

# **Holly Energy Partners**

## **Barnsdall Pipeline Work Plan**

**Section 26, Township 17S, Range 29E  
Eddy County, New Mexico  
2RP-4020**

**January 4, 2017**



**Prepared for:**

**Holly Energy Partners  
1602 W. Main  
Artesia, NM 88210**

**By:**

**Safety & Environmental Solutions, Inc.  
703 East Clinton Street  
Hobbs, New Mexico 88240  
(575) 397-0510**

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## I. Company Contacts

Representative	Company	Telephone	E-mail
Melanie Isenberg	Holly Energy Partners	214-605-8303	Melanie.isenberg@hollyenergy.com
Bob Allen	SESI	575-397-0510	ballen@sesi-nm.com

## II. Background

Safety and Environmental Solutions, Inc., hereinafter referred to as (SESI) was engaged by Holly Energy Partners to assess a spill area on the Barnsdall Pipeline, concerning a twenty six (26) bbl. oil release. This site is situated in Eddy County, Section 26, Township 17S, and Range 29E.

According to the C-141: approximately twenty six (26) barrels of oil was released from a pipeline leak coming from the line running from the RJU South Tank battery into the Barnsdall Line. All soils were removed to access pipeline and were placed on plastic. Soil sampling will be conducted and a remediation plan determined upon receipt of sampling results.

## III. Surface and Ground Water

There is no record of groundwater in the immediate vicinity of the site location. Further research of the New Mexico Office of the State Engineer records indicates the average depth to groundwater for the area to be 76 bgs.

## IV. Characterization

The target cleanup levels are determined using the *Guidelines for Remediation of Leaks, Spills and Releases* published by the NMOCD (August 13, 1993). Based on the ranking criteria presented below, the applicable Recommended Remediation Action Levels (RRAL) are 10 parts per million (ppm) Benzene, 50 ppm combined benzene, toluene, ethyl benzene, and total xylenes (BTEX), and 5,000 ppm Total Petroleum Hydrocarbons (TPH). Characterization of vertical extent of chloride concentration to a level of 250 mg/kg (PPM) is also required.

Depth to Ground Water:			
(Vertical distance from contaminants to seasonal high water elevation of groundwater)	Less than 50 feet	20 points	
	50 feet to 99 feet	10 points	<b>X</b>
	>100 feet	0 points	
Wellhead Protection Area:			
(Less than 200 feet from a private domestic water source; or less than 1000 feet from all other water sources)	Yes	20 points	
	No	0 points	<b>X</b>
Distance to Surface Water:			
(Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	Less than 200 feet	20 points	
	200 feet to 1000 feet	10 points	
	>1000 feet	0 points	<b>X</b>
RANKING SCORE (TOTAL POINTS)			<b>10</b>

## **V. Work Performed**

On November 21, 2016 Safety and Environmental Solutions, Inc. (SESI) personnel, at the request of Holly Energy Partners, was on site to assess a crude oil spill incident at the Barnsdall Pipeline, Eddy County, New Mexico location. The observed spill area contained an existing excavation and spoils placed on plastic. The site was photographed and mapped.

On November 29, 2016, Jerry SESI is onsite with Bob Allen SESI at the Holly Barnsdall Pipeline leak to obtain soil samples from the bottom of the excavation and composite sample of the stock pile spoils. The bottom samples were obtained and a six point composite sample of the spoils pile was obtained and properly preserved. The sample points were mapped using the Juno 3B. The samples were properly packaged, preserved and transported to Cardinal Laboratories of Hobbs, NM by chain of custody, and analyzed for TPH(total petroleum hydrocarbons)(Method 8015M), and BTEX. The results are presented in the table below:

<b>Soil Sample Results: Cardinal Laboratories 12-6-16</b>							
SAMPLE ID	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	TPH GRO	TPH DRO
SP-1 Bottom	0.515	5.87	13.0	19.2	38.7	102	2530
SP-2 Bottom	62.4	385	295	379	1120	8010	12800
SP-3 Bottom	0.087	0.174	0.057	<0.150	0.318	<10.0	<10.0
C-1 Spoils	33.5	281	253	343	911		

On December 6, Jerry SESI is onsite at the Holly Barnsdall Pipeline leak with MSI Inc. Backhoe and operator, one spotter and Holly Mike McPherson, Jim Herring and Jordan Raza to begin delineation of the leak site. Excavation began two feet down from the South end of the excavation and worked North on the west side wall, and excavated to the area of previous sample point two. Excavation to two feet was performed so that the backhoe could dig deeper, if needed, to find vertical. Excavation to eight feet deep took place and vertical was met. A soil sample was taken at eight feet and field tested, with a result of 62 ppm for TPH. Field test results were under the 100 ppm for TPH. A small area was cleaned off on the south end of the site where the spoils were placed on a liner. The samples were properly packaged, preserved and transported to Cardinal Laboratories of Hobbs, NM by chain of custody, and analyzed for TPH(total petroleum hydrocarbons)(Method 8015M), and BTEX. The results are presented in the table below:

<b>Soil Sample Results: Cardinal Laboratories 12-6-16</b>							
SAMPLE ID	Benzene	Toluene	Ethyl benzene	Total Xylenes	Total BTEX	TPH GRO	TPH DRO
SP-4 8' Bottom	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	10.4

**VI. Action Plan**

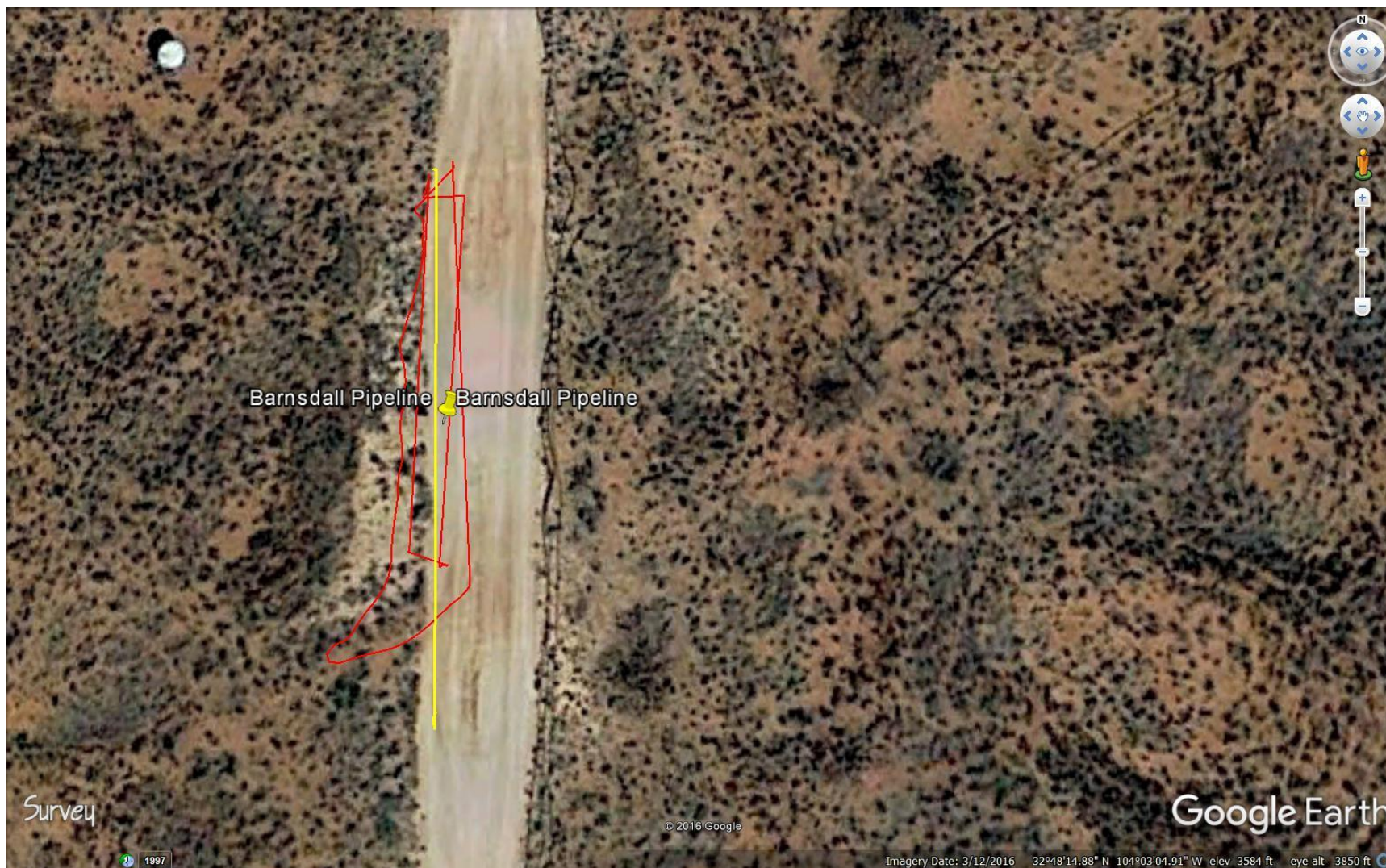
The impacted areas will be excavated to a depth where the TPH concentration is less than 100 ppm. However, Holly Energy Partners safety policies do not allow mechanical excavation within 4ft on either side of the pipeline, so that the integrity of the pipeline is not impacted. All excavated soil will be transported to an approved NMOCD facility for disposal. The excavated area is to be backfilled with similar material to that removed and returned to grade. Upon completion of all approved remediation activity: all necessary closure documentation related to this incident will be submitted to Holly Energy Partners and the appropriate regulatory agencies.

**VII. Figures & Appendices**

Figure 1 - Vicinity Map  
Figure 2 - Site Plan  
Appendix A – C-141  
Appendix B – Groundwater  
Appendix C – Analytical Results  
Appendix D – Photo Documentation

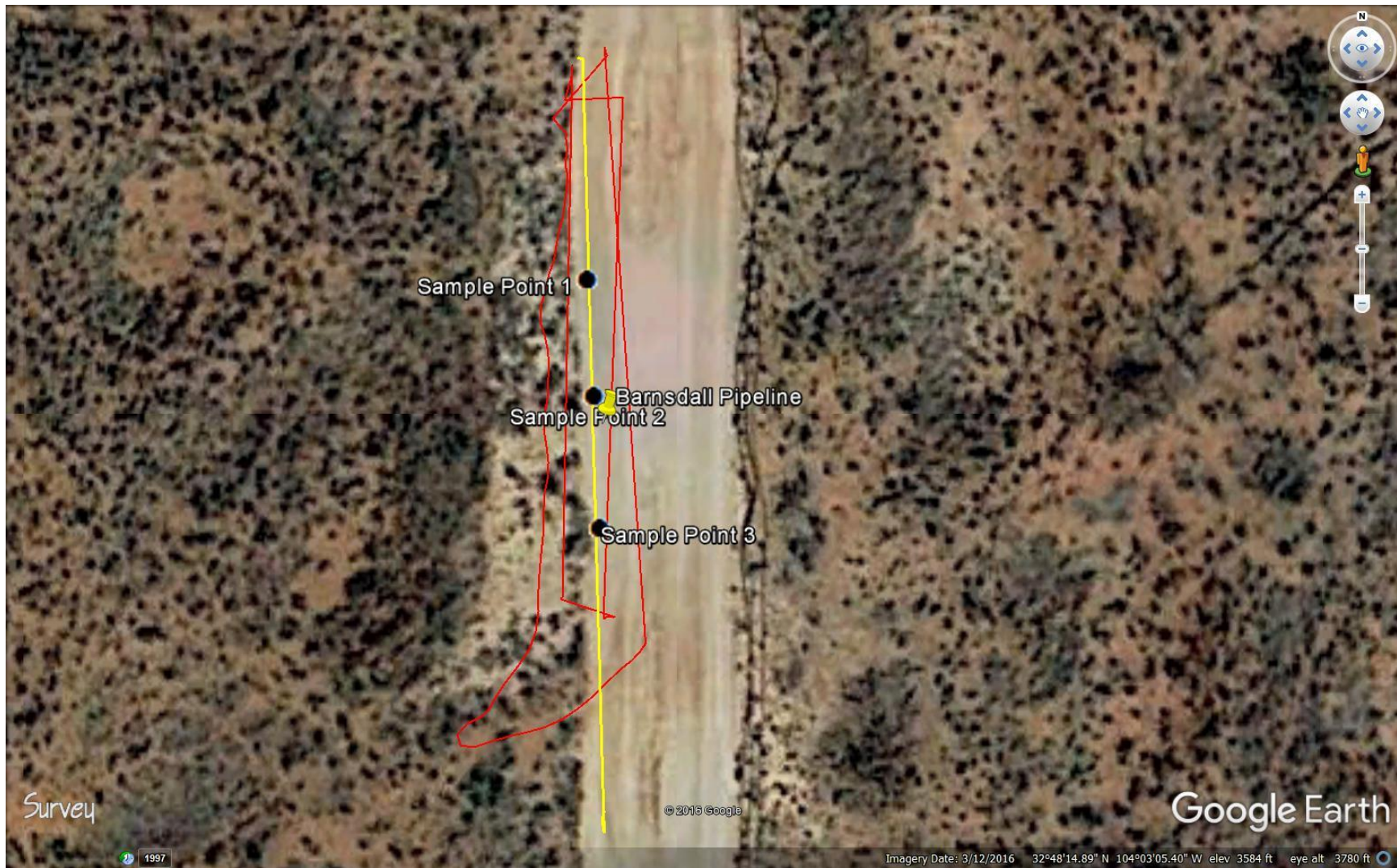
# **Figure 1**

## **Vicinity Map**



**Figure 2**  
**Site Plan**





Sample Point 1

Barnsdall Pipeline  
Sample Point 2

Sample Point 3

Survey

© 2015 Google

Google Earth

1997

Imagery Date: 3/12/2016 32°48'14.89" N 104°03'05.40" W elev 3584 ft eye alt 3780 ft

# **Appendix A**

## **C-141**

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

State of New Mexico  
Energy Minerals and Natural Resources

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

### OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	HOLLY ENERGY PARTNERS	Contact	MELANIE ISENBERG
Address	1602 W MAIN ST	Telephone No.	214-605-8303
Facility Name	BARNSDALL LINE	Facility Type	CRUDE OIL PIPELINE
Surface Owner	BLM	Mineral Owner	API No.

### LOCATION OF RELEASE

Unit Letter	Section 26	Township 17S	Range 29	Feet from the	North/South Line	Feet from the	East/West Line	County EDDY
-------------	---------------	-----------------	-------------	---------------	------------------	---------------	----------------	----------------

Latitude 32.8042 Longitude -104.515

### NATURE OF RELEASE

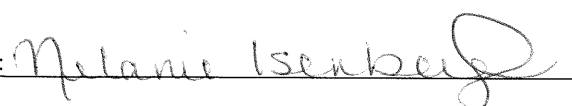
Type of Release	Crude Oil	Volume of Release	26 Barrels	Volume Recovered	0
Source of Release	UNDERGROUND PIPELINE	Date and Hour of Occurrence	UNKNOWN	Date and Hour of Discovery	11/17/2016 1420
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	NMOCD AND NMED		
By Whom?	MELANIE ISENBERG	Date and Hour	5/4/2016	NOTIFICATIONS COMPLETED TO BOTH AGENCIES BY 1520	
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.\*  
N/A

Describe Cause of Problem and Remedial Action Taken.\* A PIPELINE LEAK COMING FROM THE LINE RUNNING FROM THE RJU SOUTH TANK BATTERY INTO THE BARNSDALL LINE. LINE WAS SHUT DOWN AND CREWS WERE DISPATCHED. LEAK WAS FOUND AND REPAIRS ON LINE WERE COMPLETED BY 11/18/16. ALL SOILS REMOVED TO ACCESS PIPELINE WERE REMOVED AND PLACED ON PLASTIC.

Describe Area Affected and Cleanup Action Taken.\* THE AREA AFFECTED IS LOCATED OFF OF AN ACCESS DIRT ROAD THAT IS APPROXIMATELY A MILE SE OF BARNSDALL STATION. ESTIMATED AMOUNT OF SPILL IS 26 BARRELS. LEAK WAS LOCATED AND REPAIR TO LINE WAS MADE. CONTAMINATED SOIL THAT WAS REMOVED FROM AREA WAS PLACED ON PLASTIC TILL IT CAN EITHER BE REMEDIATED OR DISPOSED OF. SITE IS CURRENTLY BEING DELINEATED. WORK PLAN WILL BE SUBMITTED ONCE SITE IS DELINEATED. ATTACHED IS 2 MAPS DEPICTING LEAK LOCATION.

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: MELANIE ISENBERG	Approved by Environmental Specialist:		
Title: ENVIRONMENTAL ASSOCIATE	Approval Date:	Expiration Date:	
E-mail Address: MELANIE.ISENBERG@HOLLYENERGY.COM	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 11/22/2016 Phone: 214-605-8303			

\* Attach Additional Sheets If Necessary

# **Appendix B**

## **Groundwater**



# New Mexico Office of the State Engineer

## Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced,  
O=orphaned,  
C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
<a href="#">RA 11807 POD1</a>			ED	1	2	3	22	17S	29E	587360	3631585	131	76	55

Average Depth to Water: **76 feet**

Minimum Depth: **76 feet**

Maximum Depth: **76 feet**

Record Count: 1

PLSS Search:

Township: 17S

Range: 29E

# **Appendix C**

## **Analytical Results**

December 05, 2016

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: HEP-16-021

Enclosed are the results of analyses for samples received by the laboratory on 11/30/16 8:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. 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:**

 Safety & Environmental Solutions  
 Bob Allen  
 703 East Clinton  
 Hobbs NM, 88240  
 Fax To: (575) 393-4388

 Received: 11/30/2016  
 Reported: 12/05/2016  
 Project Name: HEP-16-021  
 Project Number: HEP-16-021  
 Project Location: NONE GIVEN

 Sampling Date: 11/29/2016  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP-1 BOTTOM (H602660-01)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>0.515</b>	0.200	12/01/2016	ND	2.10	105	2.00	1.81	
<b>Toluene*</b>	<b>5.87</b>	0.200	12/01/2016	ND	2.16	108	2.00	1.71	
<b>Ethylbenzene*</b>	<b>13.0</b>	0.200	12/01/2016	ND	2.12	106	2.00	1.69	
<b>Total Xylenes*</b>	<b>19.2</b>	0.600	12/01/2016	ND	6.35	106	6.00	1.68	
<b>Total BTEX</b>	<b>38.7</b>	1.20	12/01/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 121 % 73.6-140

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10</b>	<b>102</b>	50.0	11/30/2016	ND	191	95.3	200	2.60	
<b>DRO &gt;C10-C28</b>	<b>2530</b>	50.0	11/30/2016	ND	210	105	200	4.38	

Surrogate: 1-Chlorooctane 65.3 % 35-147

Surrogate: 1-Chlorooctadecane 97.8 % 28-171

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

Safety & Environmental Solutions  
Bob Allen  
703 East Clinton  
Hobbs NM, 88240  
Fax To: (575) 393-4388

Received: 11/30/2016  
Reported: 12/05/2016  
Project Name: HEP-16-021  
Project Number: HEP-16-021  
Project Location: NONE GIVEN

Sampling Date: 11/29/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: SP-2 BOTTOM (H602660-02)**

BTEX 8021B		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>62.4</b>	2.00	12/01/2016	ND	2.10	105	2.00	1.81	
<b>Toluene*</b>	<b>385</b>	2.00	12/01/2016	ND	2.16	108	2.00	1.71	
<b>Ethylbenzene*</b>	<b>295</b>	2.00	12/01/2016	ND	2.12	106	2.00	1.69	
<b>Total Xylenes*</b>	<b>379</b>	6.00	12/01/2016	ND	6.35	106	6.00	1.68	
<b>Total BTEX</b>	<b>1120</b>	12.0	12/01/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 128 % 73.6-140

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	8010	50.0	11/30/2016	ND	191	95.3	200	2.60	
DRO >C10-C28	12800	50.0	11/30/2016	ND	210	105	200	4.38	

Surrogate: 1-Chlorooctane 241 % 35-147

Surrogate: 1-Chlorooctadecane 314 % 28-171

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 Safety & Environmental Solutions  
 Bob Allen  
 703 East Clinton  
 Hobbs NM, 88240  
 Fax To: (575) 393-4388

 Received: 11/30/2016  
 Reported: 12/05/2016  
 Project Name: HEP-16-021  
 Project Number: HEP-16-021  
 Project Location: NONE GIVEN

 Sampling Date: 11/29/2016  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP-3 BOTTOM (H602660-03)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.087	0.050	12/01/2016	ND	2.00	100	2.00	0.929	
Toluene*	0.174	0.050	12/01/2016	ND	2.05	102	2.00	1.33	
Ethylbenzene*	0.057	0.050	12/01/2016	ND	1.97	98.5	2.00	1.46	
Total Xylenes*	<0.150	0.150	12/01/2016	ND	5.96	99.3	6.00	1.35	
Total BTEX	0.318	0.300	12/01/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 112 % 73.6-140

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	11/30/2016	ND	191	95.3	200	2.60	
DRO >C10-C28	<10.0	10.0	11/30/2016	ND	210	105	200	4.38	

Surrogate: 1-Chlorooctane 104 % 35-147

Surrogate: 1-Chlorooctadecane 102 % 28-171

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

### Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside if QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

BILL TO

ANALYSIS REQUEST

P.O. #:

Company: Same

Attn:

Address:

City:

State:

Phone #:

Fax #:

Company Name: Safety and Environmental Solutions

Project Manager: Bob Allen

Address: 703 East Clinton, PO Box 1613

City: Hobbs State: NM Zip: 88240

Phone #: 575 397-0510 Fax #: 575 393-4388

Project #: HEP-16-021 Project Owner:

Project Name:

Project Location:

Sampler Name:

FOR LAB USE ONLY

Lab I.D. Sample I.D.

#002660

SP-1 Bottom

SP-2 Bottom

SP-3 Bottom

(G)RAB OR (C)OMP.

# CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER:

ACID/BASE:

ICE / COOL

OTHER:

DATE

TIME

TPH 8015  
BTEX

Relinquished By:

Date: 11/30/16

Received By:

CHECKED BY:

Phone Result:

Yes No

Add'l Phone #:

Add'l Fax #:

REMARKS:

Relinquished By:

Date:

Received By:

CHECKED BY:

Phone Result:

Yes No

Add'l Phone #:

Add'l Fax #:

REMARKS:

Delivered By: (Circle One)

Date:

Received By:

CHECKED BY:

Phone Result:

Yes No

Add'l Phone #:

Add'l Fax #:

REMARKS:

Sampler - UPS - Bus - Other:

Date:

Received By:

CHECKED BY:

Phone Result:

Yes No

Add'l Phone #:

Add'l Fax #:

REMARKS:



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

---

December 05, 2016

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: HEP-16-021

Enclosed are the results of analyses for samples received by the laboratory on 11/30/16 8:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

Safety & Environmental Solutions  
Bob Allen  
703 East Clinton  
Hobbs NM, 88240  
Fax To: (575) 393-4388

Received: 11/30/2016  
Reported: 12/05/2016  
Project Name: HEP-16-021  
Project Number: HEP-16-021  
Project Location: NONE GIVEN

Sampling Date: 11/29/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: C-1 SPOILS (H602661-01)****BTEX 8021B****mg/kg****Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>33.5</b>	5.00	12/02/2016	ND	2.00	100	2.00	0.929	
<b>Toluene*</b>	<b>281</b>	5.00	12/02/2016	ND	2.05	102	2.00	1.33	
<b>Ethylbenzene*</b>	<b>253</b>	5.00	12/02/2016	ND	1.97	98.5	2.00	1.46	
<b>Total Xylenes*</b>	<b>343</b>	15.0	12/02/2016	ND	5.96	99.3	6.00	1.35	
<b>Total BTEX</b>	<b>911</b>	30.0	12/02/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 122 % 73.6-140

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

**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

Company Name: Safety and Environmental Solutions

Project Manager: Bob Allen

Address: 703 East Clinton, PO Box 1613

City: Hobbs State: NM Zip: 88240

Phone #: 575 397-0510 Fax #: 575 393-4388

Project #: 442P-15-021 Project Owner:

Project Name:

Project Location:

Sampler Name:

FOR LAB USE ONLY

Lab I.D. Sample I.D.

Hobbs 1

C-1 Spills

(G)RAB OR (C)OMP.

# CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE

TIME

11/29

0930

X

37C X

BILL TO

ANALYSIS REQUEST

P.O. #:

Company: Same

Attn:

Address:

City:

State:

Zip:

Phone #:

Fax #:

MATRIX

PRESERV

SAMPLING

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 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 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: 11/30/16

Received By:

Phone Result:

Yes

No

Add'l Phone #:

Fax Result:

Yes

No

Add'l Fax #:

REMARKS:

Also for possible TELP

Relinquished By:

Date:

Time:

Received By:

Sample Condition

Cool

Intact

Yes

No

Checked By:

Initials

5.10

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December 12, 2016

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: HEP-16-021

Enclosed are the results of analyses for samples received by the laboratory on 12/08/16 8:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. 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:**

Safety & Environmental Solutions  
 Bob Allen  
 703 East Clinton  
 Hobbs NM, 88240  
 Fax To: (575) 393-4388

Received: 12/08/2016  
 Reported: 12/12/2016  
 Project Name: HEP-16-021  
 Project Number: HEP-16-021  
 Project Location: NONE GIVEN

Sampling Date: 12/06/2016  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP-4 8' BOTTOM (H602743-01)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/08/2016	ND	2.25	113	2.00	0.150	
Toluene*	<0.050	0.050	12/08/2016	ND	2.32	116	2.00	0.135	
Ethylbenzene*	<0.050	0.050	12/08/2016	ND	2.25	112	2.00	0.158	
Total Xylenes*	<0.150	0.150	12/08/2016	ND	6.81	114	6.00	0.229	
Total BTEX	<0.300	0.300	12/08/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 118 % 73.6-140

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	12/09/2016	ND	190	95.0	200	1.17		
<b>DRO &gt;C10-C28</b>	<b>10.4</b>	10.0	12/09/2016	ND	204	102	200	0.506		

Surrogate: 1-Chlorooctane 76.2 % 35-147

Surrogate: 1-Chlorooctadecane 75.7 % 28-171

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
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---

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



# CARDINAL Laboratories

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

### BILL TO

### ANALYSIS REQUEST

Company Name: Safety and Environmental Solutions

Project Manager: Bob Allen

Address: 703 East Clinton, PO Box 1613

City: Hobbs State: NM Zip: 88240

Phone #: 575 397-0510 Fax #: 575 393-4388

Project #: HES-16-021 Project Owner:

Project Name:

Project Location:

Sample Name:

FOR LAB USE ONLY

Lab I.D. Sample I.D.

H602743

SP-4 GP Return

(G)RAB OR (C)OMP.

# CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE TIME

12/06 1230

TPH 8015  
BTEX

Relinquished By:

Date: 12/06/16  
Time: 0800

Received By:

Bob Martin

Relinquished By:

Bob Martin

Date: 12/06/16  
Time: 2:20

Received By:

Bob Martin

Delivered By: (Circle One)

Sampler - UPS - Bus - Other: #75 2.40c

Sample Condition

Cool Intact  
☒ Yes ☐ No

CHECKED BY:

(Initials)

REMARKS:

Phone Result: ☐ Yes ☐ No

Add'l Phone #:

Add'l Fax #:

## **Appendix D**

### **Site Photos**



Holly Energy Partners  
Barnsdall Pipeline-11/21/2016



Excavation Looking North



Spill Area and Excavation Looking South



Spill Area Looking East



Spill Area Looking North



Spill Area Looking West