#### **APPROVED**

By OCD; Dr. Oberding at 8:25 am, Mar 30, 2015

# OXY USA, Inc. North Hobbs Unit 28 Delineation Report and Work Plan

Section 32, T18S, R38E Lea County, New Mexico

March 9, 2015



1RP-3429

Prepared for:

OXY USA, Inc. 1017 W Stanolind Road Hobbs, New Mexico 88240

By:

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

#### **TABLE OF CONTENTS**

I.	COMPANY CONTACTS	
II.	BACKGROUND	1
ш	SURFACE AND GROUND WATER	1
••••	OON AGE AND GROOM WATER	
IV	CHARACTERIZATION	1
		I
v	WORK PERFORMED	1
٧.	WORKE EIGH ORMED	1
VI	ACTION PLAN	3
٧1.	ACTION I LAN	
VII	FIGURES & APPENDICES	3
F	igure 1 – Vicinity Map	5
F	igure 2 – Site Plan	7
Α	ppendix A – Analytical Results	9
Α	ppendix B – C-141	45
Α	ppendix C – Site Photographs	20

#### I. Company Contacts

Representative	Company	Telephone	E-mail
Raymond Aguilar	OXY USA, INC.	575-390-6312	Raymond_aguilar@oxy.com
Bob Allen	SESI	575-397-0510	ballen@sesi-nm.com

#### II. Background

Safety and Environmental Solutions, Inc. (SESI) was engaged by OXY USA, INC to perform site assessment of a release area at the South Hobbs Unit 28-422 located in Section 32 of Township 18 South, Range 38 East, Lea County, New Mexico.

According to the C-141 the cause of release was external corrosion.

#### III. Surface and Ground Water

The nearest groundwater of record is approximately 1.0 mile from the site. The New Mexico Office of State Engineer record is in Section 32 Range 38 East and Township 18 South. The reported depth was 60 feet below ground surface (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, ethylbenzene, and total xylenes (BTEX), and 1000 ppm Total Petroleum Hydrocarbons (TPH).

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

#### V. Work Performed

On February 3, 2015, SESI was onsite to determine vertical extent of contamination. Bore holes were advanced to various depths to determine vertical extent of contamination. All samples were properly packaged, preserved and transported to the Laboratory, Hobbs New Mexico and analyzed for Benzene, Toluene, Ethylbenzene, Xylenes, Total BTEX and Chloride (Cl<sup>-</sup>) (Method SM4500Cl-B). The results of the analysis are presented in the table below:

Sample Date 02/03/2015	Sample ID	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX
Depth	Method					
BH-1 at 2'	BTEX 8021B	< 0.050	< 0.050	< 0.050	<0.150	< 0.300
BH-2 at 1.5-1.8'	BTEX 8021B	< 0.050	< 0.050	< 0.050	<0.150	< 0.300
BH-3 at 1.9-2.2'	BTEX 8021B	< 0.050	< 0.050	< 0.050	<0.150	< 0.300
BH-4 at 0.5'	BTEX 8021B	< 0.050	< 0.050	< 0.050	<0.150	< 0.300
BH-5 at 2-2.5'	BTEX 8021B	< 0.050	< 0.050	< 0.050	<0.150	< 0.300
BH-5 at 0.9-1.2'	BTEX 8021B	< 0.050	< 0.050	< 0.050	<0.150	< 0.300
BH-7 at 0.4-0.7'	BTEX 8021B	< 0.050	< 0.050	< 0.050	<0.150	< 0.300
BH-8 at 0.3-0.6'	BTEX 8021B	< 0.050	< 0.050	< 0.050	< 0.150	< 0.300
BH-9 at 0.3-0.6'	BTEX 8021B	< 0.050	< 0.050	< 0.050	< 0.150	< 0.300
BH-9 at 3.2-3.5'	BTEX 8021B	< 0.050	< 0.050	< 0.050	< 0.150	< 0.300
BH-10 at 0.7-1'	BTEX 8021B	< 0.050	< 0.050	< 0.050	<0.150	< 0.300
BH-10 at 3.4-3.7'	BTEX 8021B	< 0.050	< 0.050	< 0.050	<0.150	< 0.300
BH-11 at 1.7-2'	BTEX 8021B	< 0.050	< 0.050	< 0.050	<0.150	< 0.300
BH-11 at 3-3.3'	BTEX 8021B	< 0.050	< 0.050	< 0.050	<0.150	< 0.300
BH-12 at 0.8-1.2'	BTEX 8021B	< 0.050	< 0.050	< 0.050	<0.150	< 0.300
BH-12 at 2.8-3.1'	BTEX 8021B	< 0.050	<0.050	<0.050	<0.150	<0.300

Sample Date 02/03/2015	Sample ID	Chloride Sample ID (CI)		GRO (C <sub>6</sub> -C <sub>10</sub> ) (mg/kg)	DRO (>C <sub>10</sub> -C <sub>28</sub> ) (mg/kg)
Depth	Method		Method		
BH-1 at 2'	SM4500CI-B	<16.0	TPH 8015M	<10.0	<10.0
BH-1 at 3'	SM4500CI-B	<16.0	TPH 8015M	<10.0	<10.0
BH-2 at 1.5-1.8'	SM4500CI-B	<16.0	TPH 8015M	<10.0	<10.0
BH-2 at 2.6-2.8'	SM4500CI-B	<16.0	TPH 8015M	<10.0	<10.0
BH-3 at 1.9-2.2'	SM4500CI-B	<16.0	TPH 8015M	<10.0	<10.0
BH-3 at 2.6-3.0'	SM4500CI-B	32	TPH 8015M	*	*
BH-4 at 0.5'	SM4500CI-B	640	TPH 8015M	<10.0	<10.0
BH-4 at 1.6-1.9'	SM4500CI-B	64.0	TPH 8015M	*	*
BH-5 at 2-2.5'	SM4500CI-B	48.0	TPH 8015M	<10.0	<10.0
BH-5 at 0.9-1.2'	SM4500CI-B	272	TPH 8015M	<10.0	<10.0
BH-6 at 0.7-1.1'	SM4500CI-B	784	TPH 8015M	*	*
BH-7 at 0.4-0.7'	SM4500CI-B	1020	TPH 8015M	<10.0	<10.0
BH-7 at 1.0-1.3'	SM4500CI-B	512	TPH 8015M	*	*
BH-8 at 0.3-0.6'	SM4500CI-B	512	TPH 8015M	<10.0	<10.0
BH-8 at 1.2-1.4'	SM4500CI-B	400	TPH 8015M	*	*
BH-9 at 0.3-0.6'	SM4500CI-B	64.0	TPH 8015M	<10.0	<10.0
BH-9 at 3.2-3.5'	SM4500CI-B	720	TPH 8015M	<10.0	<10.0
BH-10 at 0.7-1'	SM4500CI-B	880	TPH 8015M	<10.0	<10.0
BH-10 at 3.4-3.7'	SM4500CI-B	864	TPH 8015M	<10.0	<10.0
BH-11 at 1.7-2'	SM4500CI-B	<16.0	TPH 8015M	<10.0	<10.0
BH-11 at 3-3.3'	SM4500CI-B	<16.0	TPH 8015M	<10.0	<10.0
BH-12 at 0.8-1.2'	SM4500CI-B	160	TPH 8015M	<10.0	<10.0
BH-12 at 2.8-3.1'	SM4500CI-B	<16.0	TPH 8015M	<10.0	<10.0

<sup>\*</sup>indicates that they were not analyzed

Sample Date 02/19/2015	Sample ID	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX
Depth	Method					
BH-9 at 5.5-5.7'	BTEX 8021B	< 0.050	< 0.050	< 0.050	<0.150	< 0.300
BH-10 at 5.6-5.8'	BTEX 8021B	< 0.050	< 0.050	< 0.050	<0.150	< 0.300

Sample Date 02/19/2015	Sample ID	Chloride (CI)	Sample ID	GRO (C <sub>6</sub> -C₁₀) (mg/kg)	DRO (>C <sub>10</sub> -C <sub>28</sub> ) (mg/kg)
Depth	Method		Method		
BH-9 at 5.5-5.7'	SM4500CI-B	160	TPH 8015M	<10.0	<10.0
BH-10 at 5.6-5.8'	SM4500CI-B	800	TPH 8015M	<10.0	<10.0

Sample Date 02/16/2015	Sample ID	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX
Location	Method					
South Wall	BTEX 8021B	< 0.050	< 0.050	< 0.050	<0.150	< 0.300
West Wall	BTEX 8021B	< 0.050	< 0.050	< 0.050	<0.150	< 0.300
East Wall	BTEX 8021B	< 0.050	< 0.050	< 0.050	<0.150	< 0.300
Bottom	BTEX 8021B	< 0.050	< 0.050	< 0.050	<0.150	< 0.300
North Wall	BTEX 8021B	< 0.050	< 0.050	< 0.050	<0.150	< 0.300

Sample Date 02/16/2015	Sample ID	Chloride (CI)	Sample ID	GRO (C <sub>6</sub> -C₁₀) (mg/kg)	DRO (>C <sub>10</sub> -C <sub>28</sub> ) (mg/kg)
Depth	Method		Method		
South Wall	SM4500CI-B	1580	TPH 8015M	<50.0	<50.0
West Wall	SM4500CI-B	2280	TPH 8015M	<50.0	<50.0
East Wall	SM4500CI-B	816	TPH 8015M	<10.0	<10.0
Bottom	SM4500CI-B	288	TPH 8015M	<10.0	<10.0
North Wall	SM4500CI-B	592	TPH 8015M	<10.0	<10.0

See photo # 22

#### VI. Action Plan

Due to the results listed above the following action plan is proposed:

Excavate and remove all chloride contaminated soil to 500 ppm and transport to an NMOCD approved facility for disposal. The excavated area will be backfilled with native soil and returned to natural grade. Final closure documentation will be submitted at completion.

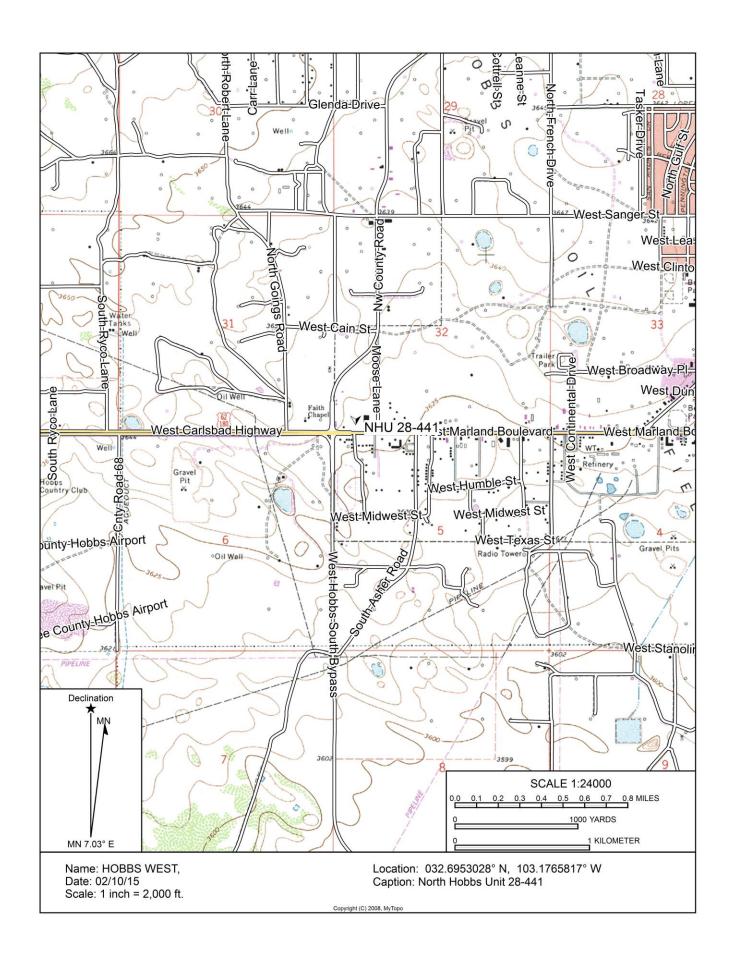
#### VII. Figures & Appendices

Figure 1 – Vicinity Map Figure 2 – Site Plan

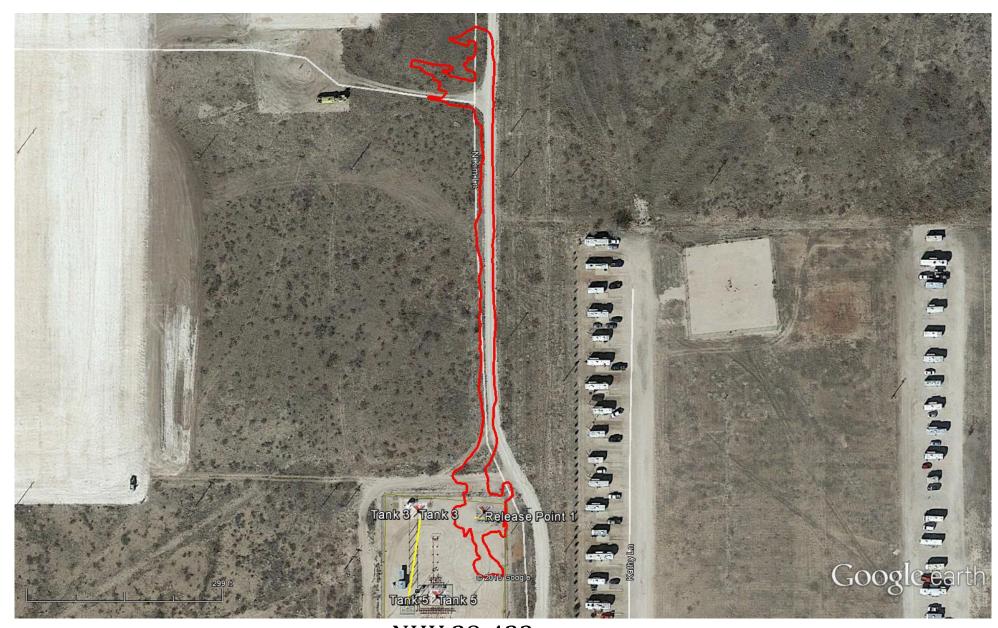
Appendix A – Analytical Results

Appendix B - C-141

## Figure 1 Vicinity Map



### Figure 2 Site Plan



NHU 28-422

## Appendix A Analytical Results



February 12, 2015

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: NHU SAT 28-441

Enclosed are the results of analyses for samples received by the laboratory on 02/06/15 16:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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 <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accredited analytes are supplied.

Cardinal Laboratories is accreditated 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.

Celey D. Keine

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

Page 1 of 21



#### Analytical Results For:

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

 Received:
 02/06/2015

 Reported:
 02/12/2015

 Project Name:
 NHU SAT 28-441

 Project Number:
 OXY-14-034

 Project Location:
 HOBBS, NM

 Sampling Date:
 02/03/2015

 Sampling Type:
 Soil

 Sampling Condition:
 Cool & Intact

 Sample Received By:
 Jodi Henson

#### Sample ID: BH-1 2' (H500369-01)

BTEX 8021B	mg/	mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/09/2015	ND	1.80	90.1	2.00	4.96	
Toluene*	< 0.050	0.050	02/09/2015	ND	1.74	87.0	2.00	5.19	
Ethylbenzene*	< 0.050	0.050	02/09/2015	ND	1.68	84.1	2.00	5.64	
Total Xylenes*	<0.150	0.150	02/09/2015	ND	5.05	84.2	6.00	5.44	
Total BTEX	< 0.300	0.300	02/09/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID	102	% 61-154							
Chloride, SM4500CI-B	mg/kg		Analyze	Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/10/2015	ND	400	100	400	3.92	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/10/2015	ND	188	94.1	200	0.958	
DRO >C10-C28	<10.0	10.0	02/10/2015	ND	200	99.9	200	0.169	

 Surrogate: 1-Chlorooctane
 109 %
 47.2-157

 Surrogate: 1-Chlorooctadecane
 95.1 %
 52.1-176

#### Sample ID: BH-1 3' (H500369-02)

Chloride, SM4500Cl-B mg/kg		Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/10/2015	ND	400	100	400	3.92	

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager

Page 2 of 21



#### Analytical Results For:

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

 Received:
 02/06/2015

 Reported:
 02/12/2015

 Project Name:
 NHU SAT 28-441

 Project Number:
 OXY-14-034

 Project Location:
 HOBBS, NM

 Sampling Date:
 02/03/2015

 Sampling Type:
 Soil

 Sampling Condition:
 Cool & Intact

 Sample Received By:
 Jodi Henson

#### Sample ID: BH-2 1.5 - 1.8' (H500369-03)

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	02/09/2015	ND	1.80	90.1	2.00	4.96	
Toluene*	< 0.050	0.050	02/09/2015	ND	1.74	87.0	2.00	5.19	
Ethylbenzene*	<0.050	0.050	02/09/2015	ND	1.68	84.1	2.00	5.64	
Total Xylenes*	<0.150	0.150	02/09/2015	ND	5.05	84.2	6.00	5.44	
Total BTEX	<0.300	0.300	02/09/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID	102	% 61-154							
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/10/2015	ND	400	100	400	3.92	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/10/2015	ND	188	94.1	200	0.958	
DRO >C10-C28	<10.0	10.0	02/10/2015	ND	200	99.9	200	0.169	

 Surrogate: 1-Chiorooctane
 101 %
 47.2-157

 Surrogate: 1-Chiorooctadecane
 87.1 %
 52.1-176

#### Sample ID: BH-2 2.6 - 2.8' (H500369-04)

Chloride, SM4500CI-B	-B mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/10/2015	ND	400	100	400	3.92	

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Page 3 of 21



#### Analytical Results For:

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

 Received:
 02/06/2015

 Reported:
 02/12/2015

 Project Name:
 NHU SAT 28-441

 Project Number:
 OXY-14-034

 Project Location:
 HOBBS, NM

Sampling Date: 02/03/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

#### Sample ID: BH-3 1.9 - 2.2' (H500369-05)

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	02/09/2015	ND	1.80	90.1	2.00	4.96	
Toluene*	< 0.050	0.050	02/09/2015	ND	1.74	87.0	2.00	5.19	
Ethylbenzene*	<0.050	0.050	02/09/2015	ND	1.68	84.1	2.00	5.64	
Total Xylenes*	<0.150	0.150	02/09/2015	ND	5.05	84.2	6.00	5.44	
Total BTEX	<0.300	0.300	02/09/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID	102	% 61-154							
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/10/2015	ND	400	100	400	3.92	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/12/2015	ND	188	94.1	200	0.958	
DRO >C10-C28	<10.0	10.0	02/12/2015	ND	200	99.9	200	0.169	

 Surrogate: 1-Chiorooctane
 101 %
 47.2-157

 Surrogate: 1-Chiorooctadecane
 85.4 %
 52.1-176

#### Sample ID: BH-3 2.6 - 3.0' (H500369-06)

Chloride, SM4500CI-B	mg/kg		Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	02/10/2015	ND	400	100	400	3.92	

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Page 4 of 21



#### Analytical Results For:

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

 Received:
 02/06/2015
 Sampling Date:

 Reported:
 02/12/2015
 Sampling Type:

 Project Name:
 NHU SAT 28-441
 Sampling Condition:

 Project Number:
 OXY-14-034
 Sample Received

 Project Location:
 HOBBS, NM

Sampling Date: 02/03/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

#### Sample ID: BH-4 0.5' (H500369-07)

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	02/09/2015	ND	1.80	90.1	2.00	4.96	
Toluene*	<0.050	0.050	02/09/2015	ND	1.74	87.0	2.00	5.19	
Ethylbenzene*	< 0.050	0.050	02/09/2015	ND	1.68	84.1	2.00	5.64	
Total Xylenes*	<0.150	0.150	02/09/2015	ND	5.05	84.2	6.00	5.44	
Total BTEX	<0.300	0.300	02/09/2015	ND					

101	% 61-154							
mg,	/kg	Analyze	d By: AP					
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
640	16.0	02/10/2015	ND	400	100	400	3.92	
mg,	/kg	Analyze	d By: MS					
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<10.0	10.0	02/10/2015	ND	188	94.1	200	0.958	
<10.0	10.0	02/10/2015	ND	200	99.9	200	0.169	
	Result 640 mg. Result <10.0	mg/kg           Result         Reporting Limit           640         16.0           mg/kg           Result         Reporting Limit           <10.0         10.0	mg/kg         Analyzed           Result         Reporting Limit         Analyzed           640         16.0         02/10/2015           mg/kg         Analyzed           Result         Reporting Limit         Analyzed           <10.0	mg/kg         Analyzed By: AP           Result Reporting Limit 640         16.0 02/10/2015 ND           mg/kg         Analyzed By: MS           Result Reporting Limit Analyzed Method Blank < 10.0 10.0 02/10/2015 ND	mg/kg         Analyzed By: AP           Result         Reporting Limit         Analyzed         Method Blank         BS           640         16.0         02/10/2015         ND         400           mg/kg         Analyzed By: MS           Result         Reporting Limit         Analyzed         Method Blank         BS           <10.0	mg/kg         Analyzed By: AP           Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery           640         16.0         02/10/2015         ND         400         100           mg/kg         Analyzed By: MS           Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery           <10.0	mg/kg         Analyzed By: AP           Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery         True Value QC           640         16.0         02/10/2015         ND         400         100         400           mg/kg         Analyzed By: MS           Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery         True Value QC           <10.0	mg/kg         Analyzed By: AP           Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery         True Value QC         RPD           640         16.0         02/10/2015         ND         400         100         400         3.92           mg/kg         Analyzed By: MS           Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery         True Value QC         RPD           <10.0

 Surrogate: 1-Chiorooctane
 95.0 %
 47.2-157

 Surrogate: 1-Chiorooctadecane
 89.5 %
 52.1-176

#### Sample ID: BH-4 1.6 - 1.9' (H500369-08)

Chloride, SM4500CI-B	mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	02/10/2015	ND	400	100	400	3.92	

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Page 5 of 21



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

Received: 02/06/2015 Reported: 02/12/2015 Project Name: NHU SAT 28-441 OXY-14-034 Project Number: Project Location: HOBBS, NM

Sampling Date: 02/03/2015 Sampling Type: Sampling Condition: Soil Cool & Intact Sample Received By: Jodi Henson

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/09/2015	ND	1.80	90.1	2.00	4.96	
Toluene*	<0.050	0.050	02/09/2015	ND	1.74	87.0	2.00	5.19	
Ethylbenzene*	<0.050	0.050	02/09/2015	ND	1.68	84.1	2.00	5.64	
Total Xylenes*	<0.150	0.150	02/09/2015	ND	5.05	84.2	6.00	5.44	
Total BTEX	<0.300	0.300	02/09/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	101 5	61-154							
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	02/10/2015	ND	400	100	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/10/2015	ND	188	94.1	200	0.958	
DRO >C10-C28	<10.0	10.0	02/10/2015	ND	200	99.9	200	0.169	
Surrogate: 1-Chiorooctane	104 5	6 47.2-15	7						

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Celey D. Keene, Lab Director/Quality Manager

Page 6 of 21



#### Analytical Results For:

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

 Received:
 02/06/2015

 Reported:
 02/12/2015

 Project Name:
 NHU SAT 28-441

 Project Number:
 0XY-14-034

 Project Location:
 HOBBS, NM

 Sampling Date:
 02/03/2015

 Sampling Type:
 Soil

 Sampling Condition:
 Cool & Intact

 Sample Received By:
 Jodi Henson

#### Sample ID: BH-5 0.9 - 1.2' (H500369-10)

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	02/09/2015	ND	1.80	90.1	2.00	4.96	
Toluene*	<0.050	0.050	02/09/2015	ND	1.74	87.0	2.00	5.19	
Ethylbenzene*	<0.050	0.050	02/09/2015	ND	1.68	84.1	2.00	5.64	
Total Xylenes*	<0.150	0.150	02/09/2015	ND	5.05	84.2	6.00	5.44	
Total BTEX	<0.300	0.300	02/09/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID	101	% 61-154							
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	02/10/2015	ND	400	100	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/10/2015	ND	188	94.1	200	0.958	
DRO >C10-C28	<10.0	10.0	02/10/2015	ND	200	99.9	200	0.169	

 Surrogate: 1-Chiorooctane
 99.3 %
 47.2-157

 Surrogate: 1-Chiorooctadecane
 100 %
 52.1-176

#### Sample ID: BH-6 0.7 - 1.1' (H500369-11)

Chloride, SM4500Cl-B mg/kg		Analyze	d By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	784	16.0	02/10/2015	ND	400	100	400	3.92	

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Page 7 of 21





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

 Received:
 02/06/2015

 Reported:
 02/12/2015

 Project Name:
 NHU SAT 28-441

 Project Number:
 OXY-14-034

 Project Location:
 HOBBS, NM

Sampling Date: 02/03/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

#### Sample ID: BH-7 0.4 - 0.7' (H500369-12)

BTEX 8021B	EX 8021B mg/kg		Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/09/2015	ND	1.80	90.1	2.00	4.96	
Toluene*	<0.050	0.050	02/09/2015	ND	1.74	87.0	2.00	5.19	
Ethylbenzene*	<0.050	0.050	02/09/2015	ND	1.68	84.1	2.00	5.64	
Total Xylenes*	<0.150	0.150	02/09/2015	ND	5.05	84.2	6.00	5.44	
Total BTEX	<0.300	0.300	02/09/2015	ND					

101	61-154							
mg/	kg	Analyze	d By: AP					
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
1020	16.0	02/10/2015	ND	400	100	400	3.92	
mg/	'kg	Analyze	d By: MS					
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<10.0	10.0	02/10/2015	ND	188	94.1	200	0.958	
<10.0	10.0	02/10/2015	ND	200	99.9	200	0.169	
	mg/ Result 1020 mg/ Result <10.0	mg/kg   Result   Reporting Limit     1020   16.0     mg/kg     Result   Reporting Limit     <10.0   10.0	mg/kg         Analyzed           Result         Reporting Limit         Analyzed           1020         16.0         02/10/2015           mg/kg         Analyzed           Result         Reporting Limit         Analyzed           <10.0	mg/kg         Analyzed By: AP           Result         Reporting Limit         Analyzed         Method Blank           1020         16.0         02/10/2015         ND           mg/kg         Analyzed By: MS           Result         Reporting Limit         Analyzed         Method Blank           <10.0	mg/kg         Analyzed By: AP           Result         Reporting Limit         Analyzed         Method Blank         BS           1020         16.0         02/10/2015         ND         400           mg/kg         Analyzed By: MS           Result         Reporting Limit         Analyzed         Method Blank         BS           <10.0	mg/kg         Analyzed By: AP           Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery           1020         16.0         02/10/2015         ND         400         100           mg/kg         Analyzed By: MS           Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery           <10.0	mg/kg         Analyzed By: AP           Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery         True Value QC           1020         16.0         02/10/2015         ND         400         100         400           mg/kg         Analyzed By: MS           Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery         True Value QC           <10.0	mg/kg         Analyzed By: AP           Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery         True Value QC         RPD           1020         16.0         02/10/2015         ND         400         100         400         3.92           mg/kg         Analyzed By: MS           Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery         True Value QC         RPD           <10.0

 Surrogate: 1-Chiorooctane
 100 %
 47.2-157

 Surrogate: 1-Chiorooctadecane
 95.1 %
 52.1-176

#### Sample ID: BH-7 1.0 - 1.3' (H500369-13)

Chloride, SM4500CI-B	ide, SM4500Cl-B mg/kg		Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	512	16.0	02/10/2015	ND	400	100	400	3.92	

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Celey D. Keene, Lab Director/Quality Manager

Page 8 of 21



#### Analytical Results For:

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

 Received:
 02/06/2015

 Reported:
 02/12/2015

 Project Name:
 NHU SAT 28-441

 Project Number:
 OXY-14-034

 Project Location:
 HOBBS, NM

Sampling Date: Sampling Type: Sampling Condition: Sample Received By: 02/03/2015 Soil Cool & Intact Jodi Henson

Sample ID: BH-8 0.3 - 0.6' (H500369-14)

BTEX 8021B Analyzed By: ms mg/kg Result Reporting Limit Analyzed Method Blank BS % Recovery True Value OC RPD Oualifier Analyte Benzene<sup>3</sup> < 0.050 0.050 02/09/2015 ND 1.80 90.1 2.00 4.96 02/09/2015 Toluene\* < 0.050 0.050 ND 1.74 87.0 2.00 5.19 Ethylbenzene\* <0.050 0.050 02/09/2015 ND 1.68 84.1 2.00 5.64 Total Xylenes\* <0.150 0.150 02/09/2015 ND 5.05 84.2 6.00 5.44 Total BTEX <0.300 0.300 02/09/2015 ND

Surrogate: 4-Bromofluorobenzene (PID 102 % 61-154 Chloride, SM4500CI-B mg/kg Analyzed By: AP Reporting Limit Method Blank % Recovery True Value QC RPD Qualifier Result Analyzed Analyte Chloride 16.0 02/10/2015 512 ND 400 100 400 3.92 TPH 8015M mg/kg Analyzed By: MS Qualifier Reporting Limit Method Blank True Value QC RPD Analyte Result Analyzed BS % Recovery GRO C6-C10 <10.0 10.0 02/10/2015 ND 188 94.1 200 0.958 DRO >C10-C28 <10.0 10.0 02/10/2015 ND 200 99.9 200 0.169

 Surrogate: 1-Chlorooctane
 102 %
 47.2-157

 Surrogate: 1-Chlorooctadecane
 94.6 %
 52.1-176

#### Sample ID: BH-8 1.2 - 1.4' (H500369-15)

Chloride, SM4500Cl-B mg/kg Analyzed By: AP % Recovery Result Reporting Limit Analyzed Method Blank BS True Value QC RPD Qualifier Chloride 400 16.0 02/10/2015 ND 400 100 400 3.92

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Page 9 of 21



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

 Received:
 02/06/2015

 Reported:
 02/12/2015

 Project Name:
 NHU SAT 28-441

 Project Number:
 OXY-14-034

 Project Location:
 HOBBS, NM

 Sampling Date:
 02/03/2015

 Sampling Type:
 Soil

 Sampling Condition:
 Cool & Intact

 Sample Received By:
 Jodi Henson

#### Sample ID: BH-9 0.3 - 0.6' (H500369-16)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Benzene*	<0.050	0.050	02/09/2015	ND	1.80	90.1	2.00	4.96	
Toluene*	<0.050	0.050	02/09/2015	ND	1.74	87.0	2.00	5.19	
Ethylbenzene*	<0.050	0.050	02/09/2015	ND	1.68	84.1	2.00	5.64	
Total Xylenes*	<0.150	0.150	02/09/2015	ND	5.05	84.2	6.00	5.44	
Total BTEX	<0.300	0.300	02/09/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	103 9	6 61-154							
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	02/10/2015	ND	400	100	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
GRO C6-C10	<10.0	10.0	02/10/2015	ND	188	94.1	200	0.958	
DRO >C10-C28	<10.0	10.0	02/10/2015	ND	200	99.9	200	0.169	
Surrogate: 1-Chlorooctane	103 9	6 47.2-157	,						
Surrogate: 1-Chiorooctadecane	89.85	6 52.1-176							

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Celey D. Keene, Lab Director/Quality Manager

Page 10 of 21



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

02/06/2015 Received: Reported: 02/12/2015 Project Name: NHU SAT 28-441 Project Number: OXY-14-034 HOBBS, NM Project Location:

Sampling Date: 02/03/2015 Sampling Type: Soil Cool & Intact Sampling Condition: Sample Received By: Jodi Henson

Sample ID: BH-9 3.2 - 3.5' (H5	00369-1	7)							
BTEX 8021B	mg/	/kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/09/2015	ND	1.80	90.1	2.00	4.96	
Toluene*	<0.050	0.050	02/09/2015	ND	1.74	87.0	2.00	5.19	
Ethylbenzene*	<0.050	0.050	02/09/2015	ND	1.68	84.1	2.00	5.64	
Total Xylenes*	<0.150	0.150	02/09/2015	ND	5.05	84.2	6.00	5.44	
Total BTEX	<0.300	0.300	02/09/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	101 5	% 61-154							
Chloride, SM4500CI-B	mg/	/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	720	16.0	02/10/2015	ND	400	100	400	3.92	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/10/2015	ND	188	94.1	200	0.958	
DRO >C10-C28	<10.0	10.0	02/10/2015	ND	200	99.9	200	0.169	
Surrogate: 1-Chiorooctane	102 5	% 47.2-15	7						
Surrogate: 1-Chiorooctadecane	00.4	% 52 1-17	6						

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Celey D. Keene, Lab Director/Quality Manager

Page 11 of 21



#### Analytical Results For:

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

 Received:
 02/06/2015

 Reported:
 02/12/2015

 Project Name:
 NHU SAT 28-441

 Project Number:
 OXY-14-034

 Project Location:
 HOBBS, NM

 Sampling Date:
 02/03/2015

 Sampling Type:
 Soil

 Sampling Condition:
 Cool & Intact

 Sample Received By:
 Jodi Henson

#### Sample ID: BH-10 0.7 - 1' (H500369-18)

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	02/09/2015	ND	1.80	90.1	2.00	4.96	
Toluene*	<0.050	0.050	02/09/2015	ND	1.74	87.0	2.00	5.19	
Ethylbenzene*	<0.050	0.050	02/09/2015	ND	1.68	84.1	2.00	5.64	
Total Xylenes*	<0.150	0.150	02/09/2015	ND	5.05	84.2	6.00	5.44	
Total BTEX	<0.300	0.300	02/09/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID	105	% 61-154							
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	880	16.0	02/10/2015	ND	400	100	400	3.92	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/10/2015	ND	188	94.1	200	0.958	
DRO >C10-C28	<10.0	10.0	02/10/2015	ND	200	99.9	200	0.169	

 Surrogate: 1-Chiorooctane
 102 %
 47.2-157

 Surrogate: 1-Chiorooctadecane
 89.7 %
 52.1-176

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Celey D. Keene, Lab Director/Quality Manager

Page 12 of 21

\*=Accredited Analyte



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

 Received:
 02/06/2015

 Reported:
 02/12/2015

 Project Name:
 NHU SAT 28-441

 Project Number:
 0XY-14-034

 Project Location:
 HOBBS, NM

Sampling Date: 02/03/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

#### Sample ID: BH-10 3.4 - 3.7' (H500369-19)

BTEX 8021B	mg/	kg	Analyze	xd By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/10/2015	ND	1.80	90.1	2.00	4.96	
Toluene*	<0.050	0.050	02/10/2015	ND	1.74	87.0	2.00	5.19	
Ethylbenzene*	< 0.050	0.050	02/10/2015	ND	1.68	84.1	2.00	5.64	
Total Xylenes*	<0.150	0.150	02/10/2015	ND	5.05	84.2	6.00	5.44	
Total BTEX	<0.300	0.300	02/10/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	103 9	6 61-154							
Chloride, SM4500CI-B	mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	864	16.0	02/10/2015	ND	400	100	400	3.92	
TPH 8015M	mg/	kg	Analyze	xd By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/10/2015	ND	195	97.4	200	2.52	
DRO >C10-C28	<10.0	10.0	02/10/2015	ND	201	101	200	3.37	
Surrogate: 1-Chlorooctane	107 9	6 47.2-15	7						
Surrogate: 1-Chlorooctadecane	91.89	6 52.1-17	5						

Cardinal Laboratories \*=Accredited Analyte

PLASE NOTE: Liability and Danages. Cardinal's liability and clients exclusive remedy for any claim string, whether based in contact or fort, thall be limited to the amount paid by client for analyses. All claims, including those for nephperics and any other cause enhancement shall be deemed unsided unless made in vertical and contact any other completion of the applicable service. In no went shall Cardinal be liable for incidental or consequental damages, including, without introduce, business inhumptions, loss of use, or loss of use, or loss of profits incomed by client, its substitutes, artifacts or necessars aftering out of resided to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above techniques contacts. Associat value only to the amplies identified above. This respectation to be reproduced example in which written approval of current absorbances.

Celeg D. Freine

Celey D. Keene, Lab Director/Quality Manager

Page 13 of 21

02/03/2015

Cool & Intact

Jodi Henson

Soil



#### Analytical Results For:

Safety & Environmental Solutions Bob Allen 703 East Clinton Hobbs NM, 88240

Fax To: (575) 393-4388

 Received:
 02/06/2015
 Sampling Date:

 Reported:
 02/12/2015
 Sampling Type:

 Project Name:
 NHU SAT 28-441
 Sampling Condition:

 Project Number:
 OXY-14-034
 Sample Received By:

 Project Location:
 HOBBS, NM

#### Sample ID: BH-11 1.7 - 2' (H500369-20)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/10/2015	ND	1.80	90.1	2.00	4.96	
Toluene*	<0.050	0.050	02/10/2015	ND	1.74	87.0	2.00	5.19	
Ethylbenzene*	<0.050	0.050	02/10/2015	ND	1.68	84.1	2.00	5.64	
Total Xylenes*	<0.150	0.150	02/10/2015	ND	5.05	84.2	6.00	5.44	
Total BTEX	<0.300	0.300	02/10/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	102 9	61-154							
Chloride, SM4500Cl-B	mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/10/2015	ND	400	100	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
GRO C6-C10	<10.0	10.0	02/12/2015	ND	195	97.4	200	2.52	
DRO >C10-C28	<10.0	10.0	02/12/2015	ND	201	101	200	3.37	
Surrogate: 1-Chlorooctane	100 9	6 47.2-15	7						
Surrogate: 1-Chlorooctadecane	88.4	% 52.1-17	6						

Cardinal Laboratories \*=Accredited Analyte

Celeny D. Frence

Celey D. Keene, Lab Director/Quality Manager

Page 14 of 21



#### Analytical Results For:

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

 Received:
 02/06/2015

 Reported:
 02/12/2015

 Project Name:
 NHU SAT 28-441

 Project Number:
 OXY-14-034

 Project Location:
 HOBBS, NM

 Sampling Date:
 02/03/2015

 Sampling Type:
 Soil

 Sampling Condition:
 Cool & Intact

 Sample Received By:
 Jodi Henson

#### Sample ID: BH-11 3 - 3.3' (H500369-21)

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	02/10/2015	ND	1.80	90.1	2.00	4.96	
Toluene*	<0.050	0.050	02/10/2015	ND	1.74	87.0	2.00	5.19	
Ethylbenzene*	<0.050	0.050	02/10/2015	ND	1.68	84.1	2.00	5.64	
Total Xylenes*	<0.150	0.150	02/10/2015	ND	5.05	84.2	6.00	5.44	
Total BTEX	<0.300	0.300	02/10/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID	103	% 61-154							
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/10/2015	ND	416	104	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/10/2015	ND	195	97.4	200	2.52	
DRO >C10-C28	<10.0	10.0	02/10/2015	ND	201	101	200	3.37	

 Surrogate: 1-Chiorooctane
 101 %
 47.2-157

 Surrogate: 1-Chiorooctadecane
 89.5 %
 52.1-176

Cardinal Laboratories

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Celeny D. Freuna

Celey D. Keene, Lab Director/Quality Manager

Page 15 of 21

\*=Accredited Analyte



#### Analytical Results For:

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

 Received:
 02/06/2015

 Reported:
 02/12/2015

 Project Name:
 NHU SAT 28-441

 Project Number:
 0XY-14-034

 Project Location:
 HOBBS, NM

Sampling Date: 02/03/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

#### Sample ID: BH-12 0.8 - 1.2 (H500369-22)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Benzene*	<0.050	0.050	02/10/2015	ND	1.80	90.1	2.00	4.96	
Toluene*	<0.050	0.050	02/10/2015	ND	1.74	87.0	2.00	5.19	
Ethylbenzene*	<0.050	0.050	02/10/2015	ND	1.68	84.1	2.00	5.64	
Total Xylenes*	<0.150	0.150	02/10/2015	ND	5.05	84.2	6.00	5.44	
Total BTEX	<0.300	0.300	02/10/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	105 5	% 61-154							
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Chloride	160	16.0	02/10/2015	ND	416	104	400	0.00	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
GRO C6-C10	<10.0	10.0	02/10/2015	ND	195	97.4	200	2.52	
DRO >C10-C28	<10.0	10.0	02/10/2015	ND	201	101	200	3,37	

Cardinal Laboratories \*=Accredited Analyte

PLOSE NOTE: Liability and Danages. Cardina's liability and clients exclusive remarky for any claim arising, whether based in contract or but, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whateverse that live desented universe made in writing and necessarily 500 clients after completion of the applicable service. In no event shall Cardinal be labele for incidental or consequental damages, excluding, without instanction, business inhumptons, loss of use, or loss of use, or loss of profits incorned by client, it is substitated, withflow or accessors arising on of or notated to the performance of the services between the clients, and clients in based ones any of the above teached reasons or otherwise. All called a labele for incidental business.

Celeny D. Keine

Surrogate: 1-Chlorooctadecane 90.2 % 52.1-176

Celey D. Keene, Lab Director/Quality Manager

Page 16 of 21



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

 Received:
 02/06/2015

 Reported:
 02/12/2015

 Project Name:
 NHU SAT 28-441

 Project Number:
 OXY-14-034

 Project Location:
 HOBBS, NM

 Sampling Date:
 02/03/2015

 Sampling Type:
 Soil

 Sampling Condition:
 Cool & Intact

 Sample Received By:
 Jodi Henson

#### Sample ID: BH-12 2.8 - 3.1 (H500369-23)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	< 0.050	0.050	02/10/2015	ND	1.80	90.1	2.00	4.96	
Toluene*	<0.050	0.050	02/10/2015	ND	1.74	87.0	2.00	5.19	
Ethylbenzene*	< 0.050	0.050	02/10/2015	ND	1.68	84.1	2.00	5.64	
Total Xylenes*	<0.150	0.150	02/10/2015	ND	5.05	84.2	6.00	5.44	
Total BTEX	<0.300	0.300	02/10/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	104 9	6 61-154							
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/10/2015	ND	416	104	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/10/2015	ND	195	97.4	200	2.52	
DRO >C10-C28	<10.0	10.0	02/10/2015	ND	201	101	200	3.37	
Surrogate: 1-Chlorooctane	103 5	6 47.2-15	7						
Surrogate: 1-Chlorooctadecane	91.7	% 52.1-17	6						

Cardinal Laboratories \*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardina's liability and clients exclusive remarky for any claim and/or, whether based in contract or ton's shall be limited to the amount paid by client for analyses. All claims, including those for nephpeors and any other clause whatever deal be deemed variety under under under make in writing and recorded by Cardinal letter thinty (20) days after completion of the applicable service. In no event shall Cardinal be label for incidental or consequental demanages, bringing the contraction of the performance of the services between the cardinal incidental cardinal labelity and claims in branching and cardinal labelity and cardinal labelity and cardinal labelity and claims and cardinal labelity and claims in the performance of the services between the cardinal labelity and claims in the cardinal labelity and claims in the cardinal labelity and claims.

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Celey D. Keene, Lab Director/Quality Manager

Page 17 of 21



#### **Notes and Definitions**

ND	Analyte NOT DETECTED	D at or above the reporting limit

RPD Relative Percent Difference

Samples not received at proper temperature of 6°C or below.

\*\*\* Insufficient time to reach temperature.

Chloride by SM4500Cl-B does not require samples be received at or below 6°C
 Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories \*=Accredited Analyte

PLDASE NOTE: Liability and Damages. Cardrou's liability and clients exclusive remedy for any claim anticing, whether based in contact or fort, shall be limited to the amount paid by client for analyses. All claims, including those for reaglescent and any other cause evidationers shall be deemed solving unless made in vertical and cardround by Cardroul whellow thirty (All) days after completion of the applicable service. In no west shall Cardroul be liable for incidental or consequental dismapes, before cause whether each claim is to be performance or the services betwender by Cardroul, regardless of whether such claim is based upon any of the above detail accordance or convenient, install, and the performance or the services betwender by Cardroul, regardless of whether such claim is based upon any of the above detail accordance or convenient, install, and the performance or convenient, install and the performance or convenient shall not be amplied interface above. The respect and not he reproduced example in fail will written approved of cardroul absorbance.

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Celey D. Keene, Lab Director/Quality Manager

Page 18 of 21

Sampler - UPS - Bus - Others		Relinquished By:	sample, his same and the gar- savice, have swell shall confine glitters or extremely a same of Simplest Relinfortist	VERNE HOTEL LANGUERING D	9	8.	16	5	h	S	. 2		H500036	Lab I.D.		FOR LAB LOSS CHLY	Sampler Name:	Project Location:	Project Name: A	Project #: 0X	Phone #:	City:	Address:	Project Manager: Bob Allen	Company Name:	AR AR
Circle One) Bus - Other:		Ch	S 10. 10. 10	20	BH-5 2	34-4 1.6	24-40	H-8-1	3H-2 3,	1 648	B'#-1 3	E 1-18		Sample I.D.		9	J. 8248	Hobbs	IHU SOT	Y-14-03	575-397-0510	Hobbs	703 East Clinton	Bob Allen		ARDINAL LABORATORIES 101 East Marland, Hobbs, NM 88241 (505) 393-2325 Fax (505) 393-24
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			s per extern locuite objiced date of invite g allower's free.	10 10 10 10 10 10 10 10 10 10 10 10 10 1	+				1	1	1										_		_	-		REQUEST

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Relinquished By:	A Resultantian Services	malyses. All claims licitating those for engigence and any ener- sentee. In no evaluational Condition to Bable for inclannal or come efficient or references and opposite or relevant to the emborrance of a Charles of the Fig. 18 of the August to the emborrances.	ALEXANDRIA THE PROPERTY OF THE	W	8 34-10	16 12 H C	15 13H-80	8-42 41	UFC #		H500369	Lab I.D. Sample I.D.		ACHT THE CHTA	1.13	Project Location: Rob	Project Name: NHL Sc	Project #: 0XX-14-034	Phone #: 575-397-0510	City: Hohbs	Address: 703 East Clinton	72.5	Company Name: Cofoty 8 E	ARDINAL LA
vered Bv: (Circle One)  Temp. Sample Condition CHEC	Date: Redered By:	Time 40 Control By:	sudii iyhijhoerur ahali by disamad vyilied qajeas mada is velitg pidiisid diimagad, icoliding velbool limilahjon, birsiness Indexupitor qi asividas hayesotigi isy diesimi, regardised qi vitether such cis	will thinky profession missely for say (1911)	3.4-37	0.7-1,	0,3-0,6	12/1/6/	6.3-0.6	0.4-6.7	1	GRO MAS SOIL	AB OR ( NTAINE UNDWA TEWATI	RS	MATRIX	2240	85	4	- Project C	_	State: NM Zip: 88240	Clinton	Bob Allen	(505) 393-2326 Fax (505) 393-2476	ARDINAL LABORATORIES 101 East Marland, Hobbs, NM 88240
es printes		Phone Result: Fex Result: Fex Result: REMARKS:	fring and received by Cassinas white 30 days allow complaints of the a spikors, loss of use, or loss of pushs incurred by client, in subsidiately, to claim is bassed uses a say of the whose stated resentes or otherwise.	3	1 1, 155	40	15	150		14	X 3/3 /4	OTHE DATE	R: BASE; COOL		PRESERV. SAMPLING	FBX #:	井	Sigle: Zip:	City:	Address		Company: Same DX	P.O. E.	Sales And Andrews	EH.
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Delivered By: (Circle One) Sampler - UPS - Bus - Other: † Cardinal cannot accept v	Relinquished By	PLEASE NOTE: Living and Department Continues integra neither. At claims intending Speak for engiginose ded incy parket, is not enail these Constitution assets for interestant or published to sufficient to safety for a claim to the parking		23		2/	Lab I.D.		rokususeout	Project Location:	Project Name:	Project #: OX4	Phone #: 5		Address:	Project Manager:	The state of the s
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		orly sood than final date of In-oles,			1	1											TS



February 24, 2015

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: NHU SAT 28-422

Enclosed are the results of analyses for samples received by the laboratory on 02/19/15 16:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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 <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accredited in a certifi.html.

Cardinal Laboratories is accreditated 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)

Celey D. Keine

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

Page 1 of 5



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

 Received:
 02/19/2015

 Reported:
 02/24/2015

 Project Name:
 NHU SAT 28-422

 Project Number:
 OXY-14-034

 Project Location:
 HOBBS, NM

Sampling Date: 02/19/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

#### Sample ID: BH-9 5.5' - 5.7' (H500493-01)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Benzene*	<0.050	0.050	02/23/2015	ND	1.72	85.8	2.00	8.59	
Toluene*	<0.050	0.050	02/23/2015	ND	1.73	86.3	2.00	8.14	
Ethylbenzene*	<0.050	0.050	02/23/2015	ND	1.67	83.6	2.00	11.2	
Total Xylenes*	<0.150	0.150	02/23/2015	ND	4.89	81.6	6.00	11.4	
Total BTEX	<0.300	0.300	02/23/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.8	% 61-154	!						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Chloride	160	16.0	02/20/2015	ND	416	104	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
GRO C6-C10	<10.0	10.0	02/21/2015	ND	202	101	200	0.814	
DRO >C10-C28	<10.0	10.0	02/21/2015	ND	188	94.2	200	2.87	
Surrogate: 1-Chlorooctane	90.9	% 47.2-15	7						
Surrogate: 1-Chlorooctadecane	99.8	% 52.1-17	6						

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Celecy D. Keene

Celey D. Keene, Lab Director/Quality Manager

Page 2 of 5



#### Analytical Results For:

Safety & Environmental Solutions Bob Allen 703 East Clinton Hobbs NM, 88240

Fax To: (575) 393-4388

 Received:
 02/19/2015

 Reported:
 02/24/2015

 Project Name:
 NHU SAT 28-422

 Project Number:
 OXY-14-034

 Project Location:
 HOBBS, NM

Sampling Date: 02/19/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

#### Sample ID: BH-10 5.6' - 5.8' (H500493-02)

BTEX 8021B	mg,	/kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Benzene*	<0.050	0.050	02/23/2015	ND	1.72	85.8	2.00	8.59	
Toluene*	<0.050	0.050	02/23/2015	ND	1.73	86.3	2.00	8.14	
Ethylbenzene*	<0.050	0.050	02/23/2015	ND	1.67	83.6	2.00	11.2	
Total Xylenes*	<0.150	0.150	02/23/2015	ND	4.89	81.6	6.00	11.4	
Total BTEX	<0.300	0.300	02/23/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID	94.2	% 61-154							
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	800	16.0	02/20/2015	ND	416	104	400	3.92	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/21/2015	ND	202	101	200	0.814	
DRO >C10-C28	<10.0	10.0	02/21/2015	ND	188	94.2	200	2.87	

 Surrogate: 1-Chlorooctane
 80.6 %
 47.2-157

 Surrogate: 1-Chlorooctadecane
 77.0 %
 52.1-176

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Celey D. Keene, Lab Director/Quality Manager

Page 3 of 5



#### **Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limi	
ND	Analyte NOT DETECTED at or above the reporting limi	٠.

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

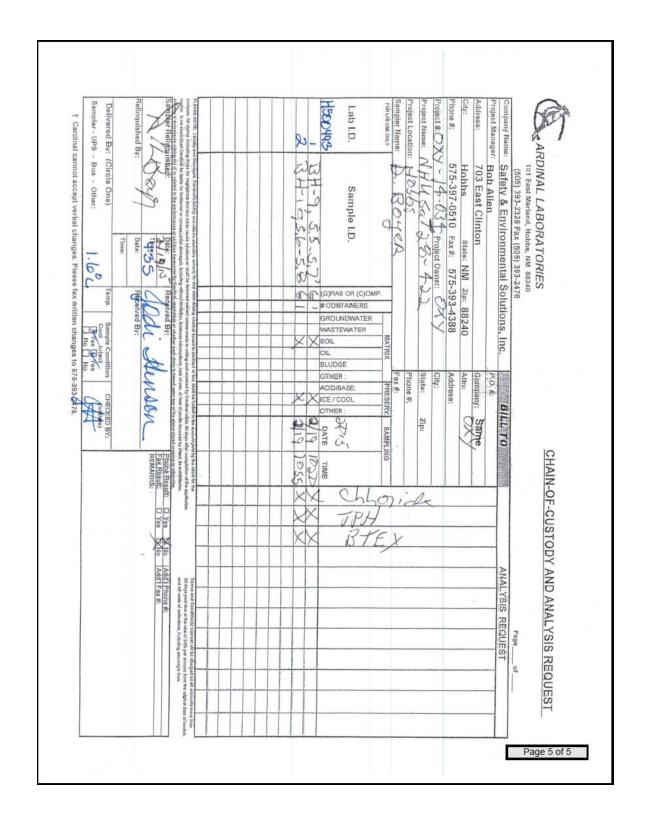
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Celey D. Keene, Lab Director/Quality Manager

Page 4 of 5





February 23, 2015

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: NHU SATELLITE #28

Enclosed are the results of analyses for samples received by the laboratory on 02/16/15 16:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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 <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accredited in a certifi.html.

Cardinal Laboratories is accreditated 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.

Celecy D. Keine

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

Page 1 of 8



PHONE (575) 393-2326  $^{\circ}$  101 E. MARLAND  $^{\circ}$  HOBBS, NM 88240

### Analytical Results For:

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

02/16/2015 Received: Reported: 02/23/2015 Project Name: NHU SATELLITE #28 Project Number: OXY-15-034 HOBBS, NEW MEXICO Project Location:

02/16/2015 Sampling Date: Soil
\*\* (See Notes) Sampling Type: Sampling Condition: Sample Received By: Jodi Henson

Sample ID: SOUTH WALL (H50	0452-01)	)							
BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Benzene*	<0.050	0.050	02/20/2015	ND	1.85	92.3	2.00	5.10	
Toluene*	<0.050	0.050	02/20/2015	ND	1.86	92.9	2.00	5.32	
Ethylbenzene*	<0.050	0.050	02/20/2015	ND	1.84	92.0	2.00	5.66	
Total Xylenes*	<0.150	0.150	02/20/2015	ND	5.45	90.8	6.00	4.79	
Total BTEX	<0.300	0.300	02/20/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	92.2	% 61-154	1						
Chloride, SM4500Cl-B	mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1580	16.0	02/18/2015	ND	416	104	400	3.92	
TPH 8015M	mg/	kg	050 02/20/2015 050 02/20/2015 050 02/20/2015 150 02/20/2015 300 02/20/2015  61-154 Analyzed 6.0 02/18/2015 Analyzed ing Limit Analyzed 0.0 02/18/2015	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
GRO C6-C10	<50.0	50.0	02/18/2015	ND	203	102	200	3.02	
DRO >C10-C28	<50.0	50.0	02/18/2015	ND	193	96.7	200	3.27	
Surrogate: 1-Chlorooctane	91.4	% 47.2-15	7						
Surrogate: 1-Chlorooctadecane	87.0	% 52.1-17	ő						

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Page 2 of 8



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

#### Analytical Results For:

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

 Received:
 02/16/2015

 Reported:
 02/23/2015

 Project Name:
 NHU SATELLITE #28

 Project Number:
 OXY-15-034

 Project Location:
 HOBBS, NEW MEXICO

Sampling Date: Sampling Type: Sampling Condition: Sample Received By: 02/16/2015 Soil \*\* (See Notes)

Jodi Henson

#### Sample ID: WEST WALL (H500452-02)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Benzene*	<0.050	0.050	02/21/2015	ND	1.85	92.3	2.00	5.10	
Toluene*	<0.050	0.050	02/21/2015	ND	1.86	92.9	2.00	5.32	
Ethylbenzene*	<0.050	0.050	02/21/2015	ND	1.84	92.0	2.00	5.66	
Total Xylenes*	<0.150	0.150	02/21/2015	ND	5.45	90.8	6.00	4.79	
Total BTEX	<0.300	0.300	02/21/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	92.1	% 61-154							
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Chloride	2880	16.0	02/18/2015	ND	416	104	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
GRO C6-C10	<10.0	10.0	02/18/2015	ND	203	102	200	3.02	
DRO >C10-C28	<10.0	10.0	02/18/2015	ND	193	96.7	200	3.27	
Surrogate: 1-Chlorooctane	85.3	% 47.2-157	,						
Surrogate: 1-Chlorooctadecane	78.7	% 52.1-170	ī						

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Celey D. Keene, Lab Director/Quality Manager

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#### Analytical Results For:

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

 Received:
 02/16/2015

 Reported:
 02/23/2015

 Project Name:
 NHU SATELLITE #28

 Project Number:
 OXY-15-034

 Project Location:
 HOBBS, NEW MEXICO

Sampling Date: 02/16/2015 Sampling Type: Soil

Sampling Condition: \*\* (See Notes)
Sample Received By: Jodi Henson

#### Sample ID: EAST WALL (H500452-03)

Sample ID: EAST WALL (H5004	52-03)								
BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Benzene*	<0.050	0.050	02/21/2015	ND	1.85	92.3	2.00	5.10	
Toluene*	<0.050	0.050	02/21/2015	ND	1.86	92.9	2.00	5.32	
Ethylbenzene*	<0.050	0.050	02/21/2015	ND	1.84	92.0	2.00	5.66	
Total Xylenes*	<0.150	0.150	02/21/2015	ND	5.45	90.8	6.00	4.79	
Total BTEX	<0.300	0.300	02/21/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	90.3	% 61-154							
Chloride, SM4500Cl-B	mg/	kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	816	16.0	02/18/2015	ND	416	104	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/18/2015	ND	203	102	200	3.02	
DRO >C10-C28	<10.0	10.0	02/18/2015	ND	193	96.7	200	3.27	
Surrogate: 1-Chlorooctane	86.85	% 47.2-15	7						
Surrogate: 1-Chlorooctadecane	76.4	% 52.1-170	ó						

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Celey D. Keene, Lab Director/Quality Manager

Page 4 of 8



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

#### Analytical Results For:

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

 Received:
 02/16/2015

 Reported:
 02/23/2015

 Project Name:
 NHU SATELLITE #28

 Project Number:
 OXY-15-034

 Project Location:
 HOBBS, NEW MEXICO

Sampling Date: 02/16/2015 Sampling Type: Soil

Sampling Condition: \*\* (See Notes)
Sample Received By: Jodi Henson

#### Sample ID: BOTTOM (H500452-04)

Sample ID: BOTTOM (H500452	-04)								
BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Benzene*	<0.050	0.050	02/21/2015	ND	1.85	92.3	2.00	5.10	
Toluene*	<0.050	0.050	02/21/2015	ND	1.86	92.9	2.00	5.32	
Ethylbenzene*	<0.050	0.050	02/21/2015	ND	1.84	92.0	2.00	5.66	
Total Xylenes*	<0.150	0.150	02/21/2015	ND	5.45	90.8	6.00	4.79	
Total BTEX	<0.300	0.300	02/21/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	92.6	% 61-154	1						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	02/18/2015	ND	416	104	400	3.92	
TPH 8015M	mg/	kg	02/21/2015 ND 02/21/2015 ND 02/21/2015 ND 02/21/2015 ND 02/21/2015 ND 02/21/2015 ND  1-154  Analyzed By: AP  mit Analyzed Method Blank 02/18/2015 ND  Analyzed By: MS  mit Analyzed Method Blank 02/18/2015 ND  Analyzed By: MS  ND 02/18/2015 ND 02/18/2015 ND 02/18/2015 ND						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/18/2015	ND	203	102	200	3.02	
DRO >C10-C28	<10.0	10.0	02/18/2015	ND	193	96.7	200	3.27	
Surrogate: 1-Chlorooctane	90.2	% 47.2-15	7						
Surrogate: 1-Chlorooctadecane	79.6	% 52.1-17	ő						

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Celeog D. Keene

Celey D. Keene, Lab Director/Quality Manager

Page 5 of 8



#### Analytical Results For:

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

 Received:
 02/16/2015

 Reported:
 02/23/2015

 Project Name:
 NHU SATELLITE #28

 Project Number:
 OXY-15-034

 Project Location:
 HOBBS, NEW MEXICO

Sampling Date: 02/16/2015
Sampling Type: Soil
Sampling Condition: \*\* (See Notes)
Sample Received By: Jodi Henson

#### Sample ID: NORTH WALL (H500452-05)

Sample ID: NORTH WALL (H50	0452-05	)							
BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/21/2015	ND	1.85	92.3	2.00	5.10	
Toluene*	<0.050	0.050	02/21/2015	ND	1.86	92.9	2.00	5.32	
Ethylbenzene*	<0.050	0.050	02/21/2015	ND	1.84	92.0	2.00	5.66	
Total Xylenes*	<0.150	0.150	02/21/2015	ND	5.45	90.8	6.00	4.79	
Total BTEX	<0.300	0.300	02/21/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	93.8	% 61-154							
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Chloride	592	16.0	02/18/2015	ND	416	104	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
GRO C6-C10	<10.0	10.0	02/18/2015	ND	203	102	200	3.02	
DRO >C10-C28	<10.0	10.0	02/18/2015	ND	193	96.7	200	3.27	
Surrogate: 1-Chlorooctane	91.8	% 47.2-157	7						
Surrogate: 1-Chlorooctadecane	85.5	% 52.1-170	5						

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Celey D. Keene, Lab Director/Quality Manager

Page 6 of 8



#### **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

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Page 7 of 8

rease note: telegrade audient leader part leader part leader part leader	Company Name: Project Manager: Address: City: Phone #: Project Location: Sampler Name: Nam
The state frosts: Leading and Emergent Conductive platfully and attempt not obtained in many that and attempt and attempt not the state of the state	IRDINAL LABORATO, 101 East Marland, Hobbs, Nu. (505) 393-2326 Fax (505) 9: Safety & Environmen F. Boh Allen 703 East Clinton Hobbs State: 575-397-0510 Fax #: (Y-(5-074 Project NH V SATILLITE n: Habbs Ni W Sample I.D. Sample I.D. Sample I.D.
Total Lasing and Enemysis Constants placing and etach, notation, record to the plates duals and believe to the state of the August States and S	# CONTAINERS GROUNDWATER MASTEWATER OIL SLUDGE    CONTAINERS   CONTAIN
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That shill be designed at all accounts more flows of the process from the college of the designed date of herbot statemy in the college of the designed date of herbot statemy in the college of the coll	REQUEST

## Appendix B C-141

District.]
1625 N. French Dr., Hobbs, NM 88240
District.II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Azteo, 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 bmit 2 Copies to appropriate

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

			Rele	ase Notific	atio	n and Co	rrective A	ction	1						
						OPERA	ΓOR	al Report		Final Report					
	Name of Company: OXY						Contact: Raymond Aguilar								
	Address: 1017 W Stanolind Road						Telephone No. 575-390-6312								
Facility Name: North Hobbs Unit 32-141						Facility Ty	pe: Oil and Ga	s Produ	ction						
Surface Ow	ner:			Mineral C	)wner:				Lease ?	No.					
				LOCA	OITA	ON OF RELEASE									
Unit Letter M	Section 32	Township 18S	Range 38E	Feet from the	North	orth/South Line   Feet from the   East/West Line   County									
Ivi															
	Latitude: 32.697350 Longitude: -103.177630  NATURE OF RELEASE														
Type of Rele	ase: Produc	ed Water		NAI	URE	Volume of			Volume !	Recovered:					
.,,,							roduced Water			Produced V	Water				
Source of Re	lease: Injec	tion Line				Date and H 10/20/2014	Your of Occurrent	ce:		Hour of Dis 14 8:30 AM		r:			
Was Immedia	ate Notice (	liven?				If YES, To			10/20/20	14 8:30 AM					
110011111111111111111111111111111111111			Yes [	No 🗌 Not Re	equired										
By Whom?						Date and Hour: 10/20/2014 2:55 PM									
Was a Water	course Reac		Yes 🖂	l No.		If YES, Volume Impacting the Watercourse.									
		pacted, Descri													
Describe Cau	se of Proble	em and Remed	dial Action	n Taken.*											
External Con	osion														
Describe Are	a Affected	and Cleanup A	etion Tak	en.*											
Safety & Env	ironmental	Solutions, Inc	. will deli	neate the spill are	a and s	ubmit an appr	opriate work plan	h.							
regulations al public health should their o or the environ	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.									ndanger f liability ıman health					
Signature:						OIL CONSERVATION DIVISION  Approved by District Supervisor:									
		erine.				Approval Date:			Expiration Date:						
E-mail Addre	Title: HES Specialist  E-mail Address: Raymond_Aguilar@oxy.com  Date: / - 7 ~ / 5 Phone: 575-390-6312					Conditions of Approval:			,	Attached 🗆					

# Appendix C Site Photographs



Release Area Facing North (Photo # 1)



Release Area Facing East (Photo # 2)



Saturated soil at leak location (Photo # 3) Ponded and saturated soil at manifold facing west (Photo # 4)



Pad facing west (Photo # 5)



Pad unaffected by release looking southwest (Photo # 6)





Looking west outside fence along pipeline corridor (Photo # 7) Manifold and release area looking southwest from outside fence (Photo # 8)





Wet soil from release outside fence facing west (Photo # 9) Ponded release water looking southwest (Photo # 10)



Ponded release water looking south (Photo # 11)



Ponding and saturated soil on lease road looking north (Photo # 12)



Ponding along lease road (Photo # 13)

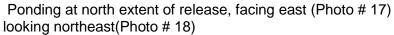


Wet soil along lease road facing north(Photo # 14)



Ponding at lease road at north extent of release (Photo # 15) Ponding at north extent of release, facing west (Photo # 16)







Ponding at north extent of release,





Vacuum truck removing ponded fluid (Photo # 20)

Lease Sign (Photo # 21)



Excavation at leak location (Photo # 22)