# OXY USA, Inc. Monsanto State Battery Delineation Report and Work Plan

# Section 16, T25S, R32E Lea County, New Mexico

March 20, 2015



Condition for approval- More complete remediation and addressing of deeper contaminants will occur upon site abandonment/sale OR when the tanks are replaced/upgraded.

By OCD; Dr. Oberding at 3:48 pm, Mar 24, 2015

Conditionally

**APPROVED** 

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

1RP-3326

# TABLE OF CONTENTS

I.	COMPANY CONTACTS	1
II.	BACKGROUND	1
III.	SURFACE AND GROUND WATER	1
IV.	CHARACTERIZATION	1
V.	WORK PERFORMED	2
VI.		3
⊢ A A	FIGURES & APPENDICES Figure 1 – Vicinity Map Figure 2 – Site Plan Appendix A – Analytical Results Appendix B – C-141 Appendix C – Site Photographs	7 9 26

# I. Company Contacts

Representative	Company	Telephone	E-mail
Austin Tramell	OXY USA, INC.	575-499-4919	austin_tramell@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 Monsanto State Battery located in Section 16 of Township 25 South, Range 32 East, Lea County, New Mexico.

According to the C-141 the cause of release was Automation failure caused the tanks to overflow and leak 35 bbls of oil and 35 bbls of produced water onto the ground. A vacuum truck recovered 30 bbls of oil and 30 bbls of produced water. The automation was repaired.

# III. Surface and Ground Water

The nearest groundwater of record is approximately 3 miles Northwest of the site. The New Mexico Office of State Engineer record is in Section 31 Range 32 East and Township 25 South. The reported depth was 295 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 100 ppm Total Petroleum Hydrocarbons (TPH).

Depth to Ground Water:			
(Vertical distance from contaminants to	Less than 50 feet	20 points	
seasonal high water elevation of	50 feet to 99 feet	10 points	
groundwater)	>100 feet	0 points	Х
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	Х
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)			0

# V. Work Performed

On March 20 2014, Safety & Environmental Solutions, Inc. was onsite 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 (CI<sup>°</sup>) (Method SM4500CI-B). The results of the analysis are presented in the table below:

Sample Date 12/03/2014	Sample ID	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX
Depth	Method					
TT 1 at 12'	BTEX 8021B	<0.200	<0.200	<0.200	2.22	2.22
TT 1 at 13'	BTEX 8021B	<0.200	<0.200	<0.200	2.27	2.27
TT 2 at 9.5'	BTEX 8021B	<0.050	<0.050	<0.050	0.221	<0.300
TT 2 at 13'	BTEX 8021B	<0.050	<0.050	<0.050	<0.150	<0.300

Sample Date 12/03/2014	Sample ID	Chloride (Cl)	Sample ID	GRO (C₀-C₁₀) (mg/kg)	DRO (>C <sub>10</sub> -C <sub>28</sub> ) (mg/kg)
Depth	Method		Method		
TT 1 at 12'	SM4500CI-B	224	TPH 8015M	337	5810
TT 1 at 13'	SM4500CI-B	224	TPH 8015M	430	9110
TT 2 at 9.5'	SM4500CI-B	1960	TPH 8015M	71.1	1720
TT 2 at 13'	SM4500CI-B	1410	TPH 8015M	<50.0	779

The backhoe only allowed a 13' depth. At this depth we did not find extent of contamination.

On March 6 2015, Safety & Environmental Solutions, Inc. was onsite 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 (CI<sup>-</sup>) (Method SM4500CI-B). The results of the analysis are presented in the table below:

Sample Date 03/09/2015	Sample ID	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX
Depth	Method					
BH 1 at 15'	BTEX 8021B	<0.050	0.116	0.672	4.84	5.63
BH 1 at 17.5'	BTEX 8021B	<0.050	<0.050	<0.050	<0.150	<0.300
BH 1 at 18.5'	BTEX 8021B	<0.050	<0.050	<0.050	<0.150	<0.300
BH 2 at 16'	BTEX 8021B	<0.050	<0.050	<0.050	<0.150	<0.300
BH 2 at 18'	BTEX 8021B	<0.050	<0.050	<0.050	<0.150	<0.300

Sample Date 03/09/2015	Sample ID	Chloride (Cl)	Sample ID	GRO (C₀-C₁₀) (mg/kg)	DRO (>C <sub>10</sub> -C <sub>28</sub> ) (mg/kg)
Depth	Method		Method		
BH 1 at 15'	SM4500CI-B	1470	TPH 8015M	337	5810
BH 1 at 17.5'	SM4500CI-B	1410	TPH 8015M	10.5	768
BH 1 at 18.5'	SM4500CI-B	1680	TPH 8015M	<10.0	838
BH 2 at 16'	SM4500CI-B	960	TPH 8015M	<10.0	<10.0
BH 2 at 18'	SM4500CI-B	816	TPH 8015M	<10.0	<10.0

# VI. Action Plan

Due to the extreme depth to groundwater in this area, the entire spill site will be excavated to a depth of 2'. All contaminated soil will be transported to Sundance Services, an NMOCD approval facility, for disposal. Some TPH contaminated will be left in place and placing a liner in the excavation would not allow further remediate by aeration. Samples will be taken from the excavation to document the amount of contamination being left in place. The excavation will be backfilled with clean soil and return to grade.

# VII. Figures & Appendices

Figure 1 – Vicinity Map Figure 2 – Site Plan Figure 3 – NMOCD Trend Map Appendix A – Analytical Results Appendix B – C-141 Figure 1 Vicinity Map

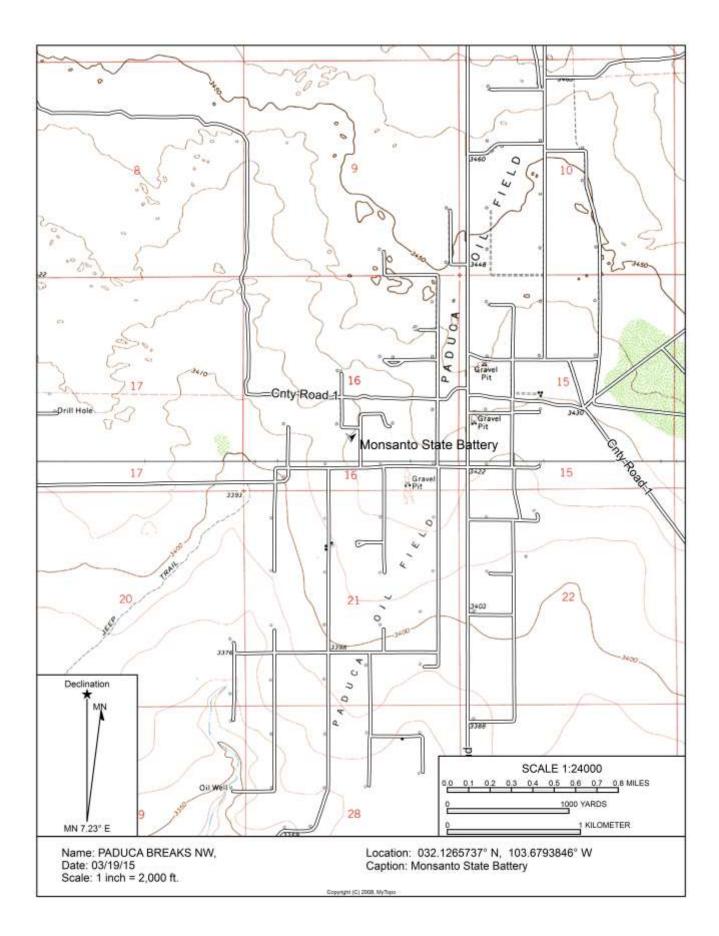


Figure 2 Site Plan



**Monsanto State Battery** 

Appendix A Analytical Results



Page 1 of 7

December 08, 2014

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

RE: MONSANTO STATE BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 12/04/14 8:00.

Cardinal Laboratories is accredited through Teurs 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 www.trea.teuras.pov/field/spafab\_accred\_certif.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.

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. Keine

Coley D, Keese 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:	12/04/2014	Sampling Date:	12/03/2014
Reported:	12/08/2014	Sampling Type:	Soll
Project Name:	MONSANTO STATE BATTERY	Sampling Condition:	Cool & Intact
Project Number:	OXY-14-005	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM	- 1996 2000	

### Sample ID: TT-1 12' BGS (H403692-01)

STEX 00218	mg/kg		Analyzed By: CK						
Acaliya.	Result	Reporting Limit	Analyzed	Method Blank	85	% Recovery	True Value QC	RFD	Quiffe
Bergene*	<0.200	0.200	12/08/2014	ND	1.91	95.3	2.00	1.78	
Tolume*	<0.200	0.200	12/08/2014	ND	1,88	13.8	2.00	1.90	
EDyDecew*	<0.200	0.200	12/08/2014	ND	1.76	87.8	2.00	3.30	
Total Xylenes*	2.22	0.600	12/08/2014	ND	5.35	69.2	6.00	3.95	
Total STEX	2.22	1.20	12/08/2014	ND					

Chieride, SM4500CI-8 Analyzed By: AP mg/kg 16 Recovery Result Reporting Limit Analyzad Method Bank 105 True Value QC RPD Qualifier Acaiy's 224 16.0 12/04/2014 ND 400 100 400 Chioride 3.92 TPH 8015H Analyze od By: CK mg/kg 5-06 Acalyta 15 % Recovery 820 Result Reporting Limit. Analyzed Nethod Bank Thue Value QC Quiffe GRO C6-C10 415 100 12/04/2014 ND 199 19.5 200 0.663 DR0 >C10-C28 7590 100 12/04/2014 ND 204 102 200 0.660

Sarrogase: /-Chiorosctane 47.2-157 284 % \$2,1-178

Surrogene: 1-Chlornoctadecane 290 %

\*-Accredited Analyte

Page 2 of 7

## Cardinal Laboratories

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Celey D, Keene, Lab Director/Quality Manager

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			ety & Environm Alien	ental Solutions					
			East Clinton						
			bbs NM, 88240						
		Fax	To: (575)	393-4388					
Received:	12/04/20	35.4			npling Da		12/03/2	1014	
Reported:	12/08/20				npling Ty		Soll		
Project Name: Project Number:	OXY-144	ITO STATE BATT	ERY		npling Co noie Reco	elved By:	Cool & Jodi He		
Project Location:		NTY, NM							
		an a							
Sample ID: TT-1 13' BGS (H40 BTEX 8021B	3692-02 mg		Analyza	d By: CK					
Acalyta	Result	Reporting Limit	Analyzed	Method Bank	85	% Recovery	True Value QC	R70	Quiller
Berume*	<0.200	0.200	12/08/2014	ND	1.91	95.3	2.00	1.78	
Toluete*	<0.200	0.200	12/08/2014	ND.	1.88	93.8	2.00	1.90	
EDyboune*	<0.200	0.200	12/08/2014	ND	1.76	87.8	2.00	3.30	
Total Xylenea*	2.27	0.600	12/08/2014	ND	5.35	89.2	6.00	3.55	
Total STEX	2.27	1,20	12/08/2014	ND					
harrogate: 4-Bromoflaorobenzane (PIL)	262	N 61-154	i						
Chioride, SH4500CI-8	mg.	The g	Analyza	d By: AP					
lealigta	Result	Reporting Limit	Analyzed	Nethod Bank	85	% Recovery	True Value QC	RPD	Quiller
Chloride	224	16.0	12/04/2014	ND	408	100	400	3.92	
TPH 6015H	mg.	ning.	Analyza	d By: CK					5-06
Acalyte	Result	Reporting Limit	Analyzed	Method Bank	85	% Recovery	True Value QC	RPD	Quiller
GRO C5-C10	430	200	\$2/04/2014	ND	199	99.5	200	0.653	
DRO >C10-C28	9110	100	12/04/2014	ND	204	102	200	0.660	
formgate: 1-Chlorosciane	179	N 47,2-15	7						
Sarrogate: I-Chilorooctadiscane	395	\$2.1-17	w						
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College 2. New									

# Analytical Results For:

FHOME (575) 393-2326 \* 101 E. MARLAND \* HOBBS, NM 86240

### Safety & Environmental Solutions Bob Allen

703 East Clinton Hobbs NM, 88240 Fax To: (575) 393-4388

Received:	12/04/2014	Sampling Date:	12/03/2014
Reported:	12/08/2014	Sampling Type:	Soll
Project Name:	MONSANTO STATE BATTERY	Sampling Condition:	Cool & Intact
Project Number:	CXY-14-D05	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

### Sample ID: TT-2 9.5' BGS (H403692-03)

mg	ing.	Analyza	at By: CK					
Result	Reporting Limit	Analyped	Nethod Sank	65	% Recovery	True Value QC	RPD	Qualifier
<0.050	0.050	12/08/2014	ND	1.91	95.3	2.00	1.78	
<0.050	0.053	12/08/2014	ND	1.88	93.8	2.00	1.90	
<0.050	0.050	12/08/2014	ND	1.76	87.8	2.00	3.30	
0.221	0.150	12/08/2014	ND	5.35	89.2	6.00	3.58	
<0.300	0.300	12/08/2014	ND					
	Ranut <0.050 <0.050 <0.050 <0.050 0.221	<0.050 0.050 <0.050 0.050 <0.050 0.050 0.221 0.150	Recuit         Reporting Limit         Analyzed           <0.050	Baselit         Reporting Limit         Analysed         Method Sank           <0.050	Result         Reporting Limit         Analysisd         Method Danis         SC           <0.050	Result         Reporting Limit         Analysisd         Method Stanis         SS         % Recovery           <0.050	Result         Reporting Limit         Analyzed         Method Banis         SS         % Recovery         True Value QC           <0.050	Result         Reporting Limit         Analysed         Method Banis         BS         % Recovery         True Value QC         RPO           <0.050

Surmgate: 4-Broughambename (PIE) 104 % 61-154

Chioride, SM4500CI-8	mg	(Ng	Analyze	d By: AP					
Acolyta	Result	Reporting Limit	Analyzed	Method Bank	85	% Recovery	The Value QC	RPD	Quelfler
Chioride	1950	16.0	12/04/2014	ND	400	100	400	3.92	
TPH SOLSH	mg	rikg	Analyze	d By: CK		12.18			
leniyte	Result	Reporting Limit	Analyzed	Method Blenk	85	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	71.1	50.0	12/04/2014	ND	199	90.5	200	0.653	
DRO >C10-C28	1720	50.0	12/04/2014	ND	204	102	200	0.660	

Suringate: 1-Oklorisoctane 128 % 47.2-157

Surrogaia: 1-Chilorooctadecans 174 % 32.1-176

\*-Accredited Analyte

Page 4 of 7

Cardinal Laboratories

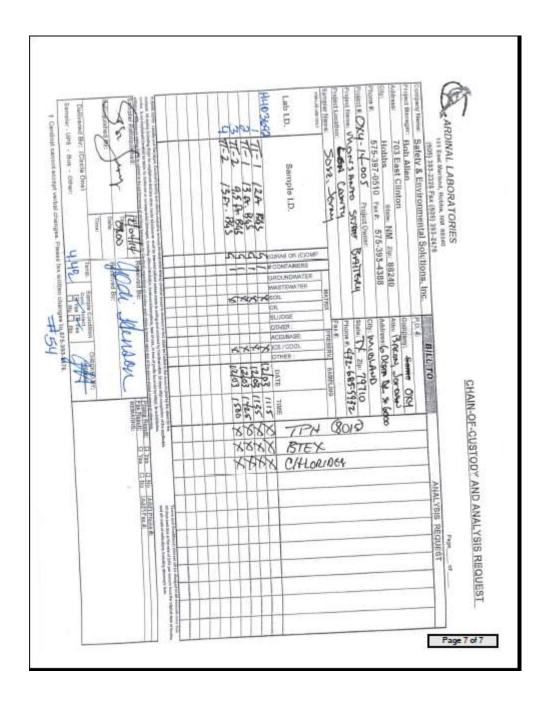
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Celey D. Keene, Lab Director/Quality Manager

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		Analy	rtical Resul	ts For:					
				ental Solutions					
		1000	Allen East Clinton						
			bbs NM, 88240						
		Fax	To: (575)	393-4388					
Received:	12/04/20	14		San	npling Da	000	12/03/2	014	
Reported:	12/08/20	11-6		San	npling Ty	pec	Soll		
Project Name: Project Number:	OXY-14-0	TO STATE BATT	ERY		npling Co	ndition: sived By:	Cool & Jodi He		
Project Location:	LEA COU				and the second	and of.	-7001 FBG		
0.04702.041566554									
Sample ID: TT-2 13' BGS (H STEX 80218	403692-04 mg/		Analyze	d By: CK					
Acultyta	Repuit	Reporting Limit	Analyzed	Method Slank	85	% Recovery	True Value QC	870	Quiffer
berume*	<0.050	0.050	12/08/2014	ND	1.91	95.3	2.00	1.78	
Toluene*	<0.050	0.050	12/08/2014	ND	1.68	93.8	2.00	1.90	
Ethylosoume*	<0.050	0.050	12/08/2014	ND	1.76	67.8	2.00	3.30	
fotal Xylenes*	<0.150	0.150	12/08/2014	ND	5.35	89.2	6.00	355	
Total BTEX	<0.300	0.300	12/08/2014	ND					
larngate: 4-Bronglasmberane /?	WD 1841	61-134	1						
Chieride, SM4500CI-8	mg	kg.	Analyza	d Oy: AP	1532	CREAT		259702	145-1
Acalyta	Reput	Reporting Limit	Analyzed	Method Slack	85	% Recovery	True Velue QC	RPD.	Quiller
Chioride	1410	16.0	12/04/2014	ND	400	100	400	3.92	
TPH BOLSM	mg/	C. CONSC	2010/01	d By: CK	1032	1040353	12000	39.02	320-
Analyta	Repuit	Reporting Limit	Analyzed	Method Slenk	85	% Recovery	True Velue QC	RPD.	Quiller
080 05-010	<50.0	50.0	12/04/2014	ND	199	96.5	200	0.653	
DRO >C10-C28	779	50.0	12/04/2014	ND	204	102	200	0.660	
Sarrogeae: I-Chilorooctane	124	47.2-13	7						
Seringate: 7-Oblemoctadocane	156 5	32.2-17	6						
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	Laboratories	PHONE (575) 393-3326 * 101 E. HARLAND * HOBBE, NH 88240
	123 Carlos Protos	Definitions
5-06	The recovery of this surrogate is outside control limits due to sample matrix interference/s.	a dilution required from high erallyte concentration and/or
ND	Analyte NOT DETECTED at or above the reporting limit	
RPD	Relative Percent Difference	
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	Inufficient time to mach temperature.	
-	Chiotole by SH4500C-B does not require samples be received at or 5	
	Samples reported on an as received basis (set) unless otherwise no	ted on report
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March 12, 2015 Bob Allen Sefer, & Environmental Solutions 703 East Clinton Hobbs, NM 88240 RE: MONSANTO STATE BATTERY Enclosed are the results of analyses for samples received by the laboratory on 03/09/15 15:50. Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to dinking 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 webste at www.tceq texas apov/fiel/qallab.accredit certificate. Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for: Method EPA 552. Holoscetic Acids (HAA-5) Method EPA 524. Regulated VOCs (VI, V2, V3) Accreditation applies to public drinking water matrices. Sincerely, Cardinal Laboratories and any questions concerning this report, please feel free to contact me. Sincerely, Cardinal Laboratories accreditated and subter and the place feel free to contact me. Celly D, Keme Lab Director/Quality Manager	Bob Allen Safety & Environmental Solutions 703 East Clinton Hobbs, NM 88240 RE: MONSANTO STATE BATTERY Enclosed are the results of analyses for samples received by the laboratory on 03/09/15 16:50. 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 webste at www.toeq.texas.gov/field/ga/lab_accredited through the State of Colorado Department of Public Health and Environment for: Method EPA 552.2 Heloacetic Acids (HAA-5) Method EPA 552.4 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, Cardinal Laboratories to public drinking water matrices.	La	ARDINAL boratories	PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240
Sefety & Environmental Solutions 703 East Clinton Hobbs, NM 88240 RE: MONSANTO STATE BATTERY Enclosed are the results of analyses for samples received by the laboratory on 03/09/15 16:50. 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 www.toeq.texas.gov/field/gallab.accred.certif.html. Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for: Method EPA 552.2 Holocetic Acids (HAA-5) Method EPA 552.4 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, Category D. Keene	Sefety & Environmental Solutions 703 East Clinton 400bs, NM 88240 RE: MONSANTO STATE BATTERY Enclosed are the results of analyses for samples received by the laboratory on 03/09/15 16:50. Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to diriking 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.toeq.texas.gov/fie/diga/lab.accred.cet/fitml. 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 552.2 Total Trihalomethanes (TTHM) Method EPA 552.4 Regulated VOCs (V1, V2, V3) Accreditation applies to public dirinking 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, Cardy D. Keene	March 12, 2015		
TOS East Clinton         Hobbs, NM 88240         RE: MONSANTO STATE BATTERY         Enclosed are the results of analyses for samples received by the laboratory on 03/09/15 16:50.         Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to dimining water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an aterisk (**). For a complete list of accredited analytes and matrices visit the TCEQ website at www.toeq texas gov/field/anlab accredicet certifitml.         Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:         Method EPA 552.2       Heloacetic Acids (HAA-5)         Method EPA 552.4       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.       Cardinal Laboratories is         Cardinal Cardinal Cardinal Substation Conterning this report, please feel free to contact me.         Sincerely.       Cardinal substate Cardinal Subs	YOJ East Clinton         Hobbs, NM 88240         RE: MONSANTO STATE BATTERY         Enclosed are the results of analyses for samples received by the laboratory on 03/09/15 16:50.         Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to dimking 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.toeg.texas.gov/field/anlab.accredicetf.html.         Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:         Wethod EPA 552.2       Heloacetic Acids (HAA-5)         Wethod EPA 552.4       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,       Cardinal Laboratories Lines (TTHM)         Cardy D. Keene       Cardy D. Keene	Bob Allen		
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Celecy D. Keene Celev D. Keene	Celez D. Keene	chain-or-cusuody, ar ye	o nave any questions concerning this report, p	ease reen nee to contact me.
Celey D. Keene	Celey D. Keene	Sincerely,		
Celey D. Keene	Celey D. Keene	Celin	Differne	
Lab Director/Quality Manager	lab Director/Quality Manager	20 - 22 C		
		Lab Director/Quality Ma	anager	



		Analy	tical Resul	ts For:					
		Bob 703 Hob	Allen East Clinton obs NM, 88240	ental Solutions					
		Fax	To: (575)	393-4388					
Received: Reported: Project Name: Project Number: Project Location:	03/09/20 03/12/20 MONSAN OXY-14-0 LEA COU	15 TO STATE BATT 105	ERY	Sar Sar	npling Da npling Ty npling Co nple Reco	pe:	03/06/2 Soil Cool & Jodi He	Intact	
Sample ID: BH-1 15' (H500647	7-01)								
STEX 80218	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	03/11/2015	ND	2.10	105	2.00	1.08	
Toluene*	0.116	0.050	03/11/2015	ND	1.92	96.1	2.00	1.13	
Ethylbenzene*	0.672	0.050	03/11/2015	ND	2.23	112	2.00	0.897	
Total Xylenes*	4.84	0.150	03/11/2015	ND	6.10	102	6.00	0.213	
Total BTEX	5.63	0.300	03/11/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID) Chloride, SM4500Cl-B	129 5			10-10-					
6 M.M.M.M.	mg/	-	Analyze	ALCONAGE POLICY AND	0.00	140023133310.55	CONTRACTOR NO.	1158617V	8747.525V/
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1470	16.0	03/10/2015	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
GR0 C6-C10	337	50.0	03/11/2015	ND	193	96.5	200	1.64	
DRO >C10-C28	5810	50.0	03/11/2015	ND	203	102	200	0.942	
Surrogate: 1-Chlorooctane	118 9	6 47.2-15	7						
Surrogate: 1-Chlorooctadecane	157 9	\$ 52.1-17	6						
Cardinal Laboratories							8	*=Accredit	ed Analyte
PLANE NOTE: Labity and Denuges. Cardinals labits any other races whatsomer shall be deemed valued a including, whose limitation, business interruptions, loss of dath is based upon any of the above stated reasons or otherwise.	niess made in i	writing and received by Co of profits incurred by client	rdinal within thirty (34) t, its subsidiaries, affiliate	days after completion of a or successors articles	the applicable ut of or relati	d to the performance	t shall Cardinal be lable t	for incidental or a	consequental dama
Cellery Di Keen									
Celey D. Keene, Lab Director/Qu	ality Mana	ger			<u>90</u> 3			Pa	ge 2 of 8



# Analytical Results For:

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

Received:	03/09/2015	Sampling Date:	03/06/2015
Reported:	03/12/2015	Sampling Type:	Soil
Project Name:	MONSANTO STATE BATTERY	Sampling Condition:	Cool & Intact
Project Number:	OXY-14-005	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

### Sample ID: BH-1 17.5' (H500647-02)

mg/	kg	Analyze	d By: ms					
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<0.050	0.050	03/11/2015	ND	2.10	105	2.00	1.08	
<0.050	0.050	03/11/2015	ND	1,92	96.1	2.00	1.13	
<0.050	0.050	03/11/2015	ND	2.23	112	2.00	0.897	
<0.150	0.150	03/11/2015	ND	6.10	102	6.00	0.213	
<0.300	0.300	03/11/2015	ND					
	Result ⊲0.050 ⊲0.050 ⊲0.050 ⊲0.150	<0.050 0.050 <0.050 0.050 <0.050 0.050 <0.150 0.150	Result         Reporting Limit         Analyzed           <0.050	Result         Reporting Limit         Analyzed         Method Blank           <0.050	Result         Reporting Limit         Analyzed         Method Blank         BS           <0.050	Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery           <0.050	Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery         True Value QC           <0.050	Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery         True Value QC         RPD           <0.050

Surrogate: 4-Bromofluorobenzene (PID 119 % 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	1410	16.0	03/10/2015	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	10.5	10.0	03/11/2015	ND	193	96.5	200	1.64	
DR0 >C10-C28	768	10.0	03/11/2015	ND	203	102	200	0.942	

Surrogate: 1-Chlorooctane 89.4 % 47.2-157 Surrogate: 1-Chiorooctadecane 97.6% 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

RDBE NOTE: Lability and Damages. Cardish Bolity and direct exclusive remain for any claim string, whether based in contract or bot, shall be limbed to the amount paid by deet for analyses. All claims, including these for registeries and any other cause whatswere fails in damanet unnear marks in writing and mixed by Cardisal Hotty (20) days the completion of the applicable and/s. So on were table Cardinal Hot for indexed or consequential damages, including, whoman historics, business himspaces, lass of uses of uses of users and and the substances. Business himspaces have deel and the substance of the survices himspaces have deel and the substance of the survices himspace in damanet of users and the survices himspace of the survices himspace in damanet or damanet.

Celleg D. treene

Celey D. Keene, Lab Director/Quality Manager

Page 3 of 8

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		Bo 70 Ho	b Allen 3 East Clinton ibbs NM, 88240		•:				
Received:	03/09/20	115		Sar	npling Da	de:	03/06/2	2015	
Reported: Project Name:	03/12/20 MONSAN	015 ITO STATE BAT	TERY	Sar Sar	mpling Ty mpling Co	pe: Indition:	Soil Cool &	Intact	
Project Number: Project Location:	OXY-14-	INTY, NM		Sar	npie keo	eived By:	Jodi He	inson	
Sample ID: BH-1 18.5' (H500	647-03)								
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	03/11/2015	ND	2.09	105	2.00	0.506	
Toluene*	<0.050	0.050	03/11/2015	ND	1.95	97.5	2.00	0.0885	
Ethylbenzene*	<0.050	0.050	03/11/2015	ND	2.31	115	2.00	1.36	
Total Xylenes*	<0.150	0.150	03/11/2015	ND	6.27	104	6.00	1.52	
Total BTEX	<0.300	0.300	03/11/2015	ND					
Surrogate: 4-Bromofluorobenzene (PI	D 119	61-15							
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	85	% Recovery	True Value QC	RPD	Qualifie
Chloride	1680	16.0	03/10/2015	ND	416	104	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS	1.1.1.1	154.055			23. 42
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
GRO C6-C10	<10.0	10.0	03/11/2015	ND	193	96.5	200	1,64	
DRO >C10-C28	838	10.0	03/11/2015	ND	203	102	200	0.942	
Surrogate: 1-Chiorooctane	92.0	% 47.2-1	57						
Surrogate: 1-Chiorooctadecane	103	52.1-1	76						
								*	ed Analyt



### Analytical Results For:

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

Received:	03/09/20	015		Sa	mpling Da	ite:	03/06/2	2015	
Reported:	03/12/20	015		Sa	mpling Ty	pe:	Soil		
Project Name:	MONSAN	TO STATE BATT	ERY		mpling Co		Cool &	Intact	
Project Number:	OXY-14-	005		Sa	mple Rece	eived By:	Jodi He	nson	
Project Location:	LEA COU	INTY, NM							
Sample ID: BH-2 16' (H5	00647-04)								
TEX 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	03/11/2015	ND	2.09	105	2.00	0.506	
and served the		0.050	03/11/2015	ND	1.95	97.5	2.00	0.0885	
	< 0.050	0.050	0011112010						
Toluene*	<0.050 <0.050	0.050	03/11/2015	ND	2.31	115	2.00	1.36	
Toluene* Ethylbenzene* Fotal Xylenes*			State Constant	ND ND	2.31 6.27	115 104	2.00 6.00	1.36 1.52	

Surrogate: 4-Bramofluarobenzene (PID 117% 61-154 Charles Makhool-B mg/kg Analyzed By: AP

Chloride, SM4500CI-B	mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	960	16.0	03/10/2015	ND	416	104	400	0.00	
TPH 8015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/11/2015	ND	193	96.5	200	1.64	
DRO >C10-C28	<10.0	10.0	03/11/2015	ND	203	102	200	0.942	
Surrogate: 1-Chlorooctane	86.5	% 47.2-15	7						

Surrogate: 1-Chlorooctadecane

95.6% 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

RUGE NOTE: Lability and Durages. Cardinal's bablity and clearts exclusive remarks for any claim straing, whether tasked in contract or torig that lie limited to the service pair by cleart for majores. All clears, including traces for reagingers and any other cause whetawers that is descent wheta clears made in whiting and reversed by Cardinal whether strainy (30) clears and completion of the applicable andress. No event shall Cardinal he labile for indexed) or consequential decayaes, including whetast initiation, husiness manyations, less of sum, or lass of profits incomed by clears, efficiency or anonance straing, and or valued to the performance of the services betwooder by Cardinal, ingendees of whether such dimin tasked poor of phase host bodies or complexity and incomed by clears, the service is expected indexed by clears to even and that the reference or the services betwooder by Cardinal, whether such dimin tasked poor of phase host bodies or complexity and an and that the reference clears and that discriminates and that has deven and that the reference or the services betwooder by Cardinal, and the service is expected and that the reference of the services betwooder by Cardinal, and the services and that the reference clears and that the services and that the services and that the clears and that the services and that the services are associated and that the service and that the services are associated and the service and that the service and that the services are associated and that the service are associated and the service and that the service are associated and the service and that the s

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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

Project Name: MONSANTO STATE BATTERY Sampling Condition: Cou	Soil
Project Number: 0XY-14-005 Sample Received By: Joo	Cool & Intac
	Jodi Henson
Project Location: LEA COUNTY, NM	

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	03/11/2015	ND	2.09	105	2.00	0.506	
Toluene*	<0.050	0.050	03/11/2015	ND	1,95	97.5	2.00	0.0885	
Ethylbenzene*	<0.050	0.050	03/11/2015	ND	2.31	115	2.00	1.36	
Total Xylenes*	<0.150	0.150	03/11/2015	ND	6.27	104	6.00	1.52	
Total BTEX	<0.300	0.300	03/11/2015	ND					

### Surrogate: 4-Bromofluorobenzene (PID 114 % 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	816	16.0	03/10/2015	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	03/11/2015	ND	193	96.5	200	1.64		
DRO >C10-C28	<10.0	10.0	03/11/2015	ND	203	102	200	0.942		
Surrogate: 1-Chiorooctane	80.8	% 47.2-15	7							

Surrogate: 1-Chiorooctane Surrogate: 1-Chlorooctadecane

86.5% 52.1-176

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\*=Accredited Analyte

REALE AUTE: Lability and Demages. Cardinals Bablity and clerifs exclude memory for any clean string, whether based in contact or tor, shall be limited to the amount paid by clerif for analyses. All claims, including those for reaginees and any other class whatswere that is deered whether that and is in writing and movied by Cardinal whether thing 201 days with compation of the applicable service. It is no wert shall critical is bable for indexed or consequential damages, holding, which is below, classes whether, have any other strates and the indexed in contact and the service state of the service becaute the service damage strates the above class critical and and any is the of applicable strates in the service strate classes. In the service strates are strated and and any other strates are strated and and any other strates are strated and and any other strates are strates are strates and any other strates are strates any other strates are strates are strates and any other strates are strates and any other strates are strates are strates and any other strates are strates and are strates ar

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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 SM4500CI-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

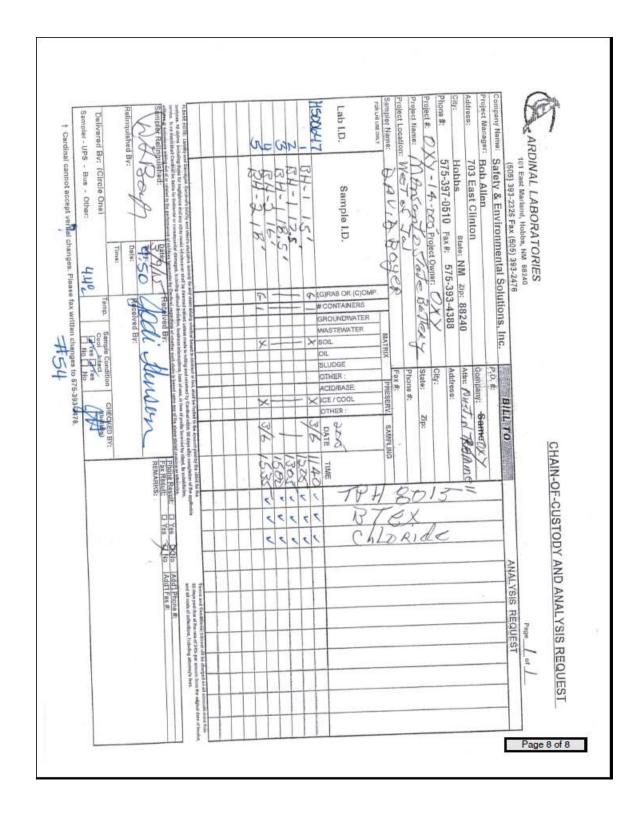
\*=Accredited Analyte

REDER FOTE: Labelity and Damages. Cardinal's labelity and cherts exclusive nemety for any clean and/og, whether based in contract or tort, shall be limbed to be sensore used by clean for subjects. All claims, including these for subjects and any other cause whethere whether whether labelity is whether and modered by Eachtel whether based in contract or tort, sphother andre. All claims, including these for subjects and excluding whether labelity, however, that produce and any other senses and the senses at the performance of the senses between the performance of the senses between the performance of the senses between the claims, regardless of whether such claims taked grows of the senses and claims and only the sense of performance of the senses between the performance of the sense between the performance of the senses between the performance of the sense between t

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Celey D. Keene, Lab Director/Quality Manager

Page 7 of 8



Appendix B C-141

District J 1625 N. French Dr., Hobts, NM 88340 District II 811 S. Fren St., Arrena, NM 88210			f New Mex and Natura	ico I Resources					Form C-141 August 8, 2011
Datriet III 1000 Rio Buano Road, Amer. NM 13410 Datriet IV 1223 S. St. Francis Dr. Santa Fe, NM 87505	1220 Sa	Sout nta F	rvation Div h St. Franc e, NM 875	is Dr. 05	07/20103	Cop	y to appropr occordance w	isse Dis oth 19.1	irict Office in 15:29 NMAC
Rel	ease Notific	atio	n and Co	orrective A	ction				
		00292	OPERA?	FOR		Init	ial Report		Final Repo
Name of Company Oxy Permian Ltd.	10 F 2000 10			ustin Tramell		1			
Address 1017 W. Stanolind Rd, Hobbs, Facility Name Monsanto State Battery	NM 88240	-		<ul> <li>do. (575) 49</li> <li>Gathering</li> </ul>	9-4919	_			
Surface Owner State	Mineral O	linter	and the state of the		1.4	DI SI	0. n/h	_	_
Sume of the state	- 124-5177		landar dav	1365322	1.0	21.15	0, 0/1	-	
Unit Letter Section Township Range	LOCA Fort from the		N OF REA	Fest from the	1		1.0.	_	
and the second	For tron the	7600	h30101 Line	PER nomine	East/West	Cat	County		
N 16 258 32E				-	-		Lea		
	Latitude N.32.1	2676	e Longitu	de <u>W 103.6795</u>	34*				
	NAT	URF	OF REL	EASE					
Type of Release Oil and Produced water			Volume m	Rolcase 35bb			Recoveral		e cid.
Source of Refease Overload tripped on water to	ansfer pump coasi	iter		duced water lour of Occurren		30 biss produced water Date and Hour of Discovery			
tank overflow			01/05/2014	0.					
Was Immediate Notice Given?	No 🗖 Noi Re	quired	If YES, To Temps Obs	whom? ring-NMOCE					
By Whom? Austin Tranell		-	Date and H	and a set of the second		-			
Was a Watercourse Reached?	L No.		If YES, Vo	dome Impocing	the Watercoo	ne.			
If a Watercourse was Impacted, Describe Fully	1. Mar	_	-			_			
Describe Cause of Problem and Remedial Action Automation failur caused the tanks to overflow : nil and 30 bits of the produced water. The actor Describe Area Allected and Cleanup Action Tai	ind leak 35 bbls of ution was repaire im.*	đ							
The affected area is approximately 60' s 150' or NMOCD.	location. Rened	istion	will be comple	sed in accordanc	e with an app	rove	5 remediatio	t plan fi	rom
I benefy certify that the information given above regulations all operators are required to report an public health or the environment. The acceptane though their operations have failed to adequarely or the environment, in addition, NMOCD acceptances, federal, state, or loggi laws analyse regulations,	d/or file certain re w of a C-141 repo investigate and re	decce n by ti media	notifications at te NMOCD m (c contaminati	od perform corre- arked as 'Final P on that pose a th	ctive actions tepert" does r reat to ground	for re tot re i wate	leases which here the ope st, surface w	may er rator of ster, hu	stanger Trability man health
signesse fullrall			Amounts	OIL CON	er of the second state	ION	DIVISI	ON	
Printed Name Austin Tranfell		-	when an a	environmental 3	discussi.	_			
Tatle: HES Operations Specialis:		_	Approval Dat	H.	Expir	stion	Date:		
E-mail Address: Acisin_Trancli@coxy.com	-	_	Conditions of	Approvai:			Anached		
Dute Phone: Attach Additional Sheets If Necessary	(575) 499-4911	2				_	10 Contractor	542715	

Appendix C Site Photographs



Location Sign



Spill facing north



Spill facing east



Spill facing northwest



Spill facing northeast



Spill facing southeast





Spill facing northeast



Spill facing southwest



Spill facing south