

# *Basin Environmental Service Technologies, LLC*

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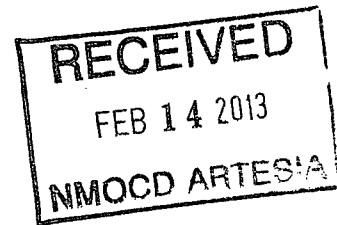


## **REMEDIATION SUMMARY AND SITE CLOSURE REQUEST**

**BOPCO, LP  
GOLDEN 8 FEDERAL BATTERY #1 FLOWLINE  
Eddy County, New Mexico  
Unit Letter "K" (NE/SW), Section 8, Township 21 South, Range 29 East  
Latitude 32.491352° North, Longitude 103.008223° West  
NMOCD Reference #s 2RP-466**

Prepared For:

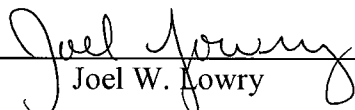
BOPCO, LP  
522 W. Mermod, Suite 704  
Carlsbad, New Mexico 88220



Prepared By:

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

**September 2012**

  
Joel W. Lowry  
Project Manager

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## **1.0 INTRODUCTION AND BACKGROUND INFORMATION**

Basin Environmental Service Technologies, LLC (Basin), on behalf of BOPCO, LP (BOPCO), has prepared this *Remediation Summary and Site Closure Request* for the release site known as Golden 8 Federal Battery #1 Flowline. The legal description of the release site is Unit Letter "K" (NE/SW), Section 8, Township 21 South, Range 29 East, in Eddy County, New Mexico. The geographic coordinates of the release site are 32.491352° North latitude and 103.008223° 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" and Figure 2 for "Site & Sample Location Map".

On October 6, 2010, BOPCO discovered a release had occurred on a flowline near the Golden 8 Federal Battery #1. The release was attributed to the failure of a two and seven eighths inch (2 7/8") flowline. A "Release Notification and Corrective Action" (Form C-141) was filed with the New Mexico Oil Conservation Division (NMOCD) Artesia District Office on November 8, 2010. The Form C-141 indicated approximately ten (10) barrels of crude oil was released. During initial response activities the well was shut in and one joint of tubing was replaced. The oil soaked area was covered with fresh dirt to absorb pockets of oil. The release affected approximately one thousand, six hundred square feet (1,600 ft<sup>2</sup>) of pasture near the south side of the tank battery. A Form C-141, dated is provided as Appendix A. General Photographs of the release site are provided as Appendix B.

## **2.0 NMOCD SITE CLASSIFICATION**

A search of the New Mexico Water Rights Reporting System (NMWRRS) database maintained by the New Mexico Office of the State Engineer (NMOSE) indicated information was unavailable for Section 8, Township 21 South, Range 29 East. A depth to groundwater reference map utilized by the NMOCD indicates groundwater should be encountered at approximately one hundred sixty feet (160') 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 1,000 feet of the release. Based on the NMOCD ranking system, zero (0) points will be assigned to the site as a result of this criterion.

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

NMOCD guidelines indicate the Poker Lake Unit Well #205 at Battery PLU-158 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)
- BTEX – 50 mg/Kg (ppm)
- 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 April 18, 2012, following initial response activities, excavation of impacted soil commenced at the release site. A Photo-Ionization Detector (PID) and chloride field kit were used to field screen the horizontal and vertical extent of impacted soil and to guide the excavation. Soil samples were collected and submitted to Cardinal Laboratories in Hobbs, New Mexico, for analysis of benzene, ethylbenzene, toluene, and xylene (BTEX) using EPA SW-846-8021b, total petroleum hydrocarbon (TPH) using EPA SW-846 8015M, and/or chloride concentrations using EPA method 4500 Cl-B. The excavated soil was stockpiled on-site pending final disposition.

On April 20, 2012, eight (8) soil samples (Sample 1, Sample 2, Sample 3, Sample 4, Sample 5, Sample 6, Sample 7 and Sample 8) were collected from the excavation floor and sidewalls and submitted to the laboratory for analysis of TPH and chloride concentrations. Laboratory analytical results indicated TPH concentrations were less than the appropriate laboratory method detection limit (MDL) for each of the submitted soil samples with the exception of soil sample "Sample 6", which had a concentrations of 25.6 mg/Kg. Analytical results indicated chloride concentrations ranged from less than the laboratory MDL for soil sample "Sample 1" to 624 mg/Kg for soil sample "Sample 6". Soil sample "Sample 6" was also analyzed for BTEX constituent concentrations, which were determined to be less than the appropriate laboratory MDL for each constituent. Chloride, BTEX and TPH concentrations were less than NMOCD regulatory standards in each of the submitted soil samples.

On April 23 and 24, 2012, approximately four hundred and thirty two cubic yards (432 yd<sup>3</sup>) of impacted material was transported to Lea Land (WM-01-035), for disposal. Prior to backfilling, the final dimensions of the excavation were approximately fifty feet (50') to seventy-five feet (75') in width, two hundred feet (200') in length and one foot (1) to three and one half feet (3.5') in depth. The site will be reseeded with BLM-approved seed mixture at time more conducive to germination.

### **4.0 QA/QC PROCEDURES**

#### **4.1 Soil Sampling**

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

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

## **4.2 Decontamination of Equipment**

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

## **4.3 Laboratory Protocol**

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

## **5.0 SITE CLOSURE REQUEST**

Soil samples collected from the floor and sidewalls of the Golden 8 Federal Battery #1 Flowline excavation were analyzed by an NMOCD-approved laboratory which determined that concentration of benzene, BTEX, TPH and chloride were below NMOCD regulatory standards. Basin recommends BOPCO provide the NMOCD Artesia District Office a copy of this *Remediation Summary & Site Closure Request* and request the NMOCD grant closure to the Golden 8 Federal Battery #1 Flowline remediation site.

## 6.0 LIMITATIONS

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

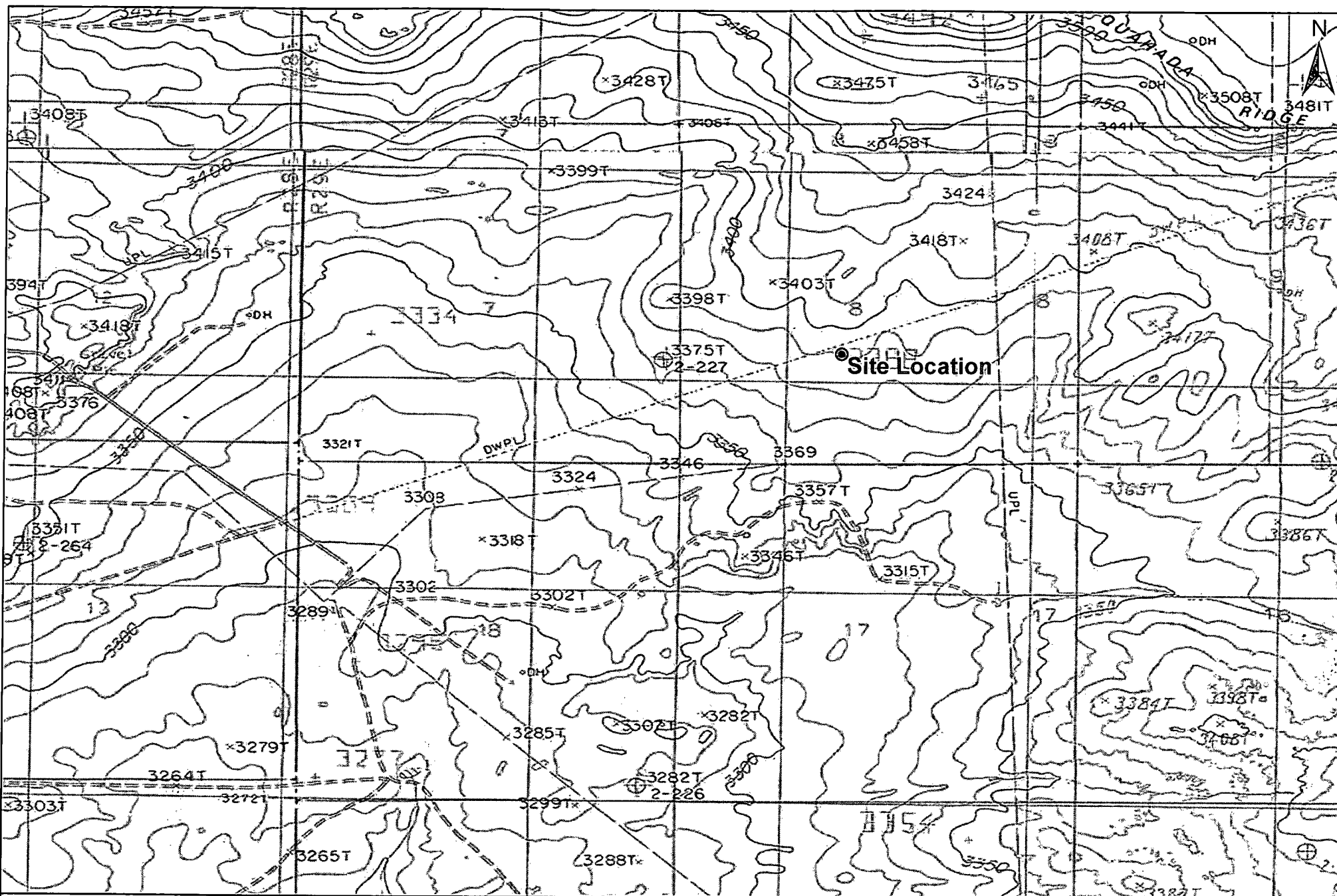
This report has been prepared for the benefit of BOPCO, LP. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the express consent of Basin Environmental Service Technologies, LLC, and/or BOPCO, LP.

## **7.0 DISTRIBUTION:**

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

## **FIGURES**





Site Location

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

**Figure 1**  
**Site Location Map**  
**BOPCO, LP**  
**Golden 8 Federal Battery #1 Flowline**  
**Eddy County, New Mexico**  
**NMOCD Reference #: 2RP-466**

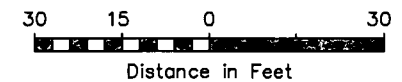
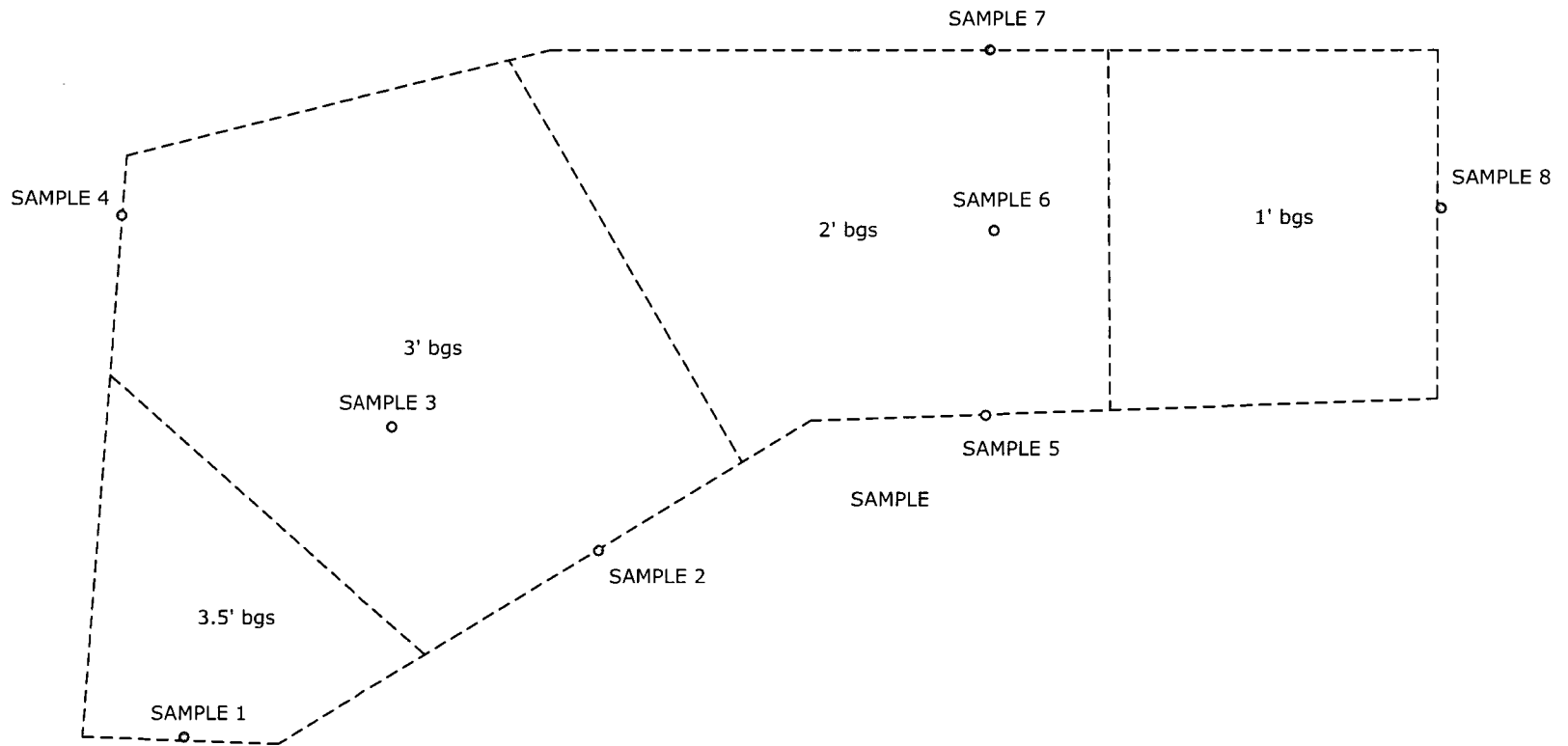


Basin Environmental Service Technologies, LLC  
3100 Plains Hwy.  
Lovington, NM 88260

Drawn By: BJA	Checked By: BRB
January 9, 2013	Scale: 1" = 2000'



ROAD



**Legend:**

- Excavation Extent
- Pipeline
- Sample Location
- Caliche Road

Figure 2  
Site Map  
BOPCO, L.P.  
Golden 8 Federal Battery #1 Flowline  
Eddy County, New Mexico

Basin Environmental Services

Prep By: JWL	Checked By: BJA
May 24, 2012	Scale 1"=30'

## **TABLES**

TABLE 1

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

BOPCO, LP  
 GOLDEN 8 FEDERAL BATTERY #1 FLOWLINE  
 EDDY COUNTY, NEW MEXICO

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030					METHOD: 8015M			TOTAL	4500 CL-B
				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)	TPH C <sub>6</sub> -C <sub>35</sub> (mg/Kg)	CHLORIDE (mg/Kg)
SAMPLE 1	2.5'	4/20/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	<16.0
SAMPLE 2	2'	4/20/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	240
SAMPLE 3	3'	4/20/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	48.0
SAMPLE 4	2'	4/20/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	208
SAMPLE 5	1'	4/20/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	544
SAMPLE 6	2'	4/20/2012	In-Situ	-	-	-	-	-	<10.0	15.0	10.6	<10.0	624
SAMPLE 7	1'	4/20/2012	In-Situ	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	16.0
SAMPLE 8	0.5'	4/20/2012	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.150	<10.0	292	211	503	336
NMOCD Criteria				10				50				5,000	

- = Not analyzed.

## **APPENDICES**

## **Appendix A**

Release Notification and 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

**RECEIVED**  
OCT 21 2010  
**NMOC D ARTESIA**

Form C-141  
Revised October 10, 2003  
Submit 2 Copies to appropriate  
District Office in accordance  
with Rule 116 on back  
side of form

30-015-26931

**Release Notification and Corrective Action**

n MCB 1031249564

**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: Golden 8 Federal Battery #1		Facility Type E&P

Surface Owner Federal	Mineral Owner Federal	Lease No.
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**LOCATION OF RELEASE**

Unit Letter K	Section 8	Township 21S	Range 29E	Feet from the	North/South Line	Feet from the	East/West Line	County Eddy
------------------	--------------	-----------------	--------------	---------------	------------------	---------------	----------------	----------------

Latitude N 32.491352 Longitude W 104.008223

**NATURE OF RELEASE**

Type of Release: Crude Oil	Volume of Release: 10 Bbls Crude oil	Volume Recovered: None
Source of Release: 2 7/8" flow line near the tank battery	Date and Hour of Occurrence No known	Date and Hour of Discovery 10/6/10 8:00 a.m.
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour 3/10/10 7:00 a.m. Left Msg. Returned call later	
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 2 7/8" flow line developed a leak coming from the producing well to the battery. The well was shut in a one joint of tubing was replaced.

Describe Area Affected and Cleanup Action Taken.\* An area covering approximately 1600 sq. ft of pasture near the south side of the tank battery to the lease road was affected by the release. The oil soaked area was covered with fresh dirt to absorb the pockets of oil.  
The Site remediation for the crude oil spill will follow the NMOC D 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 NMOC D 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 NMOC D 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, NMOC D 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>M. L. Brannon</u>	
Title: Waste Mgmt. & Remediation Specialist		Approval Date <b>NOV 08 2010</b>	Expiration Date:
E-mail Address: TASavoie@BassPet.com		Conditions of Approval:	
Date: 10/21/10 Phone: 432-556-8730		Attached <input type="checkbox"/>	

\* Attach Additional Sheets If Necessary

REMEDATION per OCD Rules and  
Guidelines. **SUBMIT REMEDIATION  
PROPOSAL BY: 12/8/2010**

2RP-466

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

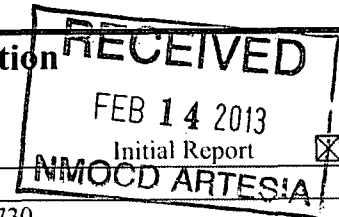
State of New Mexico  
Energy Minerals and Natural Resources

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

Name of Company	BOPCO, L.P.	Contact	Tony Savoie
Address	522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No.	432-556-8730
Facility Name	Golden 8 Federal Battery #1 (2RP-466)	Facility Type	E&P

☒ Final Report

Surface Owner: Federal	Mineral Owner: Federal	Lease No.
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LOCATION OF RELEASE

Unit Letter K	Section 8	Township 21S	Range 29E	Feet from the	North/South Line	Feet from the	East/West Line	County Eddy
------------------	--------------	-----------------	--------------	---------------	------------------	---------------	----------------	----------------

Latitude N32.491352 Longitude W104.008223

NATURE OF RELEASE

Type of Release: Crude Oil	Volume of Release 10 bbls Crude oil	Volume Recovered None
Source of Release: 2 7/8" flow line near tank battery	Date and Hour of Occurrence Not known	Date and Hour of Discovery 10/6/10 8:00 a.m.
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour: 3/10/10 7:00 a.m. Left Msg. Returned call later	
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 2 7/8" flow line developed a leak coming from the producing well to the battery. The well was shut in and one joint of tubing was replaced.

Describe Area Affected and Cleanup Action Taken.\* An area covering approximately 1,600 sq. ft. of pasture near the south side of the tank battery to the lease road was affected by the release. The oil soaked area was covered with fresh dirt to absorb the pockets of oil.

Laboratory analytical results from soil samples collected from the floor and sidewalls of the Golden 8 Federal Battery #1 Flowline excavation indicated concentrations of BTEX, TPH and chloride were less than NMOCD regulatory standards. Approximately 432 cy of impacted soil was excavated from the release site. Affected soil was transported to an NMOCD-approved disposal facility. On April 24, 2012, the excavation was backfilled with locally purchased non-impacted soil.

Please reference the attached Basin Environmental Services Technologies Remediation Summary and Site Closure Request for details of remediation activities.

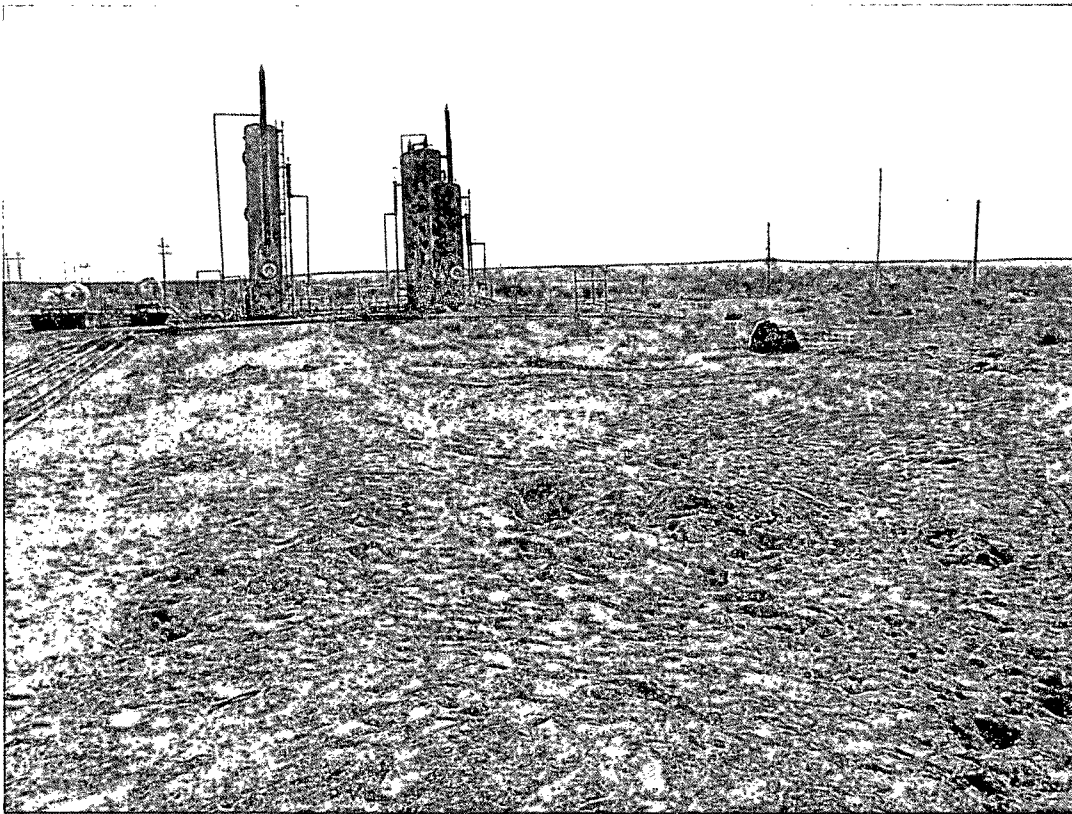
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases, which may endanger 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:		OIL CONSERVATION DIVISION	
Printed Name: Ben J. Arguiz (Agent for BOPCO, L.P.)		Approved by District Supervisor:	
Title: Project Manager - Basin Environmental		Approval Date:	Expiration Date:
E-mail Address: TASavoie@BassPet.com pm@basinenvi.com		Conditions of Approval:	
Date: 2/14/13	Phone: 432-556-8730		

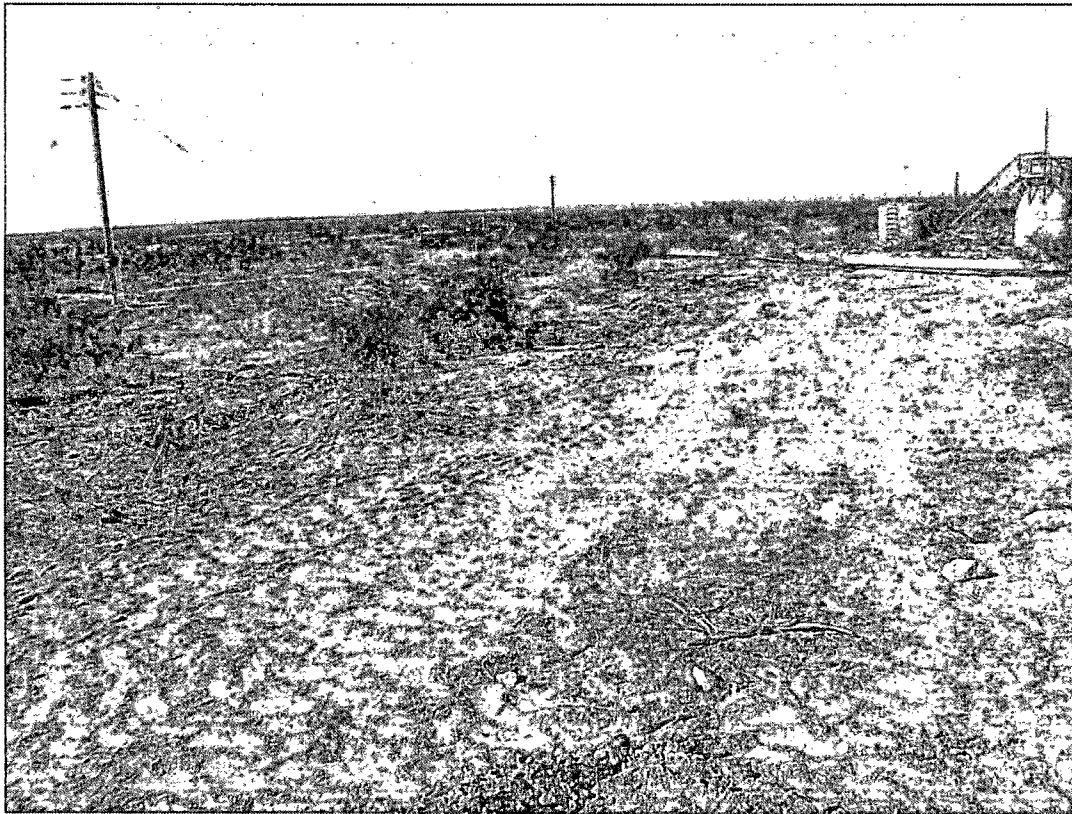
(806)549-9597



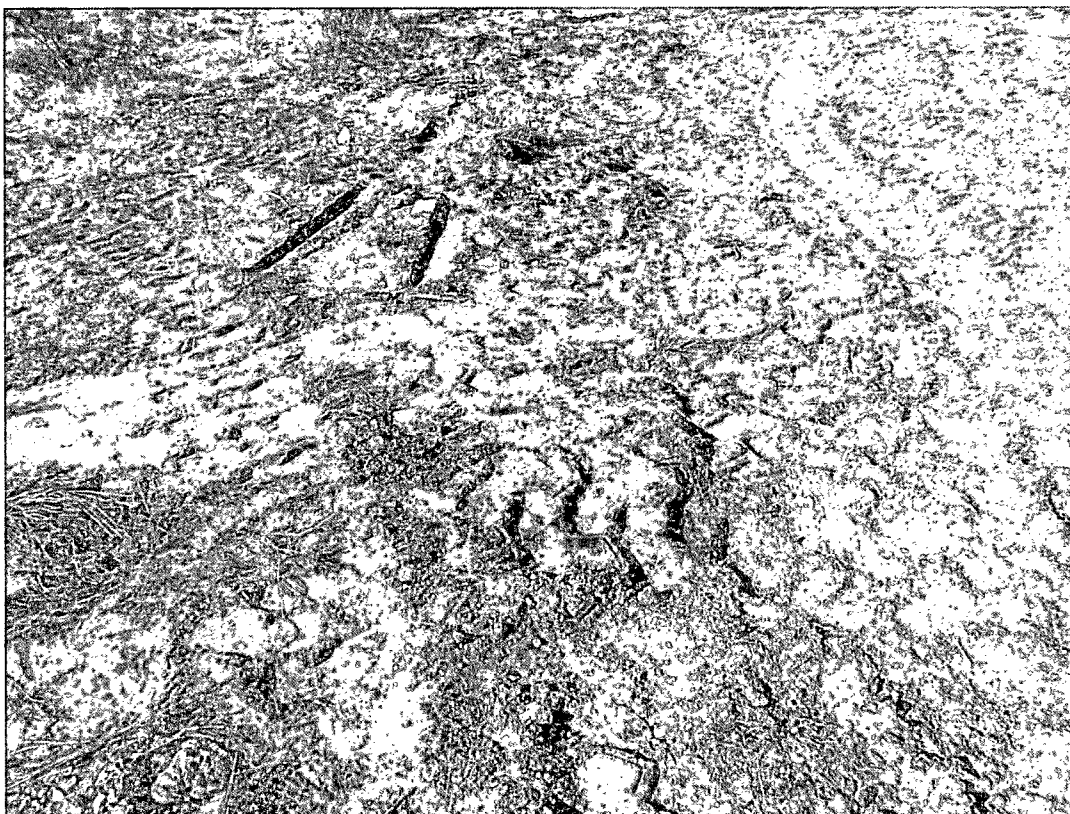
**Appendix B**  
**Photographs**



Photograph of the Initial Release at the Golden 8 Federal Battery #1.



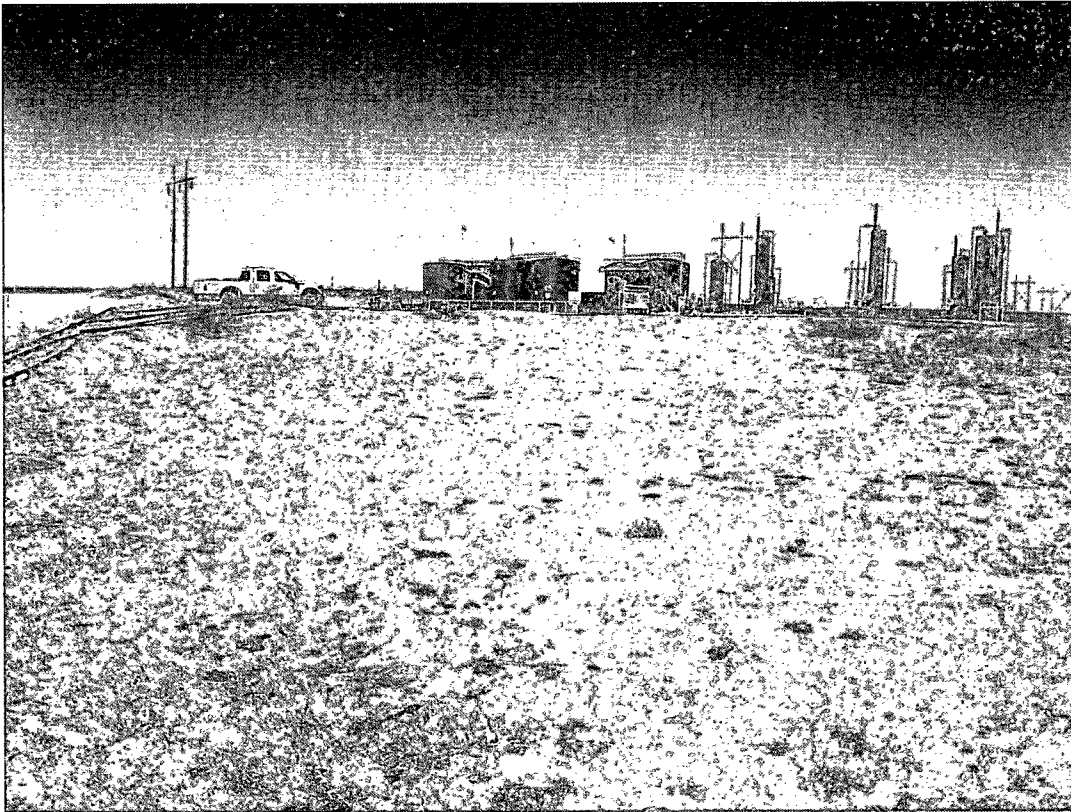
Photograph of the Initial Release at the Golden 8 Federal Battery #1.



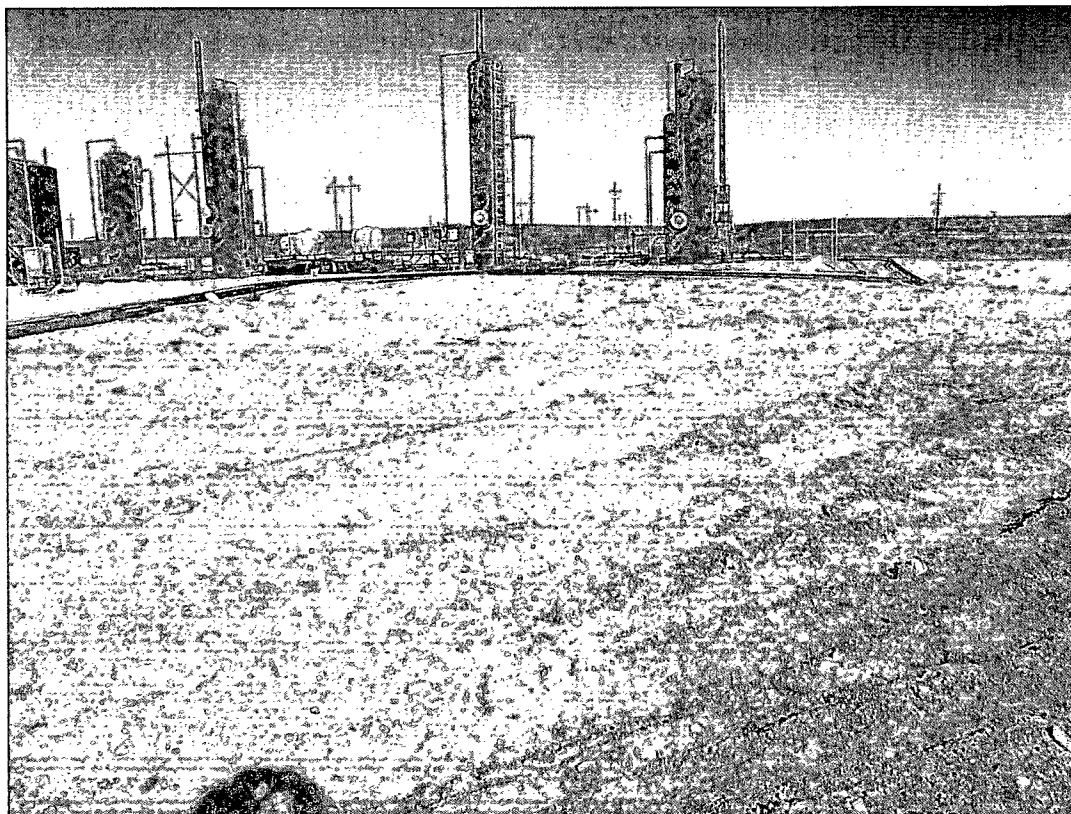
Photograph of the Initial Release at the Golden 8 Federal Battery #1.



Photograph of the Initial Release at the Golden 8 Federal Battery #1.



Post-Remediation Picture of Golden 8 Federal Battery #1 Flowline



Post-Remediation Picture of Golden 8 Federal Battery #1 Flowline

**Appendix C**  
Laboratory Analytical Reports

April 30, 2012

BEN J. ARGUIJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: GOLDEN 8

Enclosed are the results of analyses for samples received by the laboratory on 04/23/12 8:40.

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).

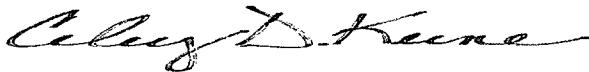
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

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:	04/23/2012	Sampling Date:	04/20/2012
Reported:	04/30/2012	Sampling Type:	Soil
Project Name:	GOLDEN 8	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, E OF CARLSBAD, NM		

**Sample ID: SAMPLE 1 (H200924-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	04/23/2012	ND	432	108	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	04/23/2012	ND	152	76.2	200	7.36	
DRO >C10-C28	<10.0	10.0	04/23/2012	ND	146	72.9	200	4.39	
EXT DRO >C28-C35	<10.0	10.0	04/23/2012	ND					
Surrogate: 1-Chlorooctane	95.1 %	55.5-154							
Surrogate: 1-Chlorooctadecane	87.7 %	57.6-158							

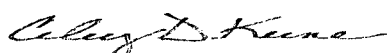
**Sample ID: SAMPLE 2 (H200924-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	04/23/2012	ND	432	108	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	04/23/2012	ND	152	76.2	200	7.36	
DRO >C10-C28	<10.0	10.0	04/23/2012	ND	146	72.9	200	4.39	
EXT DRO >C28-C35	<10.0	10.0	04/23/2012	ND					
Surrogate: 1-Chlorooctane	84.6 %	55.5-154							
Surrogate: 1-Chlorooctadecane	85.6 %	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:	04/23/2012	Sampling Date:	04/20/2012
Reported:	04/30/2012	Sampling Type:	Soil
Project Name:	GOLDEN 8	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, E OF CARLSBAD, NM		

**Sample ID: SAMPLE 3 (H200924-03)**

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	04/23/2012	ND	432	108	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	04/23/2012	ND	152	76.2	200	7.36	
DRO >C10-C28	<10.0	10.0	04/23/2012	ND	146	72.9	200	4.39	
EXT DRO >C28-C35	<10.0	10.0	04/23/2012	ND					
Surrogate: 1-Chlorooctane		98.8 %	55.5-154						
Surrogate: 1-Chlorooctadecane		98.6 %	57.6-158						

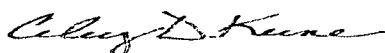
**Sample ID: SAMPLE 4 (H200924-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	04/23/2012	ND	432	108	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	04/23/2012	ND	152	76.2	200	7.36	
DRO >C10-C28	<10.0	10.0	04/23/2012	ND	146	72.9	200	4.39	
EXT DRO >C28-C35	<10.0	10.0	04/23/2012	ND					
Surrogate: 1-Chlorooctane		96.6 %	55.5-154						
Surrogate: 1-Chlorooctadecane		101 %	57.6-158						

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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:	04/23/2012	Sampling Date:	04/20/2012
Reported:	04/30/2012	Sampling Type:	Soil
Project Name:	GOLDEN 8	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, E OF CARLSBAD, NM		

#### Sample ID: SAMPLE 5 (H200924-05)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>544</b>	16.0	04/23/2012	ND	432	108	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	04/23/2012	ND	152	76.2	200	7.36	
DRO >C10-C28	<10.0	10.0	04/23/2012	ND	146	72.9	200	4.39	
EXT DRO >C28-C35	<10.0	10.0	04/23/2012	ND					
Surrogate: 1-Chlorooctane		96.5 %	55.5-154						
Surrogate: 1-Chlorooctadecane		95.9 %	57.6-158						

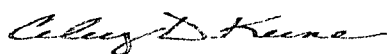
#### Sample ID: SAMPLE 6 (H200924-06)

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>624</b>	16.0	04/23/2012	ND	432	108	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	04/24/2012	ND	178	89.2	200	0.284	
<b>DRO &gt;C10-C28</b>	<b>15.0</b>	10.0	04/24/2012	ND	187	93.6	200	0.749	
<b>EXT DRO &gt;C28-C35</b>	<b>10.6</b>	10.0	04/24/2012	ND					
Surrogate: 1-Chlorooctane		96.6 %	55.5-154						
Surrogate: 1-Chlorooctadecane		95.0 %	57.6-158						

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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: 04/23/2012  
 Reported: 04/30/2012  
 Project Name: GOLDEN 8  
 Project Number: NONE GIVEN  
 Project Location: EDDY COUNTY, E OF CARLSBAD, NM

 Sampling Date: 04/20/2012  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

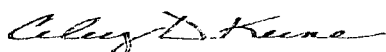
**Sample ID: SAMPLE 7 (H200924-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	04/23/2012	ND	432	108	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	04/24/2012	ND	178	89.2	200	0.284	
DRO >C10-C28	<10.0	10.0	04/24/2012	ND	187	93.6	200	0.749	
EXT DRO >C28-C35	<10.0	10.0	04/24/2012	ND					
Surrogate: 1-Chlorooctane		97.6 %	55.5-154						
Surrogate: 1-Chlorooctadecane		97.6 %	57.6-158						

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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: 04/23/2012  
Reported: 04/30/2012  
Project Name: GOLDEN 8  
Project Number: NONE GIVEN  
Project Location: EDDY COUNTY, E OF CARLSBAD, NM

Sampling Date: 04/20/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: SAMPLE 8 (H200924-08)**

BTX 8021B		mg/kg		Analyzed By: ZZZ					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/30/2012	ND	2.09	105	2.00	0.449	
Toluene*	<0.050	0.050	04/30/2012	ND	2.21	111	2.00	0.541	
Ethylbenzene*	<0.050	0.050	04/30/2012	ND	2.23	111	2.00	0.820	
Total Xylenes*	<0.150	0.150	04/30/2012	ND	6.92	115	6.00	1.10	

Surrogate: 4-Bromofluorobenzene (PIL) 105 % 64.4-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	04/23/2012	ND	432	108	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	04/24/2012	ND	178	89.2	200	0.284	
DRO >C10-C28	292	10.0	04/24/2012	ND	187	93.6	200	0.749	
EXT DRO >C28-C35	211	10.0	04/24/2012	ND					

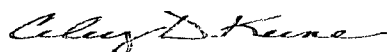
Surrogate: 1-Chlorooctane 87.8 % 55.5-154

Surrogate: 1-Chlorooctadecane 92.2 % 57.6-158

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

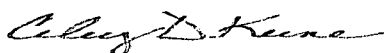
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received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

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Relinquished By: 		Date: 4-23-12 Time: 7:00	Received By: 	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #: _____ Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Fax #: _____ REMARKS:
Relinquished By: 		Date: 4-23-12 Time: 8:40	Received By: 	Please email results to pm@basinenv.com & TASavoie@BassPet.com  * Added as per Ben 4/27/12. ch
Delivered By: (Circle One) Sampler - UPS - Bus - Other:		Sample Condition Cool Intact 40° <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	CHECKED BY: (Initials) 	

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2478.