of Occurrence	4/25/13 time unknown	Date and Hour of Discovery	4/25/13 5:00 p.m.
Was Immediate Notice Given?	X Yes No Not Required	If YES, To Whom?	NMOCD Emergency #104		
By Whom?	Tony Savoie	Date and Hour	4/26/13 at 8:00 a.m.		
Was a Watercourse Reached?	<input type="checkbox"/> Yes X No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* The strainer on the suction to the SWD plugged up, causing the pump to discharge at a rate that was not sufficient to keep up with the incoming water. The alarm system failed to report high tank levels and high discharge pressure. The strainer was removed and cleaned.

Describe Area Affected and Cleanup Action Taken.\* The area was being remediated as a result of previous spills associated with the SWD pump failure. The area impacted was on top of several prior spills that stayed primarily around the SWD tanks and the caliche tank battery pad area. Following initial response activities, the release was remediated as per NMOCD recommended guidelines. Please reference the attached *Remediation Summary & Risk-Based Site Closure Request* for remediation details.

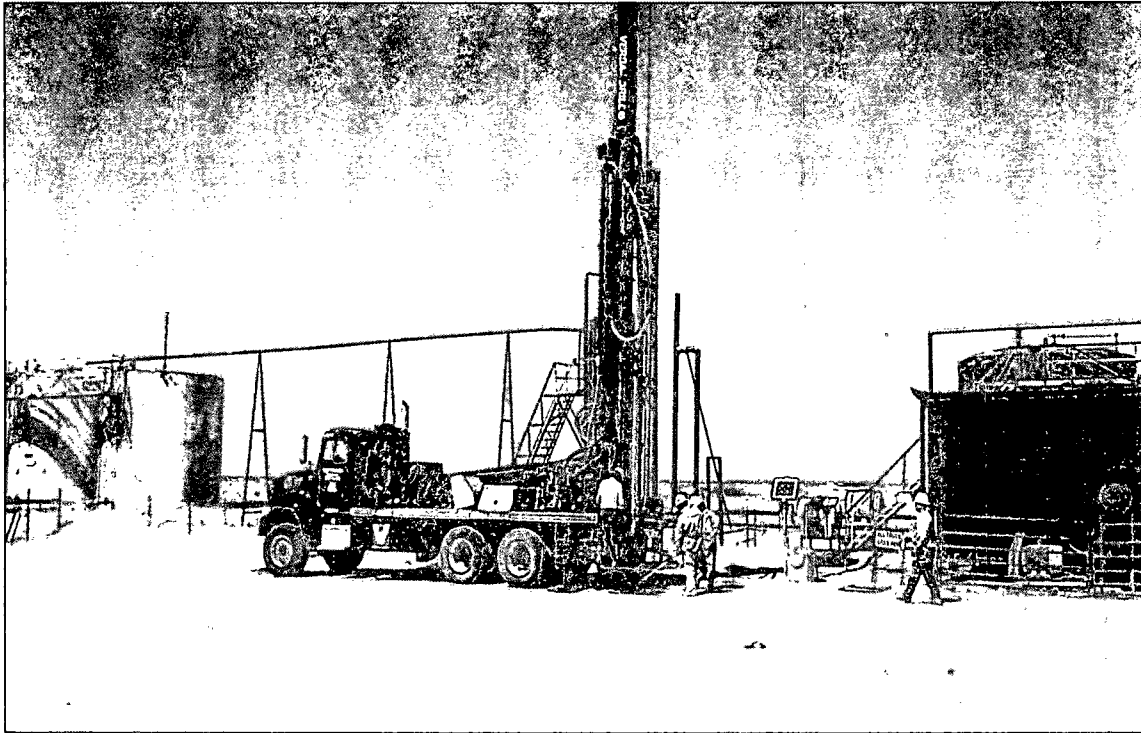
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases, which may endanger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

Signature: <i>Tony Savoie</i>	OIL CONSERVATION DIVISION	
Printed Name: <i>Tony Savoie</i>	Approved by District Supervisor:	
Title:	Approval Date:	Expiration Date:
E-mail Address:	Conditions of Approval:	
Date: <i>10/3/13</i>	Phone:	

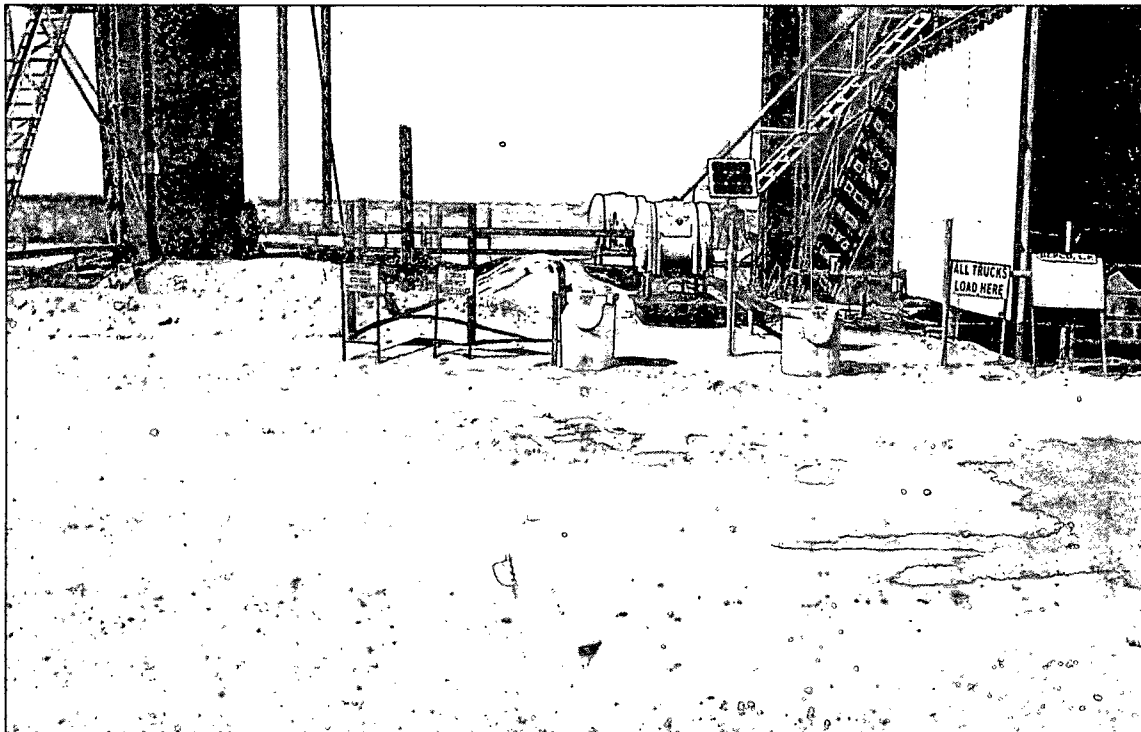
2 RP-1656

# **Appendix B**

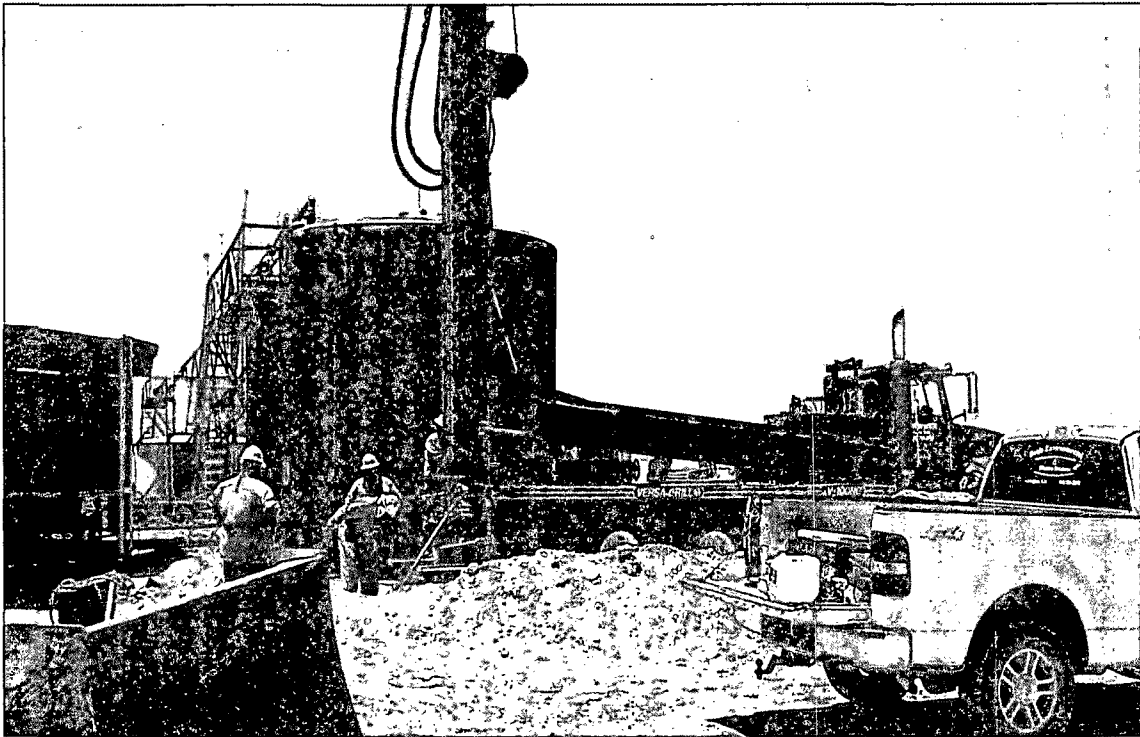
## **Photographs**



Indian Flats Bass Federal #1 SWD - Advancement of Soil Boring SB-2



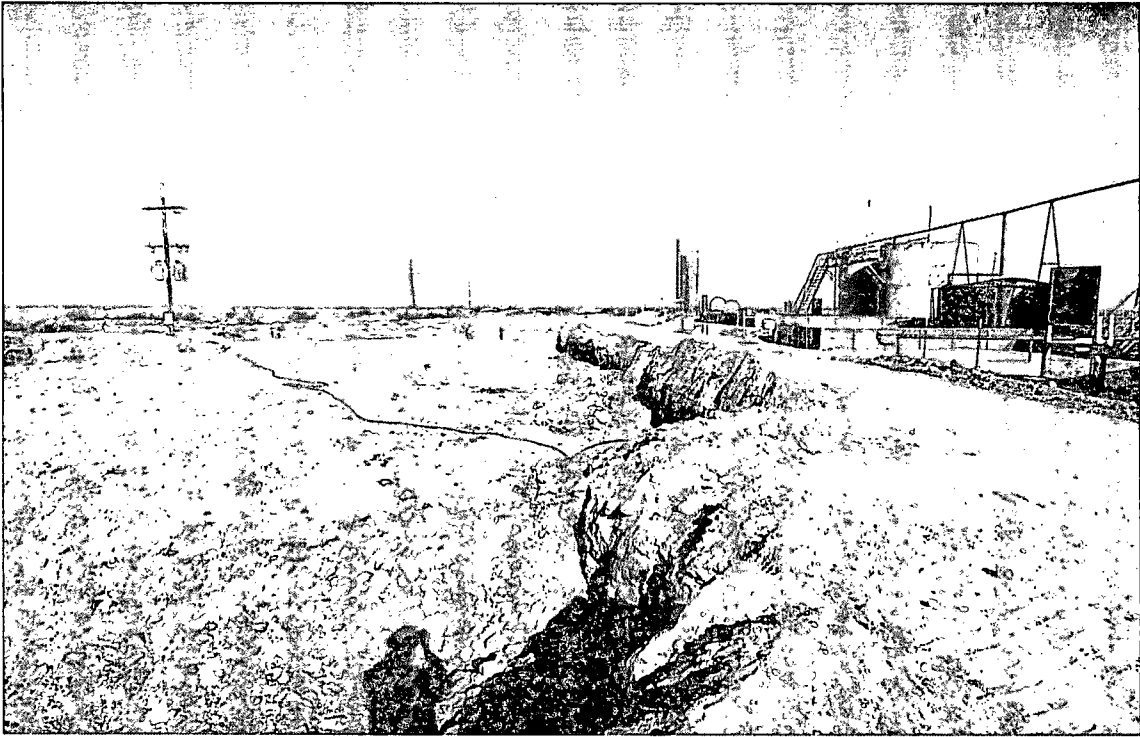
Indian Flats Bass Federal #1 SWD - Soil Boring SB-2 Following P&A  
(Portion of Stain Visible in Right Foreground)



Indian Flats Bass Federal #1 SWD - Advancement of Soil Boring SB-9



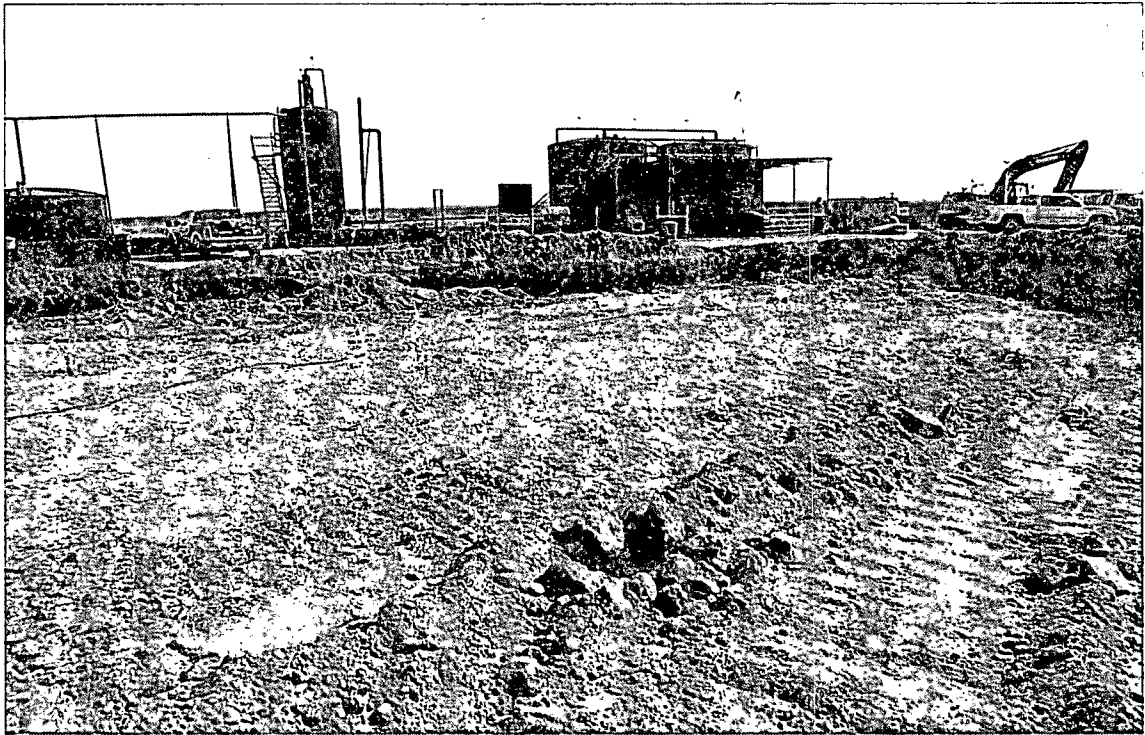
Indian Flats Bass Federal #1 SWD - Excavation



Indian Flats Bass Federal #1 SWD - Excavation (Looking West)



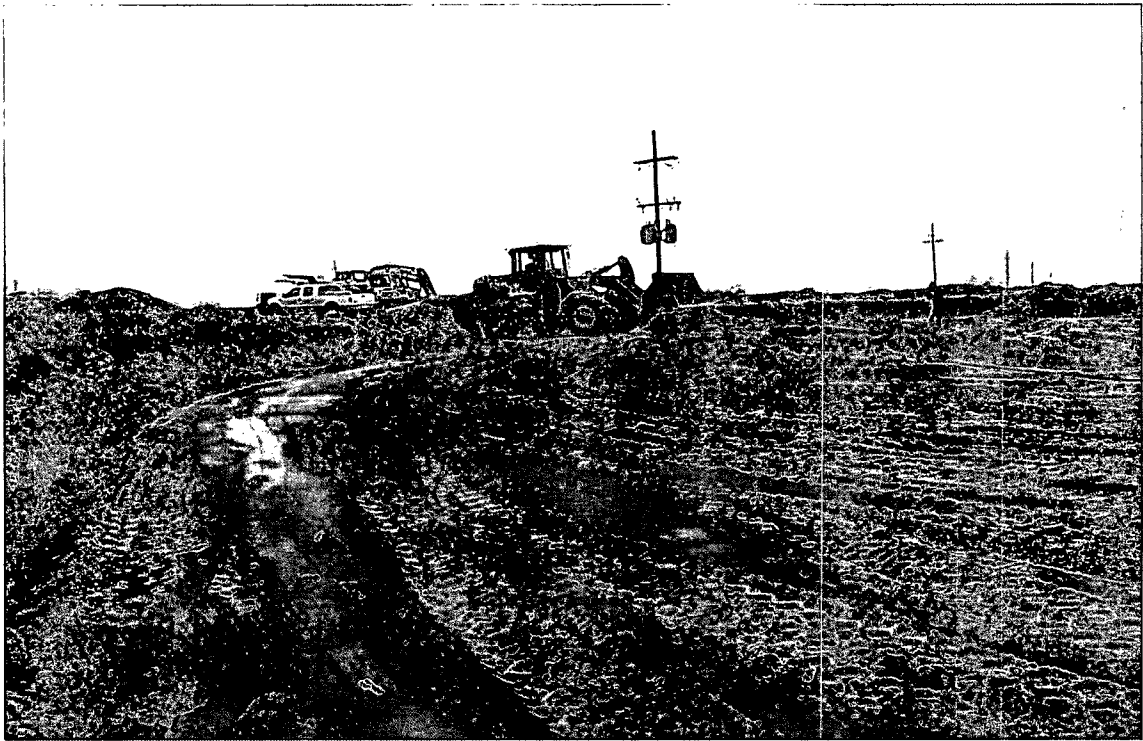
Indian Flats Bass Federal #1 SWD - Excavation (Looking West)



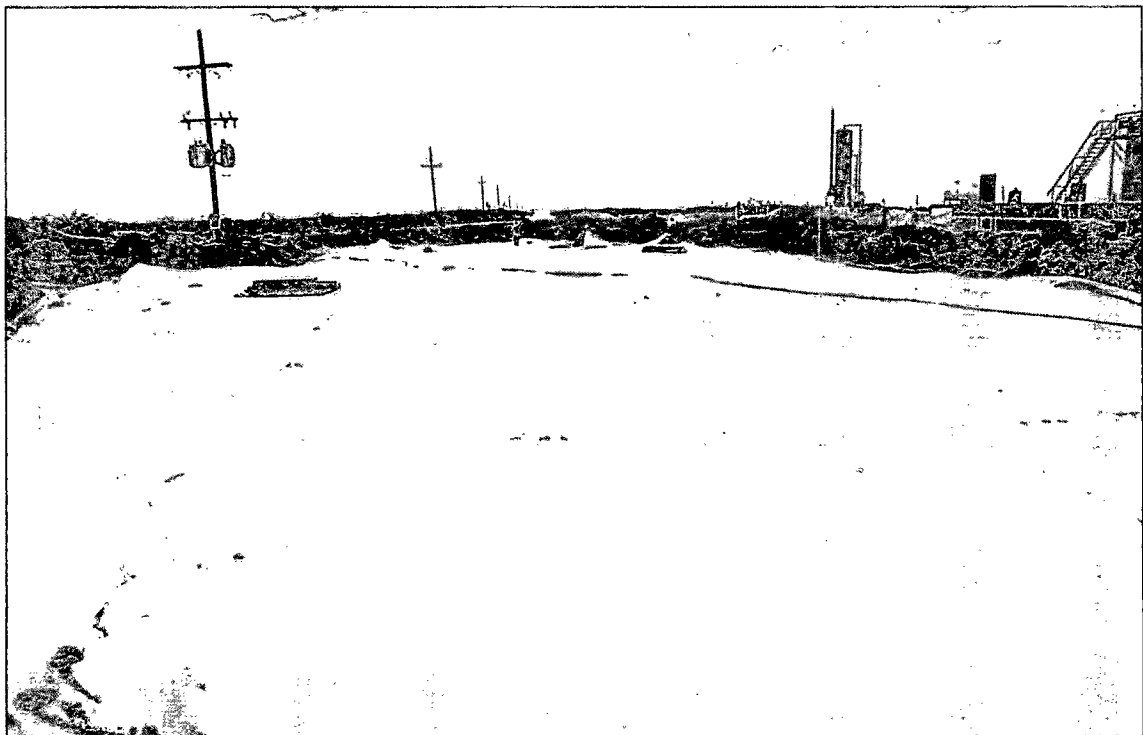
Indian Flats Bass Federal #1 SWD - Excavation (Looking East-Northeast)



Indian Flats Bass Federal #1 SWD - Excavation (Looking East)



Indian Flats Bass Federal #1 SWD - Preparations for Liner Installation



Indian Flats Bass Federal #1 SWD - Liner Installation (Looking West)



Indian Flats Bass Federal #1 SWD - Installation of Pad Sand



Indian Flats Bass Federal #1 SWD - Installation of Pad Sand

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

# Soil Boring SB-1

Depth Below Ground Surface	Soil Column	Chloride Field Test	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description	Boring SB-1
0				None	None	0' - 3' - Brown loamy sand with clay	Date Drilled <u>March 6, 2012</u>
5			1.1	None	None	3' - 5' - Tan calcified sandstone - fine sand	Thickness of Bentonite Seal <u>30 Ft</u>
10			6.5	None	None	5' - 8' - Tan fine sand - sandstone - caliche	Depth of Exploratory Boring <u>30 Ft bgs</u>
15			1.1	None	None	8' - 17' - Tan fine sand - sandstone (dense)	Depth to Groundwater _____
20		1,052		None	None		Ground Water Elevation _____
25		644		None	None	17' - 30' - Red fine sand	<div> <div>▼</div> Indicates the PSH level measured on _____ <div>▼</div> Indicates the groundwater level measured on _____ <div>○</div> Indicates samples selected for Laboratory Analysis. <div>PID</div> Head-space reading in ppm obtained with a photo-ionization detector. </div>
30		300		None	None		

## Completion Notes

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

Soil Boring SB-1

BOPCO, LP  
Indian Flats Bass Federal SWD  
Eddy County, New Mexico



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

Prep By: BJA	Checked By: BRB
March 16, 2012	

# Soil Boring SB-2

Depth Below Ground Surface	Soil Column	Chloride Field Test	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description	Boring SB-2
0		3,614		None	Moderate	0' - 1' - Tan fine sand - caliche	Date Drilled <u>March 6, 2012</u>
5			1.0	None	Moderate	1' - 5' - Brown fine sand with clay	Thickness of Bentonite Seal <u>35 Ft</u>
10			1.0	None	None	5' - 16' - Tan fine sand - calcified sandstone - caliche	Depth of Exploratory Boring <u>35 Ft bgs</u>
15			1.8	None	None	16' - 20' - Tan very fine sand - sandstone	Depth to Groundwater _____
20		>2,428		None	None	20' - 22' - Red fine sand - gravel	Ground Water Elevation _____
25				None	None		<div> <div>▼</div> Indicates the PSH level measured on _____ <div>▼</div> Indicates the groundwater level measured on _____ <div>○</div> Indicates samples selected for Laboratory Analysis. </div>
30		820		None	None	22' - 35' - Red fine sand	PID Head-space reading in ppm obtained with a photo-ionization detector.
35		372					

## Completion Notes

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

Soil Boring SB-2

BOPCO, LP  
Indian Flats Bass Federal SWD  
Eddy County, New Mexico



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

Prep By: BJA	Checked By: BRB
March 16, 2012	

# Soil Boring SB-3 (Background)

Depth Below Ground Surface	Soil Column	Chloride Field Test	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description	Boring SB-3
0		<116		None	None	0' - 1' - Tan fine sand	Date Drilled December 12, 2012
5		<112		None	None		Thickness of Bentonite Seal 25 Ft
10		<112		None	None	1' - 14' - Tan fine sand - caliche - sandstone	Depth of Exploratory Boring 25 Ft bgs
15		<112		None	None		Depth to Groundwater
20		<112		None	None	14' - 25' - Red fine sand - caliche	Ground Water Elevation
25		<112		None	None		

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

## Completion Notes

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

Soil Boring SB-3  
(Background)

BOPCO, LP  
Indian Flats Bass Federal SWD  
Eddy County, New Mexico



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

Prep By: BJA	Checked By: BRB
March 25, 2013	

# Soil Boring SB-4

Depth Below Ground Surface	Soil Column	Chloride Field Test	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description	Boring SB-4
0		(1,684)	(2.5)	Heavy	Heavy		Date Drilled <u>December 12, 2012</u>
5		(568)	(2.5)	Heavy	Moderate	0' - 5' - Tan fine sand - caliche	Thickness of Bentonite Seal <u>56 Ft</u>
10		(1,812)	(0.7)	Moderate	Moderate	5' - 12' - Tan fine sand - sandstone	Depth of Exploratory Boring <u>56 Ft bgs</u>
15			1.0	Slight	None	12' - 14' - Pale tan very fine sand - caliche sandstone	Depth to Groundwater _____
20		(1,736)	(5.3)	Heavy	Heavy	14' - 17' - Tan fine sandstone	Ground Water Elevation _____
25				None	None	17' - 23' - Tannish red silty sand	▼ Indicates the PSH level measured on _____
30		(2,140)	(4.7)	None	None		▼ Indicates the groundwater level measured on _____
35				None	None	23' - 41' - Red silty sand	○ Indicates samples selected for Laboratory Analysis.
40		(1,220)		None	None		PID Head-space reading in ppm obtained with a photo-ionization detector.
45		1,480		None	None	41' - 44' - Red fine sand - pea gravel	
50		(568)		None	None	44' - 51' - Red fine sand	
55		(776)		None	None	51' - 56' - Red fine sand - sandstone	

## Completion Notes

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

Soil Boring SB-4

BOPCO, LP  
Indian Flats Bass Federal SWD  
Eddy County, New Mexico



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

Prep By: BJA

Checked By: BRB

March 25, 2013

# Soil Boring SB-5

Depth Below Ground Surface	Soil Column	Chloride Field Test	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description	Boring SB-5
0			128	Heavy	Moderate	0' - 3' - Red fine sand - sandstone	Date Drilled <u>December 12, 2012</u>
5		620	16.4	Slight	None	3' - 7' - Tan fine sand - sandstone	Thickness of Bentonite Seal <u>50 Ft</u>
10		1,080	9.9	None	None	7' - 8' - Dense caliche sandstone - tan sand	Depth of Exploratory Boring <u>50 Ft bgs</u>
15		1,684	13.7	None	None	8' - 11' - Tan fine sand - sandstone	Depth to Groundwater _____
20		2,256		None	None	11' - 16' - Beige silty sand - sandstone	Ground Water Elevation _____
25				None	None	16' - 19' - Tan silty sand - sandstone	
30		860	32.0	None	None		<div> <div>▼</div> Indicates the PSH level measured on _____ <div>▼</div> Indicates the groundwater level measured on _____ <div>○</div> Indicates samples selected for Laboratory Analysis. <div>PID</div> Head-space reading in ppm obtained with a photo-ionization detector. </div>
35			6.8	None	None	19' - 49' - Red silty sand - sandstone	
40		672	4.5	None	None		
45		792		None	None		
50		568		None	None	49' - 50' - Cobble	

## Completion Notes

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

Soil Boring SB-5

BOPCO, LP  
Indian Flats Bass Federal SWD  
Eddy County, New Mexico



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

Prep By: BJA	Checked By: BRB
March 25, 2013	

# Soil Boring SB-6

Depth Below Ground Surface	Soil Column	Chloride Field Test	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description	Boring SB-6
0		(2,928)	(6.3)	None	Moderate		Date Drilled <u>December 12, 2012</u>
5		(192)	(4.6)	None	Slight	0' - 12' - Tan fine sand - caliche - sandstone	Thickness of Bentonite Seal <u>40 Ft</u>
10		(1,164)	(4.9)	None	None		Depth of Exploratory Boring <u>40 Ft bgs</u>
15		(1,948)	(128)	Slight	None	12' - 14' - Tan fine sand - sandstone	Depth to Groundwater _____
20		620	7.0	None	None	14' - 23' - Red fine sand - sandstone	Ground Water Elevation _____
25		(352)	(8.9)	None	None		▼ Indicates the PSH level measured on _____
30		192		None	None		▼ Indicates the groundwater level measured on _____
35		(192)		None	None	23' - 40' - Red silty sand	○ Indicates samples selected for Laboratory Analysis.
40		(192)		None	None		PID Head-space reading in ppm obtained with a photo-ionization detector.

## Completion Notes

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

Soil Boring SB-6

BOPCO, LP  
Indian Flats Bass Federal SWD  
Eddy County, New Mexico



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

Prep By: BJA	Checked By: BRB
March 25, 2013	

# Soil Boring SB-7

Depth Below Ground Surface	Soil Column	Chloride Field Test	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description	Boring SB-7
0		12,002	2.0	Slight	Moderate	0' - 4' - Tan fine sand - caliche - sandstone	Date Drilled <u>December 12, 2012</u>
5		316	1.6	None	None	4' - 8' - Tan fine sand - calcified sandstone	Thickness of Bentonite Seal <u>65 Ft</u>
10		928	1.7	None	None	8' - 17' - Tan fine sand - sandstone	Depth of Exploratory Boring <u>65 Ft bgs</u>
15			1.2	None	None		Depth to Groundwater _____
20		252	0.0	None	None	17' - 24' - Red silty sand - sandstone	Ground Water Elevation _____
25			2.0	None	None		▼ Indicates the PSH level measured on _____
30		192	0.0	None	None	24' - 36' - Red silty sand	▼ Indicates the groundwater level measured on _____
35		220		None	None	36' - 38' - Red fine sand - cobble	○ Indicates samples selected for Laboratory Analysis.
40		352		None	None		PID Head-space reading in ppm obtained with a photo-ionization detector.
45		792		None	None		
50		568		None	None	38' - 65' - Red silty sand	
55		520		None	None		
60		432		None	None		
65		388		None	None		

## Completion Notes

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

Soil Boring SB-7

BOPCO, LP  
Indian Flats Bass Federal SWD  
Eddy County, New Mexico



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

Prep By: BJA	Checked By: BRB
March 25, 2013	

# Soil Boring SB-8

Depth Below Ground Surface	Soil Column	Chloride Field Test	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description	Boring SB-8
0				None	None	0' - 1' - Tan fine sand - caliche - sandstone	Date Drilled <u>May 31, 2013</u>
5			3.7	None	None	1' - 9' - Brown fine sand	Thickness of Bentonite Seal <u>70 Ft</u>
10			3.4	None	None		Depth of Exploratory Boring <u>70 Ft bgs</u>
15				None	None	9' - 18' - Tan fine sand - cemented sandstone	Depth to Groundwater _____
20				None	None	18' - 20' - Reddish tan fine sand	Ground Water Elevation _____
25		1,204	2.2	None	None	20' - 26' - Red very fine sand with clay	Indicates the PSH level measured on _____
30				None	None		Indicates the groundwater level measured on _____
35				None	None	26' - 32' - Tan very fine sand - sandstone	Indicates samples selected for Laboratory Analysis.
40		600		None	None	32' - 41' - Red fine sand - pea gravel	PID Head-space reading in ppm obtained with a photo-ionization detector.
45				None	None	41' - 43' - Tan fine sand - sandstone	
50				None	None	43' - 45' - Red very fine sand - cemented sandstone	
55		420		None	None		
60				None	None	45' - 70' - Tan very fine sand - sandstone	
65		280		None	None		
70		464		None	None		

## Completion Notes

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

Soil Boring SB-8

BOPCO, LP  
Indian Flats Bass Federal SWD  
Eddy County, New Mexico



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

Prep By: BJA  
June 12, 2013

Checked By: BRB

# Soil Boring SB-9

Depth Below Ground Surface	Soil Column	Chloride Field Test	PID Reading	Petroleum Odor Moderate	Petroleum Stain Moderate	Soil Description	Boring SB-9
0						0' - 3' - Tan fine sand - caliche - sandstone	Date Drilled <u>May 31, 2013</u>
5			2.6	Slight	None		Thickness of Bentonite Seal <u>110 Ft</u>
10			1.2	None	None	3' - 11' - Tan fine sand - cemented sandstone	Depth of Exploratory Boring <u>110 Ft bgs</u>
15							Depth to Groundwater _____
20						11' - 17' - Tan fine sand - caliche - sandstone (dense)	Ground Water Elevation _____
25		2,144		None	None	17' - 29' - Red very fine sand - sandstone - gravel	<div> <div> Indicates the PSH level measured on _____ </div> <div> Indicates the groundwater level measured on _____ </div> <div> Indicates samples selected for Laboratory Analysis. </div> <div> PID Head-space reading in ppm obtained with a photo-ionization detector. </div> </div>
30			0.5	None	None		
35				None	None		
40				None	None	29' - 51' - Red very fine sand - pea gravel	
45		1,040	0.8	None	None		
50				None	None	51' - 55' - Red fine sand with clay	
55				None	None		
60		1,856	1.0	None	None	55' - 63' - Red silty sand - silty clay	
65				None	None	63' - 66' - Red fine sand - pea gravel	
70				None	None	66' - 71' - Red silty sand - silty clay	
75		1,608		None	None	71' - 80' - Red silty clay	
80		464		None	None		
85		964		None	None	80' - 92' - Tan silty sand - clay	
90		768		None	None		
95		464		None	None	92' - 94' - Red very fine sand - sandstone	
100		552		None	None	94' - 97' - Tan silty sand - silty clay	
105		348		None	None	97' - 102' - Tan fine sand - pea gravel - sandstone	
110		708		None	None	102' - 110' - Red silty sand - silty clay	

## Completion Notes

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

Soil Boring SB-9

BOPCO, LP  
Indian Flats Bass Federal SWD  
Eddy County, New Mexico



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

Prep By: BJA	Checked By: BRB
June 12, 2013	

# Soil Boring SB-10

Depth Below Ground Surface	Soil Column	Chloride Field Test	PID Reading	Petroleum Odor Moderate	Petroleum Stain Moderate	Soil Description	Boring SB-10
0						0' - 8' - Tan fine sand - caliche - cemented sandstone	Date Drilled <u>June 3, 2013</u> Thickness of Bentonite Seal <u>110 Ft</u> Depth of Exploratory Boring <u>110 Ft bgs</u> Depth to Groundwater _____ Ground Water Elevation _____
5			0.0	None	None		
10			0.8	None	None	8' - 13' - Tan fine sand - cemented sandstone	
15			0.0	None	None		
20			1.0	None	None		
25		652	0.5	None	None		▼ 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.
30				None	None		
35				None	None	13' - 52' - Red fine sand - sandstone - pea gravel (layers)	
40		1,040		None	None		
45				None	None		
50		3,304		None	None		
55				None	None	52' - 63' - Red silty sand - silty clay	
60				None	None		
65				None	None		
70		2,304		None	None		
75				None	None	63' - 86' - Red silty sand - silty sandstone - pea gravel	
80		600		None	None		
85				None	None		
90		1,204		None	None		
95				None	None	86' - 108' - Tan fine sand - sandstone (siliceous)	
100		600		None	None		
105				None	None		
110		652		None	None	108' - 115' - Red & tan fine sand (layers) - sandstone	
115		896		None	None		

## Completion Notes

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

Soil Boring SB-10

BOPCO, LP  
Indian Flats Bass Federal SWD  
Eddy County, New Mexico



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

Prep By: BJA	Checked By: BRB
June 12, 2013	

# **Appendix D**

## **Permits**

Scott A. Verhines, P.E.  
State Engineer



Roswell Office  
1900 WEST SECOND STREET  
ROSWELL, NM 88201

**STATE OF NEW MEXICO  
OFFICE OF THE STATE ENGINEER**

Trn Nbr: 514456  
File Nbr: CP 01118

Oct. 09, 2012

BEN J. ARGUIJO (BASIN ENVIRONMENTAL)  
BOPCO  
522 W. MERMOD  
CARLSBAD, NM 88220

Greetings:

Enclosed is your copy of the above numbered permit that has been approved subject to the conditions set forth on the approval page. In accordance with the conditions of approval, the well can only be tested for 10 cumulative days, and the well is to be plugged on or before 10/31/2013, unless a permit to use the water is acquired from this office.

A Well Record & Log (OSE Form wr-20) shall be filed in this office within twenty (20) days after completion of drilling, but no later than 10/31/2013.

Appropriate forms can be downloaded from the OSE website [www.ose.state.nm.us](http://www.ose.state.nm.us) or will be mailed upon request.

Sincerely,

A handwritten signature in cursive script, appearing to read "M. Wolf".

Margaret Wolf  
(575) 622-6521

Enclosure

explore

**NEW MEXICO STATE ENGINEER OFFICE  
PERMIT TO EXPLORE**

**SPECIFIC CONDITIONS OF APPROVAL**

- 4 No water shall be appropriated and beneficially used under this permit.
- B The well shall be drilled by a driller licensed in the State of New Mexico in accordance with Section 72-12-12 New Mexico Statutes Annotated.
- C Driller's well record must be filed with the State Engineer within 20 days after the well is drilled or driven. Well record forms will be provided by the State Engineer upon request.
- P The well shall be constructed, maintained, and operated to prevent inter-aquifer exchange of water and to prevent loss of hydraulic head between geologic zones.
- LOG The Point of Diversion CP 01118 POD1 must be completed and the Well Log filed on or before 10/31/2013.
- LOG The Point of Diversion CP 01118 POD2 must be completed and the Well Log filed on or before 10/31/2013.
- LOG The Point of Diversion CP 01118 POD3 must be completed and the Well Log filed on or before 10/31/2013.
- LOG The Point of Diversion CP 01118 POD4 must be completed and the Well Log filed on or before 10/31/2013.
- LOG The Point of Diversion CP 01118 POD5 must be completed and the Well Log filed on or before 10/31/2013.

No water shall be diverted from these wells except for testing purposes which shall not exceed ten (10) cumulative days, and wells shall be plugged or capped on or before 10/31/2013, unless a permit to use water from these wells is acquired from the Office of the State Engineer.

NEW MEXICO STATE ENGINEER OFFICE  
PERMIT TO EXPLORE

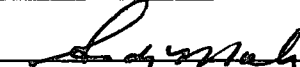
ACTION OF STATE ENGINEER

Notice of Intention Rcvd:                      Date Rcvd. Corrected:  
Formal Application Rcvd: 09/19/2012      Pub. of Notice Ordered:  
Date Returned - Correction:                  Affidavit of Pub. Filed:

This application is approved provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare of the state; and further subject to the specific conditions listed previously.

Witness my hand and seal this 09 day of Oct A.D., 2012

Scott A. Verhines, P.E., State Engineer

By:   
Andy Morley

File No.

## NEW MEXICO OFFICE OF THE STATE ENGINEER

APPLICATION FOR PERMIT TO DRILL A WELL  
WITH NO CONSUMPTIVE USE OF WATER

(check applicable box):

For fees, see State Engineer website: <http://www.ose.state.nm.us/>

2-32017

- Purpose:
- ☐ Pollution Control And / Or Recovery ☐ Geo-Thermal
- ☒ Exploratory ☐ Construction Site De-Watering ☐ Other (Describe):
- ☐ Monitoring ☐ Mineral De-Watering

A separate permit will be required to apply water to beneficial use.

☐ Temporary Request - Requested Start Date: 9/18/2012

Requested End Date: 9/18/2013

Plugging Plan of Operations Submitted? ☐ Yes ☒ No

## 1. APPLICANT(S)

Name: BOPCO, LP	Name:
Contact or Agent: check here if Agent <input checked="" type="checkbox"/> Ben J. Arguljo (Basin Environmental)	Contact or Agent: check here if Agent <input checked="" type="checkbox"/>
Mailing Address: 522 W. Mermod	Mailing Address:
City: Carlsbad	City:
State: NM Zip Code: 88220	State: Zip Code:
Phone: (432)556-8730 <input type="checkbox"/> Home <input checked="" type="checkbox"/> Cell Phone (Work):	Phone: <input type="checkbox"/> Home <input type="checkbox"/> Cell Phone (Work):
E-mail (optional): TASavoie@BassPet.com bjarguljo@basinenv.com	E-mail (optional):

FOR OSE INTERNAL USE

Application for Permit, Form wr-07, Rev 4/12/12

File Number: CP-1118	Tm Number: 514456
Trans Description (optional): 5 Exploratory Wells	
Sub-Basin: CP	
PCW/LOG Due Date: 10/31/2013	

2. WELL(S) Describe the well(s) applicable to this application.

2-32017

<b>Location Required:</b> Coordinate location must be reported in NM State Plane (NAD 83), UTM (NAD 83), or Latitude/Longitude (Lat/Long - WGS84). District II (Roswell) and District VII (Cimarron) customers, provide a PLSS location in addition to above.			
<input type="checkbox"/> NM State Plane (NAD83) (Feet) <input type="checkbox"/> NM West Zone <input type="checkbox"/> NM East Zone <input type="checkbox"/> NM Central Zone		<input type="checkbox"/> UTM (NAD83) (Meters) <input type="checkbox"/> Zone 12N <input type="checkbox"/> Zone 13N	
<input checked="" type="checkbox"/> Lat/Long (WGS84) (to the nearest 1/10 <sup>th</sup> of second)			
Well Number (If known):	X or Easting or Longitude:	Y or Northing or Latitude:	Provide if known: -Public Land Survey System (PLSS) (Quarters or Halves, Section, Township, Range) OR - Hydrographic Survey Map & Tract; OR - Lot, Block & Subdivision; OR - Land Grant Name
SB-1	104 3 19.5 w	32 26 2.1 n	Unit Letter "J" (NW/SE), Section 35, Township 21 South, Range 28 East
SB-2	104 3 19.5 w	32 26 2.1 n	Unit Letter "J" (NW/SE), Section 35, Township 21 South, Range 28 East
SB-3	104 3 19.5 w	32 26 2.1 n	Unit Letter "J" (NW/SE), Section 35, Township 21 South, Range 28 East
SB-4	104 3 19.5 w	32 26 2.1 n	Unit Letter "J" (NW/SE), Section 35, Township 21 South, Range 28 East
SB-5	104 3 19.5 w	32 26 2.1 n	Unit Letter "J" (NW/SE), Section 35, Township 21 South, Range 28 East
NOTE: If more well locations need to be described, complete form WR-08 (Attachment 1 – POD Descriptions) <b>Additional well descriptions are attached:</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, how many _____			
Other description relating well to common landmarks, streets, or other: See attached Site Location Map.			
Well is on land owned by: US Department of the Interior - Bureau Of Land Management			
<b>Well Information:</b> NOTE: If more than one (1) well needs to be described, provide attachment. Attached? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, how many _____			
Approximate depth of well (feet): 50.00		Outside diameter of well casing (inches): 0.00	
Driller Name: Straub Corporation		Driller License Number: WD1478	

3. ADDITIONAL STATEMENTS OR EXPLANATIONS

Up to five (5) soil borings will be drilled on-site to investigate the vertical and horizontal extent of contamination following a series of produced water and/or crude oil releases at BOPCO's Indian Flats Bass Federal Salt Water Disposal (SWD) site. The exact number, location(s), and depth(s) of the soil bore(s) will be determined on the drilling date by field-screens using a chloride test kit and/or Photo-Ionization Detector. Due to the depth to water at the location (approximately 140 feet below ground surface), it is unlikely that monitor wells will be required.

2017 SEP 19 10:09 AM

STATE ENGINEER OFFICE

FOR OSE INTERNAL USE

Application for Permit, Form wr-07

File Number: CP-1118

Trm Number: 514456

**4. SPECIFIC REQUIREMENTS:** The applicant must include the following, as applicable to each well type. Please check the appropriate boxes, to indicate the information has been included and/or attached to this application:

<b>Exploratory:</b> <input checked="" type="checkbox"/> Include a description of any proposed pump test, if applicable.	<b>Pollution Control and/or Recovery:</b> <input type="checkbox"/> Include a plan for pollution control/recovery, that includes the following: <input type="checkbox"/> A description of the need for the pollution control or recovery operation. <input type="checkbox"/> The estimated maximum period of time for completion of the operation. <input type="checkbox"/> The annual diversion amount. <input type="checkbox"/> The annual consumptive use amount. <input type="checkbox"/> The maximum amount of water to be diverted and injected for the duration of the operation. <input type="checkbox"/> The method and place of discharge.	<b>Construction De-Watering:</b> <input type="checkbox"/> Include a description of the proposed dewatering operation, <input type="checkbox"/> The estimated duration of the operation, <input type="checkbox"/> The maximum amount of water to be diverted, <input type="checkbox"/> A description of the need for the dewatering operation, and, <input type="checkbox"/> A description of how the diverted water will be disposed of.	<b>Mine De-Watering:</b> <input type="checkbox"/> Include a plan for pollution control/recovery, that includes the following: <input type="checkbox"/> A description of the need for mine dewatering. <input type="checkbox"/> The estimated maximum period of time for completion of the operation. <input type="checkbox"/> The source(s) of the water to be diverted. <input type="checkbox"/> The geohydrologic characteristics of the aquifer(s). <input type="checkbox"/> The maximum amount of water to be diverted per annum. <input type="checkbox"/> The maximum amount of water to be diverted for the duration of the operation. <input type="checkbox"/> The quality of the water.
<b>Monitoring:</b> <input type="checkbox"/> Include the reason for the monitoring well, and, <input type="checkbox"/> The duration of the planned monitoring.	<input type="checkbox"/> The method of measurement of water produced and discharged. <input type="checkbox"/> The source of water to be injected. <input type="checkbox"/> The method of measurement of water injected. <input type="checkbox"/> The characteristics of the aquifer. <input type="checkbox"/> The method of determining the resulting annual consumptive use of water and depletion from any related stream system. <input type="checkbox"/> Proof of any permit required from the New Mexico Environment Department. <input type="checkbox"/> An access agreement if the applicant is not the owner of the land on which the pollution plume control or recovery well is to be located.	<b>Geo-Thermal:</b> <input type="checkbox"/> Include a description of the geothermal heat exchange project, <input type="checkbox"/> The amount of water to be diverted and re-injected for the project, <input type="checkbox"/> The time frame for constructing the geothermal heat exchange project, and, <input type="checkbox"/> The duration of the project. <input type="checkbox"/> Preliminary surveys, design data, and additional information shall be included to provide all essential facts relating to the request.	<input type="checkbox"/> The method of measurement of water diverted. <input type="checkbox"/> The recharge of water to the aquifer. <input type="checkbox"/> Description of the estimated area of hydrologic effect of the project. <input type="checkbox"/> The method and place of discharge. <input type="checkbox"/> An estimation of the effects on surface water rights and underground water rights from the mine dewatering project. <input type="checkbox"/> A description of the methods employed to estimate effects on surface water rights and underground water rights. <input type="checkbox"/> Information on existing wells, rivers, springs, and wetlands within the area of hydrologic effect.

#### ACKNOWLEDGEMENT

I, We (name of applicant(s)), Ben J. Arguijo

Print Name(s)

affirm that the foregoing statements are true to the best of (my, our) knowledge and belief.

  
Applicant Signature

\_\_\_\_\_  
Applicant Signature

#### ACTION OF THE STATE ENGINEER

This application is:

☒ Approved ☐ partially approved ☐ denied

provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare and further subject to the attached conditions of approval.

Witness my hand and seal this 9th day of October 20 12, for the State Engineer,

Scott A. Verhines, P.E.

State Engineer

By:   
Signature

\_\_\_\_\_  
Print

Title: Andy Morley, Acting District II Manager

Print

FOR OSE INTERNAL USE

Application for Permit, Form wr-07

File Number: CP-1118

Tm Number: 514456

2-3 2017



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Carlsbad Field Office  
620 E. Greene St.  
Carlsbad, New Mexico 88220-6292  
www.blm.gov/nm



In Reply Refer To:  
3162.4 (NM-080)  
NMLC067144

September 16, 2012

NM Office of the State Engineer  
Attn: Bill Duemling  
1900 W. Second St.  
Roswell, NM 99201

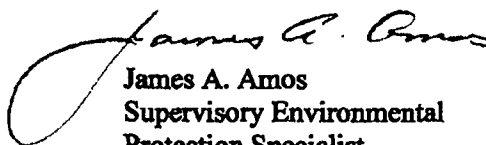
RE: NMLC067144; Indian Flats Bass Federal #1 SWD  
NWSE, Section 35, T21S-R28E  
Latitude: 32.433816, Longitude: -104.055308  
Eddy County, New Mexico

Gentlemen:

The above well location has had recent spill events related to oil and gas operation on the above well location. In order to fully delineate the impacted sites, a drilling unit will be needed to complete the delineation. The Bureau of Land Management (land owner) authorizes the use of a drilling unit to accomplish the full delineation of the site.

If there are any questions please call Jim Amos, Supervisory Environmental Protection Specialist, at (505) 234-5909.

Sincerely,

  
James A. Amos  
Supervisory Environmental  
Protection Specialist

2012 SEP 19 11:49 AM  
STATE ENGINEER OFFICE  
ROSWELL, NM

## **Locator Tool Report**

### **General Information:**

Application ID:29                      Date: 10-09-2012                      Time: 10:34:24

WR File Number: CP  
Purpose: POINT OF DIVERSION

Applicant First Name: BOPCO  
Applicant Last Name: BEN J. ARGUIJO

GW Basin: CAPITAN  
County: EDDY

Critical Management Area Name(s): NONE  
Special Condition Area Name(s): NONE  
Land Grant Name: NON GRANT

### **PLSS Description (New Mexico Principal Meridian):**

SE 1/4 of SW 1/4 of NW 1/4 of SE 1/4 of Section 35, Township 21S, Range 28E.

### **Coordinate System Details:**

#### **Geographic Coordinates:**

Latitude: 32 Degrees 26 Minutes 2.1 Seconds N  
Longitude: 104 Degrees 3 Minutes 19.5 Seconds W

#### **Universal Transverse Mercator Zone: 13N**

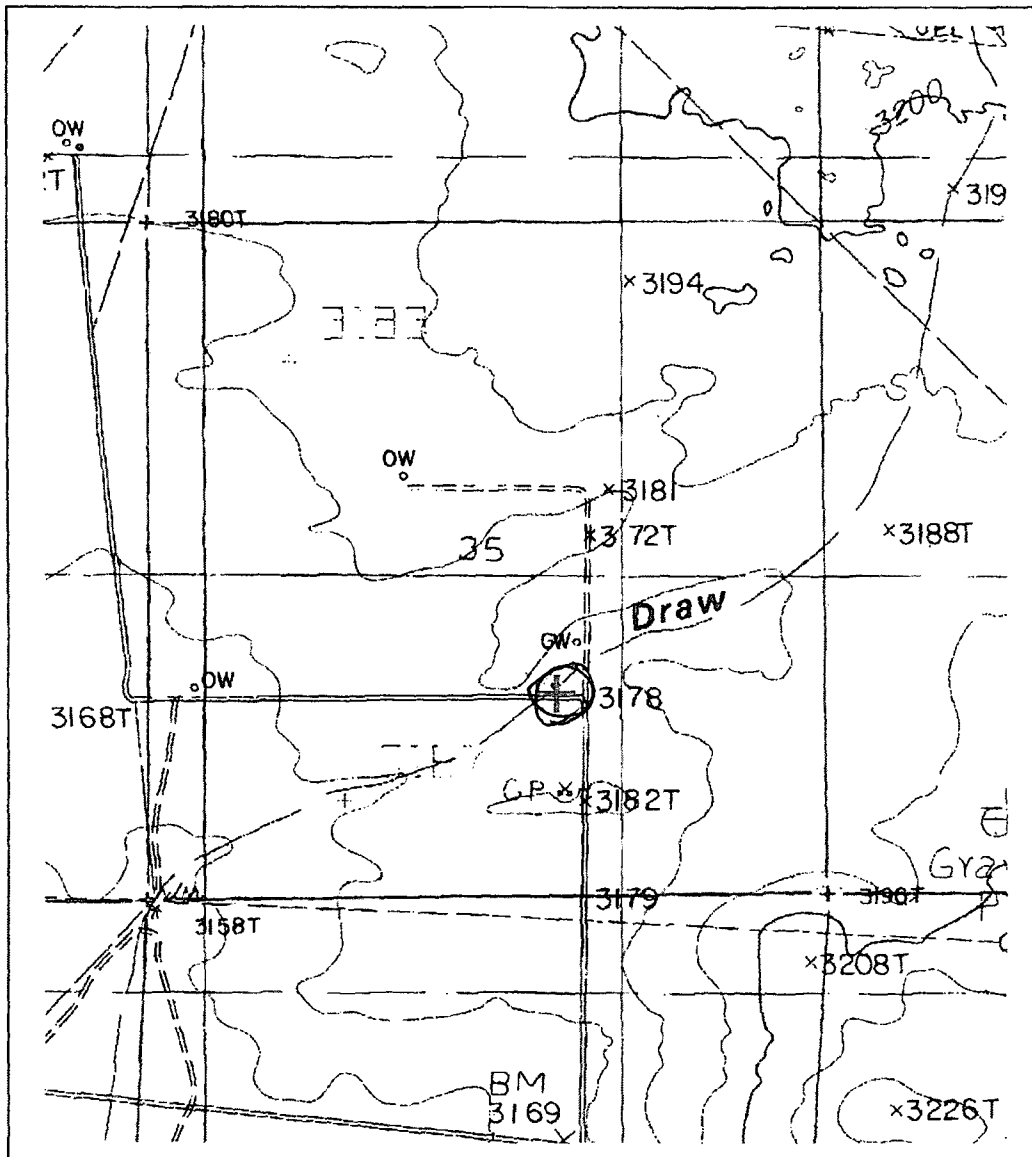
NAD 1983(92) (Meters)	N: 3,588,926	E: 588,800
NAD 1983(92) (Survey Feet)	N: 11,774,669	E: 1,931,754
NAD 1927 (Meters)	N: 3,588,724	E: 588,849
NAD 1927 (Survey Feet)	N: 11,774,006	E: 1,931,915

#### **State Plane Coordinate System Zone: New Mexico East**

NAD 1983(92) (Meters)	N: 159,015	E: 191,134
NAD 1983(92) (Survey Feet)	N: 521,702	E: 627,080
NAD 1927 (Meters)	N: 158,996	E: 178,582
NAD 1927 (Survey Feet)	N: 521,641	E: 585,899

**NEW MEXICO OFFICE OF STATE ENGINEER**

**Locator Tool Report**



WR File Number: CP

Scale: 1:17,516

Northring/Easting: UTM83(92) (Meter): N: 3,588,926

E: 588,800

Northring/Easting: SPCS83(92) (Feet): N: 521,702

E: 627,080

GW Basin: Capitan

Scott A. Verhines, P.E.  
State Engineer



Roswell Office  
1900 WEST SECOND STREET  
ROSWELL, NM 88201

**STATE OF NEW MEXICO  
OFFICE OF THE STATE ENGINEER**

Trn Nbr: 527952  
File Nbr: CP 01171

May. 22, 2013

BEN J ARGUIJO  
BOPCO LP  
3100 PLAINS HWY  
LOVINGTON, NM 88260

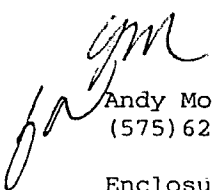
Greetings:

Enclosed is your copy of the above numbered permit that has been approved subject to the conditions set forth on the approval page. In accordance with the conditions of approval, the well can only be tested for 10 cumulative days, and the well is to be plugged on or before 05/31/2014, unless a permit to use the water is acquired from this office.

A Well Record & Log (OSE Form wr-20) shall be filed in this office within twenty (20) days after completion of drilling, but no later than 05/31/2014.

Appropriate forms can be downloaded from the OSE website [www.ose.state.nm.us](http://www.ose.state.nm.us) or will be mailed upon request.

Sincerely,

  
Andy Morley  
(575) 622-6521

Enclosure

File No.



# NEW MEXICO OFFICE OF THE STATE ENGINEER

## APPLICATION FOR PERMIT TO DRILL A WELL WITH NO CONSUMPTIVE USE OF WATER



(check applicable box):

For fees, see State Engineer website: <http://www.ose.state.nm.us/>

2.33050

Purpose: ☐ Pollution Control And / Or Recovery ☐ Geo-Thermal  
☒ Exploratory ☐ Construction Site De-Watering ☐ Other (Describe):  
☐ Monitoring ☐ Mineral De-Watering

A separate permit will be required to apply water to beneficial use.

☐ Temporary Request - Requested Start Date: 5/20/2013

Requested End Date:

Plugging Plan of Operations Submitted? ☐ Yes ☒ No

### 1. APPLICANT(S)

Name: <b>BOPCO, LP</b>	Name:
Contact or Agent: <b>Ben J. Arguijo (Basin Environmental)</b> check here if Agent <input checked="" type="checkbox"/>	Contact or Agent: check here if Agent <input checked="" type="checkbox"/>
Mailing Address: <b>3100 Plains Hwy.</b>	Mailing Address:
City: <b>Lovington</b>	City:
State: <b>NM</b> Zip Code: <b>88220</b>	State: Zip Code:
Phone: <b>(806)549-9597</b> <input type="checkbox"/> Home <input checked="" type="checkbox"/> Cell Phone (Work):	Phone: <input type="checkbox"/> Home <input type="checkbox"/> Cell Phone (Work):
E-mail (optional): <b>bjarguijo@basinenv.com</b>	E-mail (optional):

FOR OSE INTERNAL USE

Application for Permit, Form wr-07, Rev 4/12/12

File Number: <b>CP-1171</b>	Trn Number: <b>527952</b>
Trans Description (optional): <b>POD 1-5</b>	
Sub-Basin:	
PCW/LOG Due Date: <b>5-31-14</b>	

2. WELL(S) Describe the well(s) applicable to this application.

2.33050

Location Required: Coordinate location must be reported in NM State Plane (NAD 83), UTM (NAD 83), or Latitude/Longitude (Lat/Long - WGS84).

District II (Roswell) and District VII (Cimarron) customers, provide a PLSS location in addition to above.

- ☐ NM State Plane (NAD83) (Feet) ☐ UTM (NAD83) (Meters) ☒ Lat/Long (WGS84) (to the nearest 1/10<sup>th</sup> of second)
- ☐ NM West Zone ☐ Zone 12N
- ☐ NM East Zone ☐ Zone 13N
- ☐ NM Central Zone

Well Number (if known):	X or Easting or Longitude:	Y or Northing or Latitude:	Provide if known: -Public Land Survey System (PLSS) (Quarters or Halves, Section, Township, Range) OR - Hydrographic Survey Map & Tract; OR - Lot, Block & Subdivision; OR - Land Grant Name
SB-6 CP-1171 POD1	104 3 19.5 w	32 26 2.1 n	Unit Letter "J" (NW/SE), Section 35, Township 21 South, Range 28 East
SB-7 CP-1171 POD2	104 3 19.5 w	32 26 2.1 n	Unit Letter "J" (NW/SE), Section 35, Township 21 South, Range 28 East
SB-8 CP-1171 POD3	104 3 19.5 w	32 26 2.1 n	Unit Letter "J" (NW/SE), Section 35, Township 21 South, Range 28 East
SB-9 CP-1171 POD4	104 3 19.5 w	32 26 2.1 n	Unit Letter "J" (NW/SE), Section 35, Township 21 South, Range 28 East
SB-10 CP-1171 POD5	104 3 19.5 w	32 26 2.1 n	Unit Letter "J" (NW/SE), Section 35, Township 21 South, Range 28 East

NOTE: If more well locations need to be described, complete form WR-08 (Attachment 1 – POD Descriptions)

Additional well descriptions are attached: ☐ Yes ☒ No If yes, how many \_\_\_\_\_

Other description relating well to common landmarks, streets, or other: See attached Site Location Map.

Well is on land owned by: US Department Of The Interior - Bureau Of Land Management

Well Information: NOTE: If more than one (1) well needs to be described, provide attachment. Attached? ☐ Yes ☐ No  
If yes, how many \_\_\_\_\_

Approximate depth of well (feet): 50.00

Outside diameter of well casing (inches): 0.00

Driller Name: Straub Corporation

Driller License Number: WD1478

3. ADDITIONAL STATEMENTS OR EXPLANATIONS

Up to five (5) soil borings will be drilled on-site to investigate the vertical and horizontal extent of contamination following a series of produced water and/or crude oil releases at BOPCO's Indian Flats Bass Federal Salt Water Disposal (SWD) site. The exact number, location(s), and depth(s) of the soil bore(s) will be determined on the drilling date by field-screens using a chloride test kit and/or Photo-Ionization Detector. Due to the depth to water at the location (approximately 140 feet below ground surface), it is unlikely that monitor wells will be required.

COPIED FROM

STATE OF NEW MEXICO

FOR OSE INTERNAL USE

Application for Permit, Form wr-07

File Number:

CP 1171

Trn Number:

527952

**4. SPECIFIC REQUIREMENTS:** The applicant must include the following, as applicable to each well type. Please check the appropriate boxes, to indicate the information has been included and/or attached to this application:

2.33050

<b>Exploratory:</b> <input checked="" type="checkbox"/> Include a description of any proposed pump test, if applicable.	<b>Pollution Control and/or Recovery:</b> <input type="checkbox"/> Include a plan for pollution control/recovery, that includes the following: <input type="checkbox"/> A description of the need for the pollution control or recovery operation. <input type="checkbox"/> The estimated maximum period of time for completion of the operation. <input type="checkbox"/> The annual diversion amount. <input type="checkbox"/> The annual consumptive use amount. <input type="checkbox"/> The maximum amount of water to be diverted and injected for the duration of the operation. <input type="checkbox"/> The method and place of discharge.	<b>Construction De-Watering:</b> <input type="checkbox"/> Include a description of the proposed dewatering operation, <input type="checkbox"/> The estimated duration of the operation, <input type="checkbox"/> The maximum amount of water to be diverted, <input type="checkbox"/> A description of the need for the dewatering operation, and, <input type="checkbox"/> A description of how the diverted water will be disposed of.	<b>Mine De-Watering:</b> <input type="checkbox"/> Include a plan for pollution control/recovery, that includes the following: <input type="checkbox"/> A description of the need for mine dewatering. <input type="checkbox"/> The estimated maximum period of time for completion of the operation. <input type="checkbox"/> The source(s) of the water to be diverted. <input type="checkbox"/> The geohydrologic characteristics of the aquifer(s). <input type="checkbox"/> The maximum amount of water to be diverted per annum. <input type="checkbox"/> The maximum amount of water to be diverted for the duration of the operation. <input type="checkbox"/> The quality of the water.
<b>Monitoring:</b> <input type="checkbox"/> Include the reason for the monitoring well, and, <input type="checkbox"/> The duration of the planned monitoring.	<input type="checkbox"/> The method of measurement of water produced and discharged. <input type="checkbox"/> The source of water to be injected. <input type="checkbox"/> The method of measurement of water injected. <input type="checkbox"/> The characteristics of the aquifer. <input type="checkbox"/> The method of determining the resulting annual consumptive use of water and depletion from any related stream system. <input type="checkbox"/> Proof of any permit required from the New Mexico Environment Department. <input type="checkbox"/> An access agreement if the applicant is not the owner of the land on which the pollution plume control or recovery well is to be located.	<b>Geo-Thermal:</b> <input type="checkbox"/> Include a description of the geothermal heat exchange project, <input type="checkbox"/> The amount of water to be diverted and re-injected for the project, <input type="checkbox"/> The time frame for constructing the geothermal heat exchange project, and, <input type="checkbox"/> The duration of the project. <input type="checkbox"/> Preliminary surveys, design data, and additional information shall be included to provide all essential facts relating to the request.	<input type="checkbox"/> The method of measurement of water diverted. <input type="checkbox"/> The recharge of water to the aquifer. <input type="checkbox"/> Description of the estimated area of hydrologic effect of the project. <input type="checkbox"/> The method and place of discharge. <input type="checkbox"/> An estimation of the effects on surface water rights and underground water rights from the mine dewatering project. <input type="checkbox"/> A description of the methods employed to estimate effects on surface water rights and underground water rights. <input type="checkbox"/> Information on existing wells, rivers, springs, and wetlands within the area of hydrologic effect.

#### ACKNOWLEDGEMENT

I, We (name of applicant(s)), Ben J. Arguijo

Print Name(s)

affirm that the foregoing statements are true to the best of (my, our) knowledge and belief.

[Signature] 5/13/13  
Applicant Signature

[Signature]  
Applicant Signature

#### ACTION OF THE STATE ENGINEER

This application is:

☒ approved ☐ partially approved ☐ denied

provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare and further subject to the attached conditions of approval.

Witness my hand and seal this 22<sup>nd</sup> day of May 20 13, for the State Engineer,

Scott A Verhines, P.E., State Engineer

By: [Signature]  
Signature

Print

Title: Andy Morley, District II Manager  
Print

FOR OSE INTERNAL USE

Application for Permit, Form wr-07

File Number: CP 1171

Trn Number: 527952

**NEW MEXICO STATE ENGINEER OFFICE  
PERMIT TO EXPLORE**

**SPECIFIC CONDITIONS OF APPROVAL (Continued)**

- LOG The Point of Diversion CP 01171 POD3 must be completed and the Well Log filed on or before 05/31/2014.
- LOG The Point of Diversion CP 01171 POD4 must be completed and the Well Log filed on or before 05/31/2014.
- LOG The Point of Diversion CP 01171 POD5 must be completed and the Well Log filed on or before 05/31/2014.

**ACTION OF STATE ENGINEER**

Notice of Intention Rcvd:	Date Rcvd. Corrected:
Formal Application Rcvd: 05/14/2013	Pub. of Notice Ordered:
Date Returned - Correction:	Affidavit of Pub. Filed:

This application is approved provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare of the state; and further subject to the specific conditions listed previously.

Witness my hand and seal this 22<sup>nd</sup> day of May A.D., 2013

Scott A. Verhines, P.E., State Engineer

By:   
Andy Morley

**NEW MEXICO STATE ENGINEER OFFICE  
PERMIT TO EXPLORE**

**SPECIFIC CONDITIONS OF APPROVAL**

- 4 No water shall be appropriated and beneficially used under this permit.
- 7 The Permittee shall utilize the highest and best technology available to ensure conservation of water to the maximum extent practical.
- B The well shall be drilled by a driller licensed in the State of New Mexico in accordance with Section 72-12-12 New Mexico Statutes Annotated.
- C Driller's well record must be filed with the State Engineer within 20 days after the well is drilled or driven. Well record forms will be provided by the State Engineer upon request.
- C2 No water shall be diverted from this well except for testing purposes which shall not exceed ten (10) cumulative days, and well shall be plugged or capped on or before , unless a permit to use water from this well is acquired from the Office of the State Engineer.
- P The well shall be constructed, maintained, and operated to prevent inter-aquifer exchange of water and to prevent loss of hydraulic head between geologic zones.
- LOG The Point of Diversion CP 01171 POD1 must be completed and the Well Log filed on or before 05/31/2014.
- LOG The Point of Diversion CP 01171 POD2 must be completed and the Well Log filed on or before 05/31/2014.

Trn Desc: CP-1171 POD1-5 EXPL

File Number: CP 01171  
Trn Number: 527952

# **Appendix E**

## **Laboratory Analytical Reports**

March 14, 2012

BEN J. ARGUJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: INDIAN FLATS BASS FEDERAL SWD

Enclosed are the results of analyses for samples received by the laboratory on 03/08/12 9:03.

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

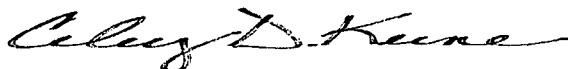
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

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

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	03/08/2012	Sampling Date:	03/06/2012
Reported:	03/14/2012	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

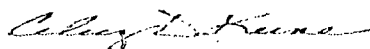
**Sample ID: SB - 1 @ 5' (H200609-01)**

Chloride, SM4500Cl-B			mg/kg Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2440	16.0	03/09/2012	ND	432	108	400	3.64		
TPH 8015M			mg/kg Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<50.0	50.0	03/10/2012	ND	187	93.7	200	1.65		
DRO >C10-C28	68.2	50.0	03/10/2012	ND	162	81.2	200	4.19		
EXT DRO >C28-C35	<50.0	50.0	03/10/2012	ND						
Surrogate: 1-Chlorooctane	103 %	55.5-154								
Surrogate: 1-Chlorooctadecane	111 %	57.6-158								

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	03/08/2012	Sampling Date:	03/06/2012
Reported:	03/14/2012	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB - 1 @ 10' (H200609-02)**

BTEX 8021B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/09/2012	ND	1.92	96.2	2.00	11.2	
Toluene*	<0.050	0.050	03/09/2012	ND	2.12	106	2.00	9.70	
Ethylbenzene*	<0.050	0.050	03/09/2012	ND	2.19	110	2.00	10.9	
Total Xylenes*	<0.150	0.150	03/09/2012	ND	6.92	115	6.00	9.87	

Surrogate: 4-Bromofluorobenzene (PIL) 111 % 64.4-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3320	16.0	03/12/2012	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/10/2012	ND	187	93.7	200	1.65	
DRO >C10-C28	15.4	10.0	03/10/2012	ND	162	81.2	200	4.19	
EXT DRO >C28-C35	10.1	10.0	03/10/2012	ND					

Surrogate: 1-Chlorooctane 103 % 55.5-154

Surrogate: 1-Chlorooctadecane 107 % 57.6-158

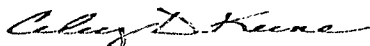
**Sample ID: SB - 1 @ 25' (H200609-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	512	16.0	03/12/2012	ND	432	108	400	3.64	

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	03/08/2012	Sampling Date:	03/06/2012
Reported:	03/14/2012	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB - 1 @ 30' (H200609-04)**

BTEX 80218		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/09/2012	ND	1.92	96.2	2.00	11.2	
Toluene*	<0.050	0.050	03/09/2012	ND	2.12	106	2.00	9.70	
Ethylbenzene*	<0.050	0.050	03/09/2012	ND	2.19	110	2.00	10.9	
Total Xylenes*	<0.150	0.150	03/09/2012	ND	6.92	115	6.00	9.87	

Surrogate: 4-Bromofluorobenzene (PIL) 111 % 64.4-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	03/12/2012	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/10/2012	ND	187	93.7	200	1.65	
DRO >C10-C28	<10.0	10.0	03/10/2012	ND	162	81.2	200	4.19	
EXT DRO >C28-C35	<10.0	10.0	03/10/2012	ND					

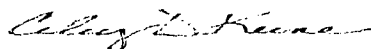
Surrogate: 1-Chlorooctane 85.4 % 55.5-154

Surrogate: 1-Chlorooctadecane 85.1 % 57.6-158

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received: 03/08/2012  
Reported: 03/14/2012  
Project Name: INDIAN FLATS BASS FEDERAL SWD  
Project Number: NONE GIVEN  
Project Location: EDDY CO., NM

Sampling Date: 03/06/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

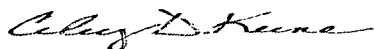
**Sample ID: SB - 2 @ 5' (H200609-05)**

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3880	16.0	03/12/2012	ND	432	108	400	3.64	
TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/10/2012	ND	187	93.7	200	1.65	
DRO >C10-C28	<10.0	10.0	03/10/2012	ND	162	81.2	200	4.19	
EXT DRO >C28-C35	<10.0	10.0	03/10/2012	ND					
<hr/>									
Surrogate: 1-Chlorooctane	92.8 %	55.5-154							
Surrogate: 1-Chlorooctadecane	96.5 %	57.6-158							

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	03/08/2012	Sampling Date:	03/06/2012
Reported:	03/14/2012	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB - 2 @ 10' (H200609-06)**

BTX 8021B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/09/2012	ND	1.92	96.2	2.00	11.2	
Toluene*	<0.050	0.050	03/09/2012	ND	2.12	106	2.00	9.70	
Ethylbenzene*	<0.050	0.050	03/09/2012	ND	2.19	110	2.00	10.9	
Total Xylenes*	<0.150	0.150	03/09/2012	ND	6.92	115	6.00	9.87	

Surrogate: 4-Bromofluorobenzene (PII) 110 % 64.4-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2760	16.0	03/12/2012	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/10/2012	ND	187	93.7	200	1.65	
DRO >C10-C28	<10.0	10.0	03/10/2012	ND	162	81.2	200	4.19	
EXT DRO >C28-C35	<10.0	10.0	03/10/2012	ND					

Surrogate: 1-Chlorooctane 113 % 55.5-154

Surrogate: 1-Chlorooctadecane 112 % 57.6-158

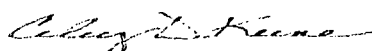
**Sample ID: SB - 2 @ 20' (H200609-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3720	16.0	03/12/2012	ND	432	108	400	3.64	

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	03/08/2012	Sampling Date:	03/06/2012
Reported:	03/14/2012	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB - 2 @ 30' (H200609-08)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	768	16.0	03/12/2012	ND	432	108	400	3.64	

**Sample ID: SB - 2 @ 35' (H200609-09)**

BTX 8021B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/09/2012	ND	1.92	96.2	2.00	11.2	
Toluene*	<0.050	0.050	03/09/2012	ND	2.12	106	2.00	9.70	
Ethylbenzene*	<0.050	0.050	03/09/2012	ND	2.19	110	2.00	10.9	
Total Xylenes*	<0.150	0.150	03/09/2012	ND	6.92	115	6.00	9.87	

Surrogate: 4-Bromofluorobenzene (PIL) 107 % 64.4-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	03/12/2012	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/10/2012	ND	187	93.7	200	1.65	
DRO >C10-C28	<10.0	10.0	03/10/2012	ND	162	81.2	200	4.19	
EXT DRO >C28-C35	<10.0	10.0	03/10/2012	ND					

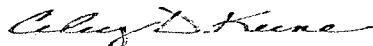
Surrogate: 1-Chlorooctane 102 % 55.5-154

Surrogate: 1-Chlorooctadecane 103 % 57.6-158

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

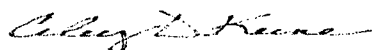
**Notes and Definitions**

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

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\* = Accredited Analyte


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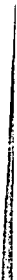
Celey D. Keene, Lab Director/Quality Manager

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Relinquished By: 		Date: 3/7/12	Received By: Patotain wmk	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
		Time: 0700		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By:		Date: 3/8/12	Received By: John Benson	REMARKS:  Please email results to <a href="mailto:pm@basinenv.com">pm@basinenv.com</a> & <a href="mailto:TASavoie@BassPet.com">TASavoie@BassPet.com</a>	
		Time: 4:03			
Delivered By: (Circle One)					
Sampler - UPS - Bus - Other:		20	Sample Condition Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>	CHECKED BY: (Initials) CMT	

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



December 20, 2012

BEN J. ARGUIJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: INDIAN FLATS BASS FEDERAL SWD

Enclosed are the results of analyses for samples received by the laboratory on 12/14/12 15:00.

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

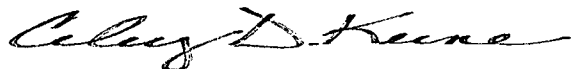
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

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

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	12/14/2012	Sampling Date:	12/12/2012
Reported:	12/20/2012	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB - 3 (BG) @ SURFACE (H203013-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/19/2012	ND	416	104	400	3.77	

**Sample ID: SB - 3 (BG) @ 5' (H203013-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	12/19/2012	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/20/2012	ND	184	92.1	200	3.64	
DRO >C10-C28	<10.0	10.0	12/20/2012	ND	199	99.5	200	5.25	
EXT DRO >C28-C35	<10.0	10.0	12/20/2012	ND					

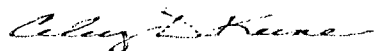
Surrogate: 1-Chlorooctane 84.5 % 65.2-140

Surrogate: 1-Chlorooctadecane 94.5 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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**Analytical Results For:**

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

Received:	12/14/2012	Sampling Date:	12/12/2012
Reported:	12/20/2012	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB - 3(BG) @ 10' (H203013-03)**

BTEX 8021B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/20/2012	ND	1.98	99.2	2.00	2.63	
Toluene*	<0.050	0.050	12/20/2012	ND	2.21	110	2.00	2.60	
Ethylbenzene*	<0.050	0.050	12/20/2012	ND	2.17	109	2.00	5.28	
Total Xylenes*	<0.150	0.150	12/20/2012	ND	6.78	113	6.00	7.51	
Total BTEX	<0.300	0.300	12/20/2012	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 115 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	12/19/2012	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/20/2012	ND	184	92.1	200	3.64	
DRO >C10-C28	<10.0	10.0	12/20/2012	ND	199	99.5	200	5.25	
EXT DRO >C28-C35	<10.0	10.0	12/20/2012	ND					

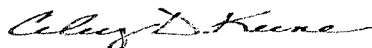
Surrogate: 1-Chlorooctane 87.6 % 65.2-140

Surrogate: 1-Chlorooctadecane 99.5 % 63.6-154

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	12/14/2012	Sampling Date:	12/12/2012
Reported:	12/20/2012	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB - 3 (BG)@ 15' (H203013-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/19/2012	ND	416	104	400	3.77	

**Sample ID: SB - 3 (BG)@ 20' (H203013-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/19/2012	ND	416	104	400	3.77	

**Sample ID: SB - 3 (BG)@ 25' (H203013-06)**

Chloride, SM4500Cl-B		mg/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/19/2012	ND	432	108	400	3.64	

**Sample ID: SB - 4 @ SURFACE (H203013-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3520	16.0	12/19/2012	ND	432	108	400	3.64	

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Celestine D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	12/14/2012	Sampling Date:	12/12/2012
Reported:	12/20/2012	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

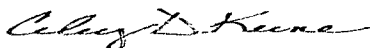
**Sample ID: SB - 4 @ 5' (H203013-08)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>928</b>	16.0	12/19/2012	ND	432	108	400	3.64	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/19/2012	ND	184	92.1	200	3.64	
<b>DRO &gt;C10-C28</b>	<b>123</b>	10.0	12/19/2012	ND	199	99.5	200	5.25	
<b>EXT DRO &gt;C28-C35</b>	<b>34.9</b>	10.0	12/19/2012	ND					
<hr/>									
Surrogate: 1-Chlorooctane	90.1 %	65.2-140							
Surrogate: 1-Chlorooctadecane	105 %	63.6-154							

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	12/14/2012	Sampling Date:	12/12/2012
Reported:	12/20/2012	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB - 4 @ 10' (H203013-09)**

BTEX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/20/2012	ND	1.94	96.8	2.00	2.01		
Toluene*	<0.050	0.050	12/20/2012	ND	2.07	104	2.00	1.83		
Ethylbenzene*	<0.050	0.050	12/20/2012	ND	1.99	99.4	2.00	1.87		
Total Xylenes*	<0.150	0.150	12/20/2012	ND	5.98	99.7	6.00	1.51		
Total BTEX	<0.300	0.300	12/20/2012	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 111 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1620	16.0	12/19/2012	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/19/2012	ND	184	92.1	200	3.64	
DRO >C10-C28	63.1	10.0	12/19/2012	ND	199	99.5	200	5.25	
EXT DRO >C28-C35	18.2	10.0	12/19/2012	ND					

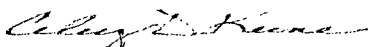
Surrogate: 1-Chlorooctane 83.1 % 65.2-140

Surrogate: 1-Chlorooctadecane 95.2 % 63.6-154

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	12/14/2012	Sampling Date:	12/12/2012
Reported:	12/20/2012	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

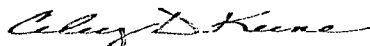
**Sample ID: SB - 4 @ 20' (H203013-10)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1950	16.0	12/19/2012	ND	432	108	400	3.64	

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Celest D. Keene, Lab Director/Quality Manager

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

Received:	12/14/2012	Sampling Date:	12/12/2012
Reported:	12/20/2012	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB - 4 @ 30' (H203013-11)**

BTX 8021B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/20/2012	ND	1.94	96.8	2.00	2.01	
Toluene*	<0.050	0.050	12/20/2012	ND	2.07	104	2.00	1.83	
Ethylbenzene*	<0.050	0.050	12/20/2012	ND	1.99	99.4	2.00	1.87	
Total Xylenes*	<0.150	0.150	12/20/2012	ND	5.98	99.7	6.00	1.51	
Total BTX	<0.300	0.300	12/20/2012	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 115 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2880	16.0	12/19/2012	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/19/2012	ND	184	92.1	200	3.64	
DRO >C10-C28	256	10.0	12/19/2012	ND	199	99.5	200	5.25	
EXT DRO >C28-C35	60.4	10.0	12/19/2012	ND					


Surrogate: 1-Chlorooctane 79.0 % 65.2-140

Surrogate: 1-Chlorooctadecane 92.0 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	12/14/2012	Sampling Date:	12/12/2012
Reported:	12/20/2012	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB - 4 @ 40' (H203013-12)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1620	16.0	12/19/2012	ND	432	108	400	3.64	

**Sample ID: SB - 4 @ 50' (H203013-13)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	848	16.0	12/19/2012	ND	432	108	400	3.64	

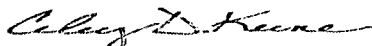
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/19/2012	ND	184	92.1	200	3.64	
DRO >C10-C28	<10.0	10.0	12/19/2012	ND	199	99.5	200	5.25	
EXT DRO >C28-C35	<10.0	10.0	12/19/2012	ND					

Surrogate: 1-Chlorooctane 84.1 % 65.2-140  
Surrogate: 1-Chlorooctadecane 94.1 % 63.6-154

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	12/14/2012	Sampling Date:	12/12/2012
Reported:	12/20/2012	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB - 4 @ 55' (H203013-14)**

BTEX 8021B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/20/2012	ND	1.94	96.8	2.00	2.01	
Toluene*	<0.050	0.050	12/20/2012	ND	2.07	104	2.00	1.83	
Ethylbenzene*	<0.050	0.050	12/20/2012	ND	1.99	99.4	2.00	1.87	
Total Xylenes*	<0.150	0.150	12/20/2012	ND	5.98	99.7	6.00	1.51	
Total BTEX	<0.300	0.300	12/20/2012	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 114 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	896	16.0	12/19/2012	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	12/19/2012	ND	184	92.1	200	3.64		
DRO >C10-C28	33.2	10.0	12/19/2012	ND	199	99.5	200	5.25		
EXT DRO >C28-C35	<10.0	10.0	12/19/2012	ND						

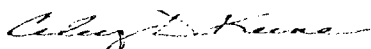
Surrogate: 1-Chlorooctane 77.6 % 65.2-140

Surrogate: 1-Chlorooctadecane 86.3 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	12/14/2012	Sampling Date:	12/12/2012
Reported:	12/20/2012	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB - 5 @ 15' (H203013-18)**

BTEX 8021B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/20/2012	ND	1.94	96.8	2.00	2.01	
Toluene*	<0.050	0.050	12/20/2012	ND	2.07	104	2.00	1.83	
Ethylbenzene*	<0.050	0.050	12/20/2012	ND	1.99	99.4	2.00	1.87	
Total Xylenes*	<0.150	0.150	12/20/2012	ND	5.98	99.7	6.00	1.51	
Total BTEX	<0.300	0.300	12/20/2012	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 114 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2000	16.0	12/19/2012	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/19/2012	ND	184	92.1	200	3.64	
DRO >C10-C28	20.9	10.0	12/19/2012	ND	199	99.5	200	5.25	
EXT DRO >C28-C35	<10.0	10.0	12/19/2012	ND					

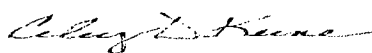
Surrogate: 1-Chlorooctane 81.5 % 65.2-140

Surrogate: 1-Chlorooctadecane 91.3 % 63.6-154

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**Analytical Results For:**

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

Received:	12/14/2012	Sampling Date:	12/12/2012
Reported:	12/20/2012	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

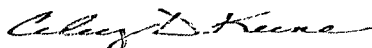
**Sample ID: SB - 5 @ 20' (H203013-19)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2440	16.0	12/19/2012	ND	432	108	400	3.64	

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	12/14/2012	Sampling Date:	12/12/2012
Reported:	12/20/2012	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB - 5 @ 30' (H203013-20)**

BTEX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/20/2012	ND	1.94	96.8	2.00	2.01		
Toluene*	<0.050	0.050	12/20/2012	ND	2.07	104	2.00	1.83		
Ethylbenzene*	<0.050	0.050	12/20/2012	ND	1.99	99.4	2.00	1.87		
Total Xylenes*	<0.150	0.150	12/20/2012	ND	5.98	99.7	6.00	1.51		
Total BTEX	<0.300	0.300	12/20/2012	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 113 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1040	16.0	12/19/2012	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/19/2012	ND	184	92.1	200	3.64	
DRO >C10-C28	104	10.0	12/19/2012	ND	199	99.5	200	5.25	
EXT DRO >C28-C35	12.4	10.0	12/19/2012	ND					

Surrogate: 1-Chlorooctane 79.7 % 65.2-140

Surrogate: 1-Chlorooctadecane 88.6 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	12/14/2012	Sampling Date:	12/12/2012
Reported:	12/20/2012	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB - 5 @ 45' (H203013-21)**

Chloride, SM4500Cl-B			mg/kg							Analyzed By: HM
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>992</b>	16.0	12/19/2012	ND	432	108	400	3.64		
TPH 8015M			mg/kg							Analyzed By: MS
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	12/19/2012	ND	184	92.1	200	3.64		
DRO >C10-C28	<10.0	10.0	12/19/2012	ND	199	99.5	200	5.25		
EXT DRO >C28-C35	<10.0	10.0	12/19/2012	ND						
<hr/>										
Surrogate: 1-Chlorooctane	82.7 %	65.2-140								
Surrogate: 1-Chlorooctadecane	93.1 %	63.6-154								

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**Analytical Results For:**

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

Received:	12/14/2012	Sampling Date:	12/12/2012
Reported:	12/20/2012	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB - 5 @ 50' (H203013-22)**

BTX 80218		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/20/2012	ND	1.94	96.8	2.00	2.01		
Toluene*	<0.050	0.050	12/20/2012	ND	2.07	104	2.00	1.83		
Ethylbenzene*	<0.050	0.050	12/20/2012	ND	1.99	99.4	2.00	1.87		
Total Xylenes*	<0.150	0.150	12/20/2012	ND	5.98	99.7	6.00	1.51		
Total BTX	<0.300	0.300	12/20/2012	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 117 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	688	16.0	12/19/2012	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/19/2012	ND	184	92.1	200	0.0933	
DRO >C10-C28	<10.0	10.0	12/19/2012	ND	202	101	200	2.20	
EXT DRO >C28-C35	<10.0	10.0	12/19/2012	ND					

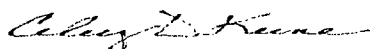
Surrogate: 1-Chlorooctane 79.0 % 65.2-140

Surrogate: 1-Chlorooctadecane 87.4 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	12/14/2012	Sampling Date:	12/12/2012
Reported:	12/20/2012	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB - 6 @ SURFACE (H203013-23)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3680	16.0	12/19/2012	ND	432	108	400	3.64	

**Sample ID: SB - 6 @ 5' (H203013-24)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	12/19/2012	ND	432	108	400	3.64	

**Sample ID: SB - 6 @ 10' (H203013-25)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1520	16.0	12/19/2012	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/19/2012	ND	184	92.1	200	0.0933	
DRO >C10-C28	<10.0	10.0	12/19/2012	ND	202	101	200	2.20	
EXT DRO >C28-C35	<10.0	10.0	12/19/2012	ND					

Surrogate: 1-Chlorooctane 81.0 % 65.2-140

Surrogate: 1-Chlorooctadecane 88.2 % 63.6-154

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**Analytical Results For:**

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

Received:	12/14/2012	Sampling Date:	12/12/2012
Reported:	12/20/2012	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB - 6 @ 15' (H203013-26)****BTEX 8021B****mg/kg****Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/20/2012	ND	1.94	96.8	2.00	2.01	
Toluene*	<0.050	0.050	12/20/2012	ND	2.07	104	2.00	1.83	
Ethylbenzene*	<0.050	0.050	12/20/2012	ND	1.99	99.4	2.00	1.87	
Total Xylenes*	<0.150	0.150	12/20/2012	ND	5.98	99.7	6.00	1.51	
Total BTEX	<0.300	0.300	12/20/2012	ND					

*Surrogate: 4-Bromofluorobenzene (PID) 115 % 89.4-126***Chloride, SM4500Cl-B****mg/kg****Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2000	16.0	12/19/2012	ND	432	108	400	0.00	

**TPH 8015M****mg/kg****Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/19/2012	ND	184	92.1	200	0.0933	
DRO >C10-C28	<10.0	10.0	12/19/2012	ND	202	101	200	2.20	
EXT DRO >C28-C35	<10.0	10.0	12/19/2012	ND					

*Surrogate: 1-Chlorooctane 82.8 % 65.2-140**Surrogate: 1-Chlorooctadecane 93.5 % 63.6-154*

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

Received:	12/14/2012	Sampling Date:	12/12/2012
Reported:	12/20/2012	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB - 6 @ 40' (H203013-29)**

BTEX 8021B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/20/2012	ND	1.94	96.8	2.00	2.01	
Toluene*	<0.050	0.050	12/20/2012	ND	2.07	104	2.00	1.83	
Ethylbenzene*	<0.050	0.050	12/20/2012	ND	1.99	99.4	2.00	1.87	
Total Xylenes*	<0.150	0.150	12/20/2012	ND	5.98	99.7	6.00	1.51	
Total BTEX	<0.300	0.300	12/20/2012	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 114 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	12/19/2012	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/19/2012	ND	184	92.1	200	0.0933	
DRO >C10-C28	<10.0	10.0	12/19/2012	ND	202	101	200	2.20	
EXT DRO >C28-C35	<10.0	10.0	12/19/2012	ND					

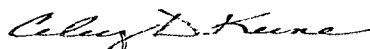
Surrogate: 1-Chlorooctane 80.3 % 65.2-140

Surrogate: 1-Chlorooctadecane 87.4 % 63.6-154

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

### Analytical Results For:

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

Received:	12/14/2012	Sampling Date:	12/12/2012
Reported:	12/20/2012	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

### Sample ID: SB - 6 @ 40' (H203013-29)

BTX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/20/2012	ND	1.94	96.8	2.00	2.01		
Toluene*	<0.050	0.050	12/20/2012	ND	2.07	104	2.00	1.83		
Ethylbenzene*	<0.050	0.050	12/20/2012	ND	1.99	99.4	2.00	1.87		
Total Xylenes*	<0.150	0.150	12/20/2012	ND	5.98	99.7	6.00	1.51		
Total BTX	<0.300	0.300	12/20/2012	ND						

Surrogate: 4-Bromofluorobenzene (PID) 114 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	12/19/2012	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	12/19/2012	ND	184	92.1	200	0.0933		
DRO >C10-C28	<10.0	10.0	12/19/2012	ND	202	101	200	2.20		
EXT DRO >C28-C35	<10.0	10.0	12/19/2012	ND						

Surrogate: 1-Chlorooctane 80.3 % 65.2-140

Surrogate: 1-Chlorooctadecane 87.4 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	12/14/2012	Sampling Date:	12/12/2012
Reported:	12/20/2012	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB - 7 @ SURFACE (H203013-30)**

Chloride, SM4500Cl-B			mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	13200	16.0	12/19/2012	ND	432	108	400	0.00		

**Sample ID: SB - 7 @ 5' (H203013-31)**

Chloride, SM4500Cl-B			mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	384	16.0	12/19/2012	ND	432	108	400	0.00		

TPH 8015M			mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	12/19/2012	ND	184	92.1	200	0.0933		
DRO >C10-C28	<10.0	10.0	12/19/2012	ND	202	101	200	2.20		
EXT DRO >C28-C35	<10.0	10.0	12/19/2012	ND						


Surrogate: 1-Chlorooctane 83.6 % 65.2-140

Surrogate: 1-Chlorooctadecane 94.3 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	12/14/2012	Sampling Date:	12/12/2012
Reported:	12/20/2012	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB - 7 @ 10' (H203013-32)**

BTX 8021B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/20/2012	ND	1.94	96.8	2.00	2.01	
Toluene*	<0.050	0.050	12/20/2012	ND	2.07	104	2.00	1.83	
Ethylbenzene*	<0.050	0.050	12/20/2012	ND	1.99	99.4	2.00	1.87	
Total Xylenes*	<0.150	0.150	12/20/2012	ND	5.98	99.7	6.00	1.51	
Total BTX	<0.300	0.300	12/20/2012	ND					

Surrogate: 4-Bromofluorobenzene (PID) 116 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	784	16.0	12/19/2012	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/19/2012	ND	184	92.1	200	0.0933	
DRO >C10-C28	<10.0	10.0	12/19/2012	ND	202	101	200	2.20	
EXT DRO >C28-C35	<10.0	10.0	12/19/2012	ND					

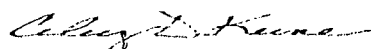
Surrogate: 1-Chlorooctane 85.1 % 65.2-140

Surrogate: 1-Chlorooctadecane 93.4 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	12/14/2012	Sampling Date:	12/12/2012
Reported:	12/20/2012	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

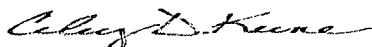
**Sample ID: SB - 7 @ 20' (H203013-33)**

Chloride, SM4500Cl-B	mg/kg	Analyzed By: HM							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	12/20/2012	ND	432	108	400	0.00	

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Celest D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received: 12/14/2012  
Reported: 12/20/2012  
Project Name: INDIAN FLATS BASS FEDERAL SWD  
Project Number: NONE GIVEN  
Project Location: EDDY CO., NM

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

**Sample ID: SB - 7 @ 30' (H203013-34)**
**BTEX 8021B**

mg/kg

Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/20/2012	ND	1.94	96.8	2.00	2.01	
Toluene*	<0.050	0.050	12/20/2012	ND	2.07	104	2.00	1.83	
Ethylbenzene*	<0.050	0.050	12/20/2012	ND	1.99	99.4	2.00	1.87	
Total Xylenes*	<0.150	0.150	12/20/2012	ND	5.98	99.7	6.00	1.51	
Total BTEX	<0.300	0.300	12/20/2012	ND					

Surrogate: 4-Bromofluorobenzene (P1C) 116 % 89.4-126

**Chloride, SM4500Cl-B**

mg/kg

Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	12/20/2012	ND	432	108	400	0.00	

**TPH 8015M**

mg/kg

Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/19/2012	ND	184	92.1	200	0.0933	
DRO >C10-C28	<10.0	10.0	12/19/2012	ND	202	101	200	2.20	
EXT DRO >C28-C35	<10.0	10.0	12/19/2012	ND					

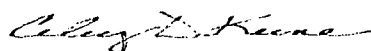
Surrogate: 1-Chlorooctane 83.3 % 65.2-140

Surrogate: 1-Chlorooctadecane 95.2 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

 Received: 12/14/2012  
 Reported: 12/20/2012  
 Project Name: INDIAN FLATS BASS FEDERAL SWD  
 Project Number: NONE GIVEN  
 Project Location: EDDY CO., NM

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

**Sample ID: SB - 7 @ 40' (H203013-35)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	12/20/2012	ND	432	108	400	0.00	

**Sample ID: SB - 7 @ 50' (H203013-36)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	704	16.0	12/20/2012	ND	432	108	400	0.00	

**Sample ID: SB - 7 @ 60' (H203013-37)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	576	16.0	12/20/2012	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/19/2012	ND	184	92.1	200	0.0933	
DRO >C10-C28	<10.0	10.0	12/19/2012	ND	202	101	200	2.20	
EXT DRO >C28-C35	<10.0	10.0	12/19/2012	ND					

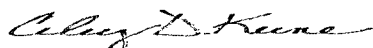
Surrogate: 1-Chlorooctane 83.5 % 65.2-140

Surrogate: 1-Chlorooctadecane 92.7 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	12/14/2012	Sampling Date:	12/12/2012
Reported:	12/20/2012	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB - 7 @ 65' (H203013-38)**

BTEX 8021B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/20/2012	ND	1.94	96.8	2.00	2.01	
Toluene*	<0.050	0.050	12/20/2012	ND	2.07	104	2.00	1.83	
Ethylbenzene*	<0.050	0.050	12/20/2012	ND	1.99	99.4	2.00	1.87	
Total Xylenes*	<0.150	0.150	12/20/2012	ND	5.98	99.7	6.00	1.51	
Total BTEX	<0.300	0.300	12/20/2012	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 117 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	496	16.0	12/20/2012	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/19/2012	ND	184	92.1	200	0.0933	
DRO >C10-C28	<10.0	10.0	12/19/2012	ND	202	101	200	2.20	
EXT DRO >C28-C35	<10.0	10.0	12/19/2012	ND					

Surrogate: 1-Chlorooctane 78.8 % 65.2-140

Surrogate: 1-Chlorooctadecane 86.9 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

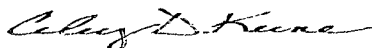
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received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

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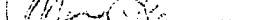

Celey D. Keene, Lab Director/Quality Manager

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

[illegible]

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<b>Relinquished By:</b> 		<b>Date:</b> 12/14/12 <b>Time:</b> 1405		<b>Received By:</b> 		<b>Phone Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Add'l Phone #:</b> <b>Fax Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Add'l Fax #:</b>	
<b>Relinquished By:</b> 		<b>Date:</b> 12/14/12 <b>Time:</b> 15:00		<b>Received By:</b> 		<b>REMARKS:</b>	
<b>Delivered By: (Circle One)</b> Sampler - UPS - Bus - Other:				<b>Sample Condition</b> Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No		<b>CHECKED BY:</b> (Initials) 	

Please email results to [pm4basinenv.com](mailto:pm4basinenv.com).  
 & [TAsavoies@BassPet.com](mailto:TAsavoies@BassPet.com)

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Basin Environmental Service Technologies, LLC				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>															
Project Manager: Ben J. Arguijo				P.O. #:																			
Address: P.O. Box 301				Company: BOPCO, LP																			
City: Lovington		State: NM		Zip: 88260		Attn: Tony Savole																	
Phone #: (575) 396-2378		Fax #: (575) 396-1429				Address: 522 W. Hermod																	
Project #:		Project Owner: BOPCO, LP				City: Carlsbad																	
Project Name: Indian Flats Bass Federal SWD				State: NM Zip: 88220																			
Project Location: Bddy Co., NM				Phone #: (432) 556-8730																			
Sampler Name: Ben J. Arguijo				Fax #:																			
FOR LAB USE ONLY																							
Lab I.D.		Sample I.D.		(C/RAB OR C/DMP) # CONTAINERS		MATRIX GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER:		PRESERV. ACID/BASE: ICE / COOL OTHER:		SAMPLING  DATE : TIME													
H203013																							
11 SB-4 @ 30'		G 1		X		X		12/2/12 1130		Chloride TPH (8015M) BTEA													
12 SB-4 @ 40'								1140															
13 SB-4 @ 50'								1150															
14 SB-4 @ 55'								1155															
15 SB-5 @ Surface								1245															
16 SB-5 @ 5'								1250															
17 SB-5 @ 10'								1255															
18 SB-5 @ 15'								1300															
19 SB-5 @ 20'								1305															
20 SB-5 @ 30'								1315															
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 this analysis. 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 profit 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 claims are based upon any of the above stated reasons or otherwise.				Relinquished By: _____ Date: 12/14/12 Received By: _____ Time: 1405				Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Phone #: _____ Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Fax #: _____ REMARKS:															
Relinquished By: _____ Date: 12-12-12 Received By: _____ Time: 15:00				Delivered By: (Circle One) _____ Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No CHECKED BY: (Initials) _____				Please email results to pm@basinenv.com & TSavole@BassPet.com															

# Laboratories

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Basin Environmental Service Technologies, LLC				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>														
Project Manager: Ben J. Arquijo				P.O. #:																		
Address: P.O. Box 301				Company: BOPCO, LP																		
City: Lovington State: NM Zip: 88260				Attn: Tony Savoie																		
Phone #: (575) 396-2378 Fax #: (575) 396-1409				Address: 522 W. Vernal																		
Project #: Project Owner: BOPCO, LP				City: Carlsbad																		
Project Name: Indian Flats Bass Federal SWD				State: NM Zip: 88220																		
Project Location: Eddy Co., NM				Phone #: (432) 556-8730																		
Sampler Name: Ben J. Arquijo				Fax #:																		
FOR LAB USE ONLY				MATRIX		PRESERV		SAMPLING														
Lab I.D.	Sample I.D.	GRAB OR (COMP. # CONTAINERS)	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE	ICE / COOL	OTHER	DATE	TIME	Chloride	TPH (8015M)	BTEX						
12051.5																						
21	SB-5 @ 45'	G			X				X			12/12/12	1330	X	X							
22	SB-5 @ 50'												1335		X	X						
23	SB-6 @ Surface												1400									
24	SB-6 @ 5'												1405									
25	SB-6 @ 10'												1410		X							
26	SB-6 @ 15'												1415		X	X						
27	SB-6 @ 25'												1425									
28	SB-6 @ 35'												1435		X							
29	SB-6 @ 40'												1440		X	X						
30	SB-7 @ Surface												1500									

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Relinquished By:	Date: 12/14/12	Received By:	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
	Time: 1405		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By:	Date: 12/14/12	Received By:	REMARKS:	
	Time: 1405			
Delivered By: (Circle One)	Sample Condition	CHECKED BY:		
Sampler - UPS - Bus - Other:	Cool <input type="checkbox"/> Intact <input type="checkbox"/>	(Initials)		
	Yes <input type="checkbox"/> No <input type="checkbox"/>			

Please email results to pm@basinenr.com  
& TSavoie@BassPet.com

# CARDINAL Laboratories

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Basin Environmental Service Technologies, LLC		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>																					
Project Manager: Ben J. Arguijo		P.O. #:																							
Address: P.O. Box 301		Company: BOPCO, LP																							
City: Lovington State: NM Zip: 88260		Attn: Tony Savoie																							
Phone #: (575) 396-2378 Fax #: (575) 396-1429		Address: 522 W. Mermod																							
Project #: Project Owner: BOPCO, LP		City: Carlsbad																							
Project Name: Indian Flats Bass Federal SWD		State: NM Zip: 88220																							
Project Location: Eddy Co., NM		Phone #: (432) 556-8730																							
Sampler Name: Ben J. Arguijo		Fax #:																							
FOR LAB USE ONLY																									
Lab I.D.	Sample I.D.	LABOR (COMP.)	# CONTAINERS	MATRIX				PRESERV.	SAMPLING																
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE	ICE / COOL	OTHER	DATE	TIME											
14203012	SB-7 @ 5'	G	1			X				X			12/12/12	1505	Chloride	TPH (8015M)	BTEX								
31	SB-7 @ 10'													1510	X	X									
32	SB-7 @ 20'													1520											
33	SB-7 @ 30'													1530	X	X									
34	SB-7 @ 40'													1540											
35	SB-7 @ 50'													1550											
36	SB-7 @ 60'													1600	X										
37	SB-7 @ 65'													1605	X	X									

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Relinquished By:	Date: 12/14/12	Received By:	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
	Time: 1405		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By:	Date: 12/14/12	Received By:	REMARKS:	
	Time: 15:00			
Delivered By: (Circle One)	Sample Condition	CHECKED BY:	Please email results to pm@basinenv.com	
Sampler - UPS - Bus - Other:	Cool Intact	(Initials)	& TSavoie@BassPet.com	
	Yes <input type="checkbox"/> No <input type="checkbox"/>			

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



June 11, 2013

BEN J. ARGUIJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: INDIAN FLATS BASS FEDERAL SWD

Enclosed are the results of analyses for samples received by the laboratory on 06/04/13 13:40.

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

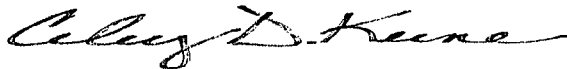
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

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

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	06/04/2013	Sampling Date:	05/31/2013
Reported:	06/11/2013	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB-8 @ 5' (H301305-01)**

BTEx 8021B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/10/2013	ND	1.88	93.9	2.00	7.29	
Toluene*	<0.050	0.050	06/10/2013	ND	1.95	97.6	2.00	9.07	
Ethylbenzene*	<0.050	0.050	06/10/2013	ND	2.03	101	2.00	10.9	
Total Xylenes*	<0.150	0.150	06/10/2013	ND	6.14	102	6.00	10.9	
Total BTEX	<0.300	0.300	06/10/2013	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	928	16.0	06/10/2013	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/05/2013	ND	212	106	200	3.07	
DRO >C10-C28	17.4	10.0	06/05/2013	ND	222	111	200	3.64	
EXT DRO >C28-C35	15.5	10.0	06/05/2013	ND					

Surrogate: 1-Chlorooctane 109 % 65.2-140

Surrogate: 1-Chlorooctadecane 116 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

 Received: 06/04/2013  
 Reported: 06/11/2013  
 Project Name: INDIAN FLATS BASS FEDERAL SWD  
 Project Number: NONE GIVEN  
 Project Location: EDDY CO., NM

 Sampling Date: 05/31/2013  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SB-8 @ 10' (H301305-02)**

BTEX 8021B			mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/10/2013	ND	1.88	93.9	2.00	7.29		
Toluene*	<0.050	0.050	06/10/2013	ND	1.95	97.6	2.00	9.07		
Ethylbenzene*	<0.050	0.050	06/10/2013	ND	2.03	101	2.00	10.9		
Total Xylenes*	<0.150	0.150	06/10/2013	ND	6.14	102	6.00	10.9		
Total BTEX	<0.300	0.300	06/10/2013	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 108 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2400	16.0	06/10/2013	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/05/2013	ND	212	106	200	3.07	
DRO >C10-C28	<10.0	10.0	06/05/2013	ND	222	111	200	3.64	
EXT DRO >C28-C35	<10.0	10.0	06/05/2013	ND					

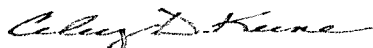
Surrogate: 1-Chlorooctane 115 % 65.2-140

Surrogate: 1-Chlorooctadecane 126 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	06/04/2013	Sampling Date:	05/31/2013
Reported:	06/11/2013	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB-8 @ 25' (H301305-03)**

BTEX 8021B			mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/10/2013	ND	1.88	93.9	2.00	7.29		
Toluene*	<0.050	0.050	06/10/2013	ND	1.95	97.6	2.00	9.07		
Ethylbenzene*	<0.050	0.050	06/10/2013	ND	2.03	101	2.00	10.9		
Total Xylenes*	<0.150	0.150	06/10/2013	ND	6.14	102	6.00	10.9		
Total BTEX	<0.300	0.300	06/10/2013	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 105 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1570	16.0	06/10/2013	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/05/2013	ND	212	106	200	3.07	
DRO >C10-C28	11.7	10.0	06/05/2013	ND	222	111	200	3.64	
EXT DRO >C28-C35	10.2	10.0	06/05/2013	ND					

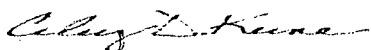
Surrogate: 1-Chlorooctane 98.4 % 65.2-140

Surrogate: 1-Chlorooctadecane 104 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	06/04/2013	Sampling Date:	05/31/2013
Reported:	06/11/2013	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB-8 @ 40' (H301305-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	672	16.0	06/10/2013	ND	416	104	400	3.77	

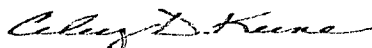
**Sample ID: SB-8 @ 55' (H301305-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	512	16.0	06/10/2013	ND	416	104	400	3.77	

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Celest D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	06/04/2013	Sampling Date:	05/31/2013
Reported:	06/11/2013	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB-8 @ 65' (H301305-06)**

BTEx 8021B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/10/2013	ND	1.88	93.9	2.00	7.29	
Toluene*	<0.050	0.050	06/10/2013	ND	1.95	97.6	2.00	9.07	
Ethylbenzene*	<0.050	0.050	06/10/2013	ND	2.03	101	2.00	10.9	
Total Xylenes*	<0.150	0.150	06/10/2013	ND	6.14	102	6.00	10.9	
Total BTEx	<0.300	0.300	06/10/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 106 % 89.4-126

Chloride, SM4500Cl-B			mg/kg		Analyzed By: DW				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	06/10/2013	ND	416	104	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/05/2013	ND	212	106	200	3.07	
DRO >C10-C28	<10.0	10.0	06/05/2013	ND	222	111	200	3.64	
EXT DRO >C28-C35	<10.0	10.0	06/05/2013	ND					

Surrogate: 1-Chlorooctane 104 % 65.2-140

Surrogate: 1-Chlorooctadecane 109 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	06/04/2013	Sampling Date:	05/31/2013
Reported:	06/11/2013	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB-8 @ 70' (H301305-07)**

BTEX 8021B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/10/2013	ND	1.88	93.9	2.00	7.29	
Toluene*	<0.050	0.050	06/10/2013	ND	1.95	97.6	2.00	9.07	
Ethylbenzene*	<0.050	0.050	06/10/2013	ND	2.03	101	2.00	10.9	
Total Xylenes*	<0.150	0.150	06/10/2013	ND	6.14	102	6.00	10.9	
Total BTEX	<0.300	0.300	06/10/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 106 % 89.4-126

Chloride, SM4500Cl-B			mg/kg		Analyzed By: DW				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	06/10/2013	ND	416	104	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/06/2013	ND	212	106	200	3.07	
DRO >C10-C28	13.2	10.0	06/06/2013	ND	222	111	200	3.64	
EXT DRO >C28-C35	<10.0	10.0	06/06/2013	ND					

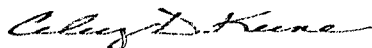
Surrogate: 1-Chlorooctane 105 % 65.2-140

Surrogate: 1-Chlorooctadecane 113 % 63.6-154

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	06/04/2013	Sampling Date:	05/31/2013
Reported:	06/11/2013	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB-9 @ 5' (H301305-08)**

BTX 8021B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/10/2013	ND	1.88	93.9	2.00	7.29	
Toluene*	<0.050	0.050	06/10/2013	ND	1.95	97.6	2.00	9.07	
Ethylbenzene*	<0.050	0.050	06/10/2013	ND	2.03	101	2.00	10.9	
Total Xylenes*	<0.150	0.150	06/10/2013	ND	6.14	102	6.00	10.9	
Total BTX	<0.300	0.300	06/10/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 106 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3680	16.0	06/10/2013	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/06/2013	ND	212	106	200	3.07	
DRO >C10-C28	<10.0	10.0	06/06/2013	ND	222	111	200	3.64	
EXT DRO >C28-C35	<10.0	10.0	06/06/2013	ND					

Surrogate: 1-Chlorooctane 107 % 65.2-140

Surrogate: 1-Chlorooctadecane 109 % 63.6-154

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*Celestine D. Keene*

Celestine D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	06/04/2013	Sampling Date:	05/31/2013
Reported:	06/11/2013	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB-9 @ 10' (H301305-09)**

BTEX 8021B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/10/2013	ND	1.88	93.9	2.00	7.29	
Toluene*	<0.050	0.050	06/10/2013	ND	1.95	97.6	2.00	9.07	
Ethylbenzene*	<0.050	0.050	06/10/2013	ND	2.03	101	2.00	10.9	
Total Xylenes*	<0.150	0.150	06/10/2013	ND	6.14	102	6.00	10.9	
Total BTEX	<0.300	0.300	06/10/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 104 % 89.4-126

Chloride, SM4500Cl-B			mg/kg		Analyzed By: DW				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3600	16.0	06/10/2013	ND	416	104	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/06/2013	ND	212	106	200	3.07	
DRO >C10-C28	<10.0	10.0	06/06/2013	ND	222	111	200	3.64	
EXT DRO >C28-C35	<10.0	10.0	06/06/2013	ND					

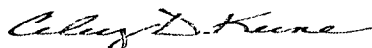
Surrogate: 1-Chlorooctane 110 % 65.2-140

Surrogate: 1-Chlorooctadecane 108 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	06/04/2013	Sampling Date:	05/31/2013
Reported:	06/11/2013	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB-9 @ 25' (H301305-10)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3320	16.0	06/10/2013	ND	416	104	400	0.00		

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**Analytical Results For:**

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

 Received: 06/04/2013  
 Reported: 06/11/2013  
 Project Name: INDIAN FLATS BASS FEDERAL SWD  
 Project Number: NONE GIVEN  
 Project Location: EDDY CO., NM

 Sampling Date: 05/31/2013  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SB-9 @ 45' (H301305-11)**

BTX 80218			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/10/2013	ND	1.88	93.9	2.00	7.29	
Toluene*	<0.050	0.050	06/10/2013	ND	1.95	97.6	2.00	9.07	
Ethylbenzene*	<0.050	0.050	06/10/2013	ND	2.03	101	2.00	10.9	
Total Xylenes*	<0.150	0.150	06/10/2013	ND	6.14	102	6.00	10.9	
Total BTX	<0.300	0.300	06/10/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 108 % 89.4-126

Chloride, SM4500Cl-B			mg/kg		Analyzed By: DW				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1090	16.0	06/10/2013	ND	416	104	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/06/2013	ND	212	106	200	3.07	
DRO >C10-C28	<10.0	10.0	06/06/2013	ND	222	111	200	3.64	
EXT DRO >C28-C35	<10.0	10.0	06/06/2013	ND					

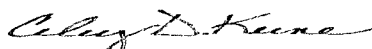
Surrogate: 1-Chlorooctane 107 % 65.2-140

Surrogate: 1-Chlorooctadecane 107 % 63.6-154

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**Analytical Results For:**

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

Received:	06/04/2013	Sampling Date:	05/31/2013
Reported:	06/11/2013	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB-9 @ 60' (H301305-12)**

BTEX 8021B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/10/2013	ND	1.88	93.9	2.00	7.29	
Toluene*	<0.050	0.050	06/10/2013	ND	1.95	97.6	2.00	9.07	
Ethylbenzene*	<0.050	0.050	06/10/2013	ND	2.03	101	2.00	10.9	
Total Xylenes*	<0.150	0.150	06/10/2013	ND	6.14	102	6.00	10.9	
Total BTEX	<0.300	0.300	06/10/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 106 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2100	16.0	06/10/2013	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/06/2013	ND	212	106	200	3.07	
DRO >C10-C28	<10.0	10.0	06/06/2013	ND	222	111	200	3.64	
EXT DRO >C28-C35	<10.0	10.0	06/06/2013	ND					


Surrogate: 1-Chlorooctane 109 % 65.2-140

Surrogate: 1-Chlorooctadecane 114 % 63.6-154

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**Analytical Results For:**

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

Received:	06/04/2013	Sampling Date:	05/31/2013
Reported:	06/11/2013	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB-9 @ 75' (H301305-13)**

BTEX 8021B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/10/2013	ND	1.88	93.9	2.00	7.29	
Toluene*	<0.050	0.050	06/10/2013	ND	1.95	97.6	2.00	9.07	
Ethylbenzene*	<0.050	0.050	06/10/2013	ND	2.03	101	2.00	10.9	
Total Xylenes*	<0.150	0.150	06/10/2013	ND	6.14	102	6.00	10.9	
Total BTEX	<0.300	0.300	06/10/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 106 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1680	16.0	06/10/2013	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/06/2013	ND	214	107	200	5.56	
DRO >C10-C28	<10.0	10.0	06/06/2013	ND	220	110	200	4.61	
EXT DRO >C28-C35	<10.0	10.0	06/06/2013	ND					

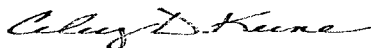
Surrogate: 1-Chlorooctane 100 % 65.2-140

Surrogate: 1-Chlorooctadecane 106 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	06/04/2013	Sampling Date:	05/31/2013
Reported:	06/11/2013	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB-9 @ 85' (H301305-14)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	800	16.0	06/10/2013	ND	416	104	400	0.00	

**Sample ID: SB-9 @ 95' (H301305-15)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	512	16.0	06/10/2013	ND	416	104	400	0.00		

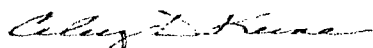
**Sample ID: SB-9 @ 100' (H301305-16)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	512	16.0	06/10/2013	ND	416	104	400	0.00	

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

Received:	06/04/2013	Sampling Date:	05/31/2013
Reported:	06/11/2013	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB-9 @ 105' (H301305-17)**

BTX 8021B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/10/2013	ND	1.88	93.9	2.00	7.29	
Toluene*	<0.050	0.050	06/10/2013	ND	1.95	97.6	2.00	9.07	
Ethylbenzene*	<0.050	0.050	06/10/2013	ND	2.03	101	2.00	10.9	
Total Xylenes*	<0.150	0.150	06/10/2013	ND	6.14	102	6.00	10.9	
Total BTX	<0.300	0.300	06/10/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 107 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	06/10/2013	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/06/2013	ND	214	107	200	5.56	
DRO >C10-C28	<10.0	10.0	06/06/2013	ND	220	110	200	4.61	
EXT DRO >C28-C35	<10.0	10.0	06/06/2013	ND					

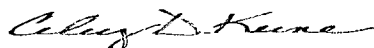
Surrogate: 1-Chlorooctane 103 % 65.2-140

Surrogate: 1-Chlorooctadecane 112 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	06/04/2013	Sampling Date:	05/31/2013
Reported:	06/11/2013	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB-9 @ 110' (H301305-18)**

BTEX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/10/2013	ND	1.88	93.9	2.00	7.29		
Toluene*	<0.050	0.050	06/10/2013	ND	1.95	97.6	2.00	9.07		
Ethylbenzene*	<0.050	0.050	06/10/2013	ND	2.03	101	2.00	10.9		
Total Xylenes*	<0.150	0.150	06/10/2013	ND	6.14	102	6.00	10.9		
Total BTEX	<0.300	0.300	06/10/2013	ND						

Surrogate: 4-Bromofluorobenzene (PIC) 105 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	688	16.0	06/10/2013	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/06/2013	ND	214	107	200	5.56	
DRO >C10-C28	<10.0	10.0	06/06/2013	ND	220	110	200	4.61	
EXT DRO >C28-C35	<10.0	10.0	06/06/2013	ND					

Surrogate: 1-Chlorooctane 102 % 65.2-140

Surrogate: 1-Chlorooctadecane 110 % 63.6-154

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\* = Accredited Analyte

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Celest D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	06/04/2013	Sampling Date:	06/03/2013
Reported:	06/11/2013	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB-10 @ 5' (H301305-19)**

BTEX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/10/2013	ND	1.88	93.9	2.00	7.29		
Toluene*	<0.050	0.050	06/10/2013	ND	1.95	97.6	2.00	9.07		
Ethylbenzene*	<0.050	0.050	06/10/2013	ND	2.03	101	2.00	10.9		
Total Xylenes*	<0.150	0.150	06/10/2013	ND	6.14	102	6.00	10.9		
Total BTEX	<0.300	0.300	06/10/2013	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 106 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5120	16.0	06/10/2013	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/06/2013	ND	214	107	200	5.56	
DRO >C10-C28	<10.0	10.0	06/06/2013	ND	220	110	200	4.61	
EXT DRO >C28-C35	<10.0	10.0	06/06/2013	ND					

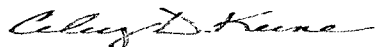
Surrogate: 1-Chlorooctane 104 % 65.2-140

Surrogate: 1-Chlorooctadecane 111 % 63.6-154

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

Received:	06/04/2013	Sampling Date:	06/03/2013
Reported:	06/11/2013	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB-10 @ 10' (H301305-20)**

BTEX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/10/2013	ND	1.88	93.9	2.00	7.29		
Toluene*	<0.050	0.050	06/10/2013	ND	1.95	97.6	2.00	9.07		
Ethylbenzene*	<0.050	0.050	06/10/2013	ND	2.03	101	2.00	10.9		
Total Xylenes*	<0.150	0.150	06/10/2013	ND	6.14	102	6.00	10.9		
Total BTEX	<0.300	0.300	06/10/2013	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	7440	16.0	06/10/2013	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/06/2013	ND	214	107	200	5.56	
DRO >C10-C28	<10.0	10.0	06/06/2013	ND	220	110	200	4.61	
EXT DRO >C28-C35	<10.0	10.0	06/06/2013	ND					

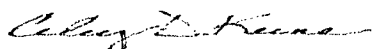
Surrogate: 1-Chlorooctane 96.8 % 65.2-140

Surrogate: 1-Chlorooctadecane 101 % 63.6-154

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**Analytical Results For:**

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

Received:	06/04/2013	Sampling Date:	06/03/2013
Reported:	06/11/2013	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB-10 @ 25' (H301305-21)**

Chloride, SM4500Cl-B		mg/kg	Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	704	16.0	06/10/2013	ND	416	104	400	0.00	

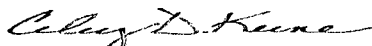
**Sample ID: SB-10 @ 40' (H301305-22)**

Chloride, SM4500Cl-B		mg/kg	Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1090	16.0	06/10/2013	ND	416	104	400	0.00	

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**Analytical Results For:**

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BEN J. ARGUIJO  
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Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	06/04/2013	Sampling Date:	06/03/2013
Reported:	06/11/2013	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB-10 @ 50' (H301305-23)**

BTEX 80218		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/10/2013	ND	1.88	93.9	2.00	7.29	
Toluene*	<0.050	0.050	06/10/2013	ND	1.95	97.6	2.00	9.07	
Ethylbenzene*	<0.050	0.050	06/10/2013	ND	2.03	101	2.00	10.9	
Total Xylenes*	<0.150	0.150	06/10/2013	ND	6.14	102	6.00	10.9	
Total BTEX	<0.300	0.300	06/10/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 107 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3520	16.0	06/10/2013	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/06/2013	ND	214	107	200	5.56	
DRO >C10-C28	<10.0	10.0	06/06/2013	ND	220	110	200	4.61	
EXT DRO >C28-C35	<10.0	10.0	06/06/2013	ND					

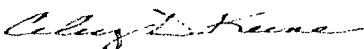
Surrogate: 1-Chlorooctane 104 % 65.2-140

Surrogate: 1-Chlorooctadecane 112 % 63.6-154

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Celest D. Keene, Lab Director/Quality Manager

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

Received:	06/04/2013	Sampling Date:	06/03/2013
Reported:	06/11/2013	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB-10 @ 70' (H301305-24)**

BTEX 8021B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/10/2013	ND	1.88	93.9	2.00	7.29	
Toluene*	<0.050	0.050	06/10/2013	ND	1.95	97.6	2.00	9.07	
Ethylbenzene*	<0.050	0.050	06/10/2013	ND	2.03	101	2.00	10.9	
Total Xylenes*	<0.150	0.150	06/10/2013	ND	6.14	102	6.00	10.9	
Total BTEX	<0.300	0.300	06/10/2013	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 89.4-126

Chloride, SM4500Cl-B			mg/kg		Analyzed By: DW				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2180	16.0	06/10/2013	ND	416	104	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/06/2013	ND	214	107	200	5.56	
DRO >C10-C28	<10.0	10.0	06/06/2013	ND	220	110	200	4.61	
EXT DRO >C28-C35	<10.0	10.0	06/06/2013	ND					

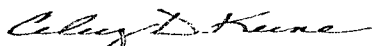
Surrogate: 1-Chlorooctane 103 % 65.2-140

Surrogate: 1-Chlorooctadecane 107 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	06/04/2013	Sampling Date:	06/03/2013
Reported:	06/11/2013	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB-10 @ 80' (H301305-25)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	768	16.0	06/10/2013	ND	416	104	400	0.00	

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**Analytical Results For:**

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

Received:	06/04/2013	Sampling Date:	06/03/2013
Reported:	06/11/2013	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB-10 @ 90' (H301305-26)**

BTEX 8021B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/10/2013	ND	1.88	93.9	2.00	7.29	
Toluene*	<0.050	0.050	06/10/2013	ND	1.95	97.6	2.00	9.07	
Ethylbenzene*	<0.050	0.050	06/10/2013	ND	2.03	101	2.00	10.9	
Total Xylenes*	<0.150	0.150	06/10/2013	ND	6.14	102	6.00	10.9	
Total BTEX	<0.300	0.300	06/10/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 105 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1170	16.0	06/10/2013	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/06/2013	ND	214	107	200	5.56	
DRO >C10-C28	<10.0	10.0	06/06/2013	ND	220	110	200	4.61	
EXT DRO >C28-C35	<10.0	10.0	06/06/2013	ND					

Surrogate: 1-Chlorooctane 101 % 65.2-140

Surrogate: 1-Chlorooctadecane 106 % 63.6-154

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Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	06/04/2013	Sampling Date:	06/03/2013
Reported:	06/11/2013	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

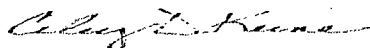
**Sample ID: SB-10 @ 100' (H301305-27)****Chloride, SM4500Cl-B****mg/kg****Analyzed By: DW**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>608</b>	16.0	06/10/2013	ND	432	108	400	0.00	

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 BEN J. ARGUIJO  
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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	06/04/2013	Sampling Date:	06/03/2013
Reported:	06/11/2013	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB-10 @ 110' (H301305-28)**

BTEX 8021B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/10/2013	ND	1.88	93.9	2.00	7.29	
Toluene*	<0.050	0.050	06/10/2013	ND	1.95	97.6	2.00	9.07	
Ethylbenzene*	<0.050	0.050	06/10/2013	ND	2.03	101	2.00	10.9	
Total Xylenes*	<0.150	0.150	06/10/2013	ND	6.14	102	6.00	10.9	
Total BTEX	<0.300	0.300	06/10/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 105 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	672	16.0	06/10/2013	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/06/2013	ND	214	107	200	5.56	
DRO >C10-C28	<10.0	10.0	06/06/2013	ND	220	110	200	4.61	
EXT DRO >C28-C35	<10.0	10.0	06/06/2013	ND					

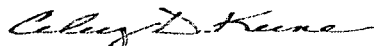
Surrogate: 1-Chlorooctane 102 % 65.2-140

Surrogate: 1-Chlorooctadecane 110 % 63.6-154

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	06/04/2013	Sampling Date:	06/03/2013
Reported:	06/11/2013	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SB-10 @ 115' (H301305-29)**

BTEX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/11/2013	ND	1.88	93.9	2.00	7.29		
Toluene*	<0.050	0.050	06/11/2013	ND	1.95	97.6	2.00	9.07		
Ethylbenzene*	<0.050	0.050	06/11/2013	ND	2.03	101	2.00	10.9		
Total Xylenes*	<0.150	0.150	06/11/2013	ND	6.14	102	6.00	10.9		
Total BTEX	<0.300	0.300	06/11/2013	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 106 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1060	16.0	06/10/2013	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/07/2013	ND	199	99.6	200	2.79	
DRO >C10-C28	<10.0	10.0	06/07/2013	ND	209	104	200	5.01	
EXT DRO >C28-C35	<10.0	10.0	06/07/2013	ND					


Surrogate: 1-Chlorooctane 98.3 % 65.2-140

Surrogate: 1-Chlorooctadecane 106 % 63.6-154

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

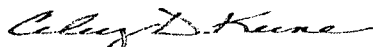
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received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

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Cardinal Laboratories

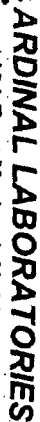
\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

FORM-006  
Revision 1.0

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




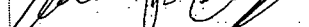



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## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 29 of 30

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Relinquished By: 		Date: 6/4/13	Received By: 	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
		Time: 2:45		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By: 		Date: 6/4/13	Received By: 	REMARKS:	
		Time: 1:40			
Delivered By: (Circle One) Sampler - UPS - Bus - Other:		Sample Condition Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No	CHECKED BY:  (Initials)		



# CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240

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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 30 of 30

Company Name: Basin Environmental Service Technologies, LLC				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>											
Project Manager: Ben Arguijo				P.O. #:				<div style="display: flex; justify-content: space-around;"> <div>Chloride</div> <div>TPH (8015M)</div> <div>BTEX (8021B)</div> </div>											
Address: P.O. Box 301				Company: BOPCO, LP															
City: Lovington		State: NM Zip: 88260		Attn: Tony Savoie															
Phone #: (575)396-2378		Fax #: (575)396-1429		Address: 522 W. Marland															
Project #:		Project Owner:		City: Carlsbad															
Project Name: Indian Flats Bass Federal SWD				State: NM Zip: 88220															
Project Location: Eddy Co., NM				Phone #: (432)566-8730															
Sampler Name: Ben J. Arguijo				Fax #:															
FOR LAB USE ONLY																			
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX				PRESERV.		SAMPLING									
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME					
H301305																			
21	SB-10 @ 25'	G	1			X				X			6/3/13	0950	X				
22	SB-10 @ 40'	G	1			X				X			6/3/13	1010	X				
23	SB-10 @ 50'	G	1			X				X			6/3/13	1030	X X X				
24	SB-10 @ 70'	G	1			X				X			6/3/13	1100	X X X				
25	SB-10 @ 80'	G	1			X				X			6/3/13	1120	X				
26	SB-10 @ 90'	G	1			X				X			6/3/13	1140	X X X				
27	SB-10 @ 100'	G	1			X				X			6/3/13	1200	X				
28	SB-10 @ 110'	G	1			X				X			6/3/13	1220	X X X				
29	SB-10 @ 115'	G	1			X				X			6/3/13	1230	X X X				

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Relinquished By:	Date: 6/4/13	Received By:	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
	Time: 1245		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By:	Date: 6/4/13	Received By:	REMARKS:	
	Time: 1:40			
Delivered By: (Circle One)				
Sampler - UPS - Bus - Other:		Sample Condition	CHECKED BY:	
		Cool Intact	(Initials)	
		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		

June 20, 2013

BEN J. ARGUIJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: INDIAN FLATS BASS FEDERAL SWD

Enclosed are the results of analyses for samples received by the laboratory on 06/14/13 15:47.

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


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

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

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

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

Received: 06/14/2013  
Reported: 06/20/2013  
Project Name: INDIAN FLATS BASS FEDERAL SWD  
Project Number: NONE GIVEN  
Project Location: EDDY CO., NM

Sampling Date: 06/14/2013  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Celey D. Keene

**Sample ID: SOUTH WALL #1 (H301383-01)**

Chloride, SM4500Cl-B		mg/kg	Analyzed By: DW							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	864	16.0	06/19/2013	ND	416	104	400	0.00		
TPH 8015M		mg/kg	Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	06/19/2013	ND	205	103	200	2.90		
DRO >C10-C28	<10.0	10.0	06/19/2013	ND	215	107	200	2.48		
EXT DRO >C28-C35	<10.0	10.0	06/19/2013	ND						
Surrogate: 1-Chlorooctane	79.7 %	65.2-140								
Surrogate: 1-Chlorooctadecane	83.6 %	63.6-154								


**Sample ID: NORTH WALL #1 (H301383-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	960	16.0	06/19/2013	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/19/2013	ND	205	103	200	2.90	
DRO >C10-C28	<10.0	10.0	06/19/2013	ND	215	107	200	2.48	
EXT DRO >C28-C35	<10.0	10.0	06/19/2013	ND					
Surrogate: 1-Chlorooctane	96.4 %	65.2-140							
Surrogate: 1-Chlorooctadecane	102 %	63.6-154							

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\*==Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

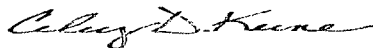
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received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

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 4 of 4

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June 27, 2013

BEN J. ARGUIJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: INDIAN FLATS BASS FEDERAL SWD

Enclosed are the results of analyses for samples received by the laboratory on 06/24/13 16:10.

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

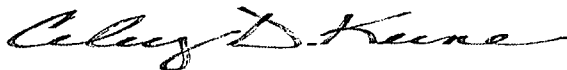
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

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

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

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

Received: 06/24/2013  
Reported: 06/27/2013  
Project Name: INDIAN FLATS BASS FEDERAL SWD  
Project Number: NONE GIVEN  
Project Location: EDDY CO., NM

Sampling Date: 06/24/2013  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: NORTH WALL #2 (H301476-01)**

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>368</b>	16.0	06/27/2013	ND	400	100	400	0.00	
TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/26/2013	ND	216	108	200	0.621	
DRO >C10-C28	<10.0	10.0	06/26/2013	ND	221	111	200	0.714	
EXT DRO >C28-C35	<10.0	10.0	06/26/2013	ND					

Surrogate: 1-Chlorooctane 97.4 % 65.2-140

Surrogate: 1-Chlorooctadecane 103 % 63.6-154

**Sample ID: EAST WALL #1 (H301476-02)**

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>416</b>	16.0	06/27/2013	ND	400	100	400	0.00	
TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/26/2013	ND	216	108	200	0.621	
DRO >C10-C28	<10.0	10.0	06/26/2013	ND	221	111	200	0.714	
EXT DRO >C28-C35	<10.0	10.0	06/26/2013	ND					


Surrogate: 1-Chlorooctane 96.4 % 65.2-140

Surrogate: 1-Chlorooctadecane 93.3 % 63.6-154

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	06/24/2013	Sampling Date:	06/24/2013
Reported:	06/27/2013	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SOUTH WALL #2 (H301476-03)**

Chloride, SM4500Cl-B			mg/kg							Analyzed By: AP
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>304</b>	16.0	06/27/2013	ND	400	100	400	0.00		
TPH 8015M			mg/kg							Analyzed By: MS
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	06/26/2013	ND	216	108	200	0.621		
DRO >C10-C28	<10.0	10.0	06/26/2013	ND	221	111	200	0.714		
EXT DRO >C28-C35	<10.0	10.0	06/26/2013	ND						
<hr/>										
Surrogate: 1-Chlorooctane	93.5 %	65.2-140								
Surrogate: 1-Chlorooctadecane	98.2 %	63.6-154								

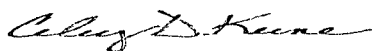
**Sample ID: WEST WALL #1 (H301476-04)**

Chloride, SM4500Cl-B			mg/kg							Analyzed By: AP
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>640</b>	16.0	06/27/2013	ND	400	100	400	0.00		
TPH 8015M			mg/kg							Analyzed By: MS
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	06/26/2013	ND	216	108	200	0.621		
DRO >C10-C28	<10.0	10.0	06/26/2013	ND	221	111	200	0.714		
EXT DRO >C28-C35	<10.0	10.0	06/26/2013	ND						
<hr/>										
Surrogate: 1-Chlorooctane	91.4 %	65.2-140								
Surrogate: 1-Chlorooctadecane	95.4 %	63.6-154								

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

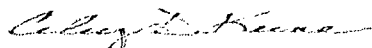
**Notes and Definitions**

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

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Celey D. Keene, Lab Director/Quality Manager



## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

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

5-393-2476  
# 54

July 10, 2013

BEN J. ARGUIJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: INDIAN FLATS BASS FEDERAL SWD

Enclosed are the results of analyses for samples received by the laboratory on 07/03/13 16:00.

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

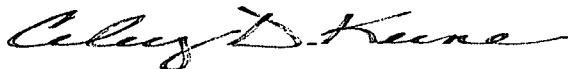
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

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

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	07/03/2013	Sampling Date:	07/03/2013
Reported:	07/10/2013	Sampling Type:	Soil
Project Name:	INDIAN FLATS BASS FEDERAL SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY CO., NM		

**Sample ID: SOUTH WALL #3 (H301576-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	512	16.0	07/10/2013	ND	416	104	400	0.00		
TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	07/09/2013	ND	201	100	200	2.08		
DRO >C10-C28	<10.0	10.0	07/09/2013	ND	212	106	200	5.52		
EXT DRO >C28-C35	<10.0	10.0	07/09/2013	ND						

Surrogate: 1-Chlorooctane 87.5 % 65.2-140

Surrogate: 1-Chlorooctadecane 92.3 % 63.6-154

**Sample ID: SOUTH WALL #4 (H301576-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	576	16.0	07/10/2013	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/10/2013	ND	202	101	200	7.87	
DRO >C10-C28	<10.0	10.0	07/10/2013	ND	205	103	200	9.74	
EXT DRO >C28-C35	<10.0	10.0	07/10/2013	ND					

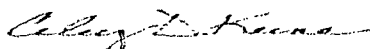
Surrogate: 1-Chlorooctane 91.1 % 65.2-140

Surrogate: 1-Chlorooctadecane 92.3 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

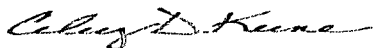
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received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

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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Relinquished By: <i>[Signature]</i>		Date: 7/3/13 Time: 4:00	Received By: <i>[Signature]</i>	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No REMARKS:
Relinquished By:		Date: Time:	Received By:	Add'l Phone #: Add'l Fax #:  Please email results to <a href="mailto:pm@basinenv.com">pm@basinenv.com</a> & <a href="mailto:TAsavoie@BassPet.com">TAsavoie@BassPet.com</a>
Delivered By: (Circle One) Sampler - UPS - Bus - Other:		2.40	Sample Condition Cool <input checked="" type="checkbox"/> Intact <input type="checkbox"/> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No	
			CHECKED BY: <i>[Signature]</i>	

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ES 10/505-393  
#54



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

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July 11, 2013

BEN J. ARGUIJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: INDIAN FLATS BASS FEDERAL SWD

Enclosed are the results of analyses for samples received by the laboratory on 07/10/13 15:50.

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

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Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

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

 Received: 07/10/2013  
 Reported: 07/11/2013  
 Project Name: INDIAN FLATS BASS FEDERAL SWD  
 Project Number: NONE GIVEN  
 Project Location: EDDY CO., NM

 Sampling Date: 07/10/2013  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: NORTH #3 (H301612-01)**

Chloride, SM4500Cl-B			mg/kg							Analyzed By: AP
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>2800</b>	16.0	07/11/2013	ND	400	100	400	0.00		
TPH 8015M			mg/kg							Analyzed By: MS
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	07/11/2013	ND	201	101	200	4.50		
DRO >C10-C28	<10.0	10.0	07/11/2013	ND	211	105	200	7.08		
EXT DRO >C28-C35	<10.0	10.0	07/11/2013	ND						

Surrogate: 1-Chlorooctane 92.2 % 65.2-140

Surrogate: 1-Chlorooctadecane 96.1 % 63.6-154

**Sample ID: NORTH #4 (H301612-02)**

Chloride, SM4500Cl-B			mg/kg							Analyzed By: AP
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>3680</b>	16.0	07/11/2013	ND	400	100	400	0.00		
TPH 8015M			mg/kg							Analyzed By: MS
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	07/11/2013	ND	201	101	200	4.50		
DRO >C10-C28	<10.0	10.0	07/11/2013	ND	211	105	200	7.08		
EXT DRO >C28-C35	<10.0	10.0	07/11/2013	ND						

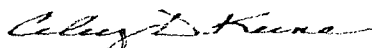
Surrogate: 1-Chlorooctane 90.9 % 65.2-140

Surrogate: 1-Chlorooctadecane 93.2 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

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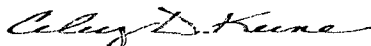
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Celey D. Keene, Lab Director/Quality Manager



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Please email results to pm@basinenv.com  
& TAsavoie@BassPet.com