



PHONE (575) 397-6388 • FAX (575) 397- 0397 • 1324 W. MARLAND • P.O. BOX 805 • HOBBS, NM 88241-0805  
E-MAIL: [cbrunson@bbcinternational.com](mailto:cbrunson@bbcinternational.com)

**RECEIVED**

*By OCD District 1 at 1:02 pm, Aug 18, 2015*

**APPROVED** Conditional

*By OCD District 1 at 1:02 pm, Aug 18, 2015*

**OXY – MADERA 17 FEDERAL #1H** 1. Ensure BLM approval.

## REMEDIATION PLAN

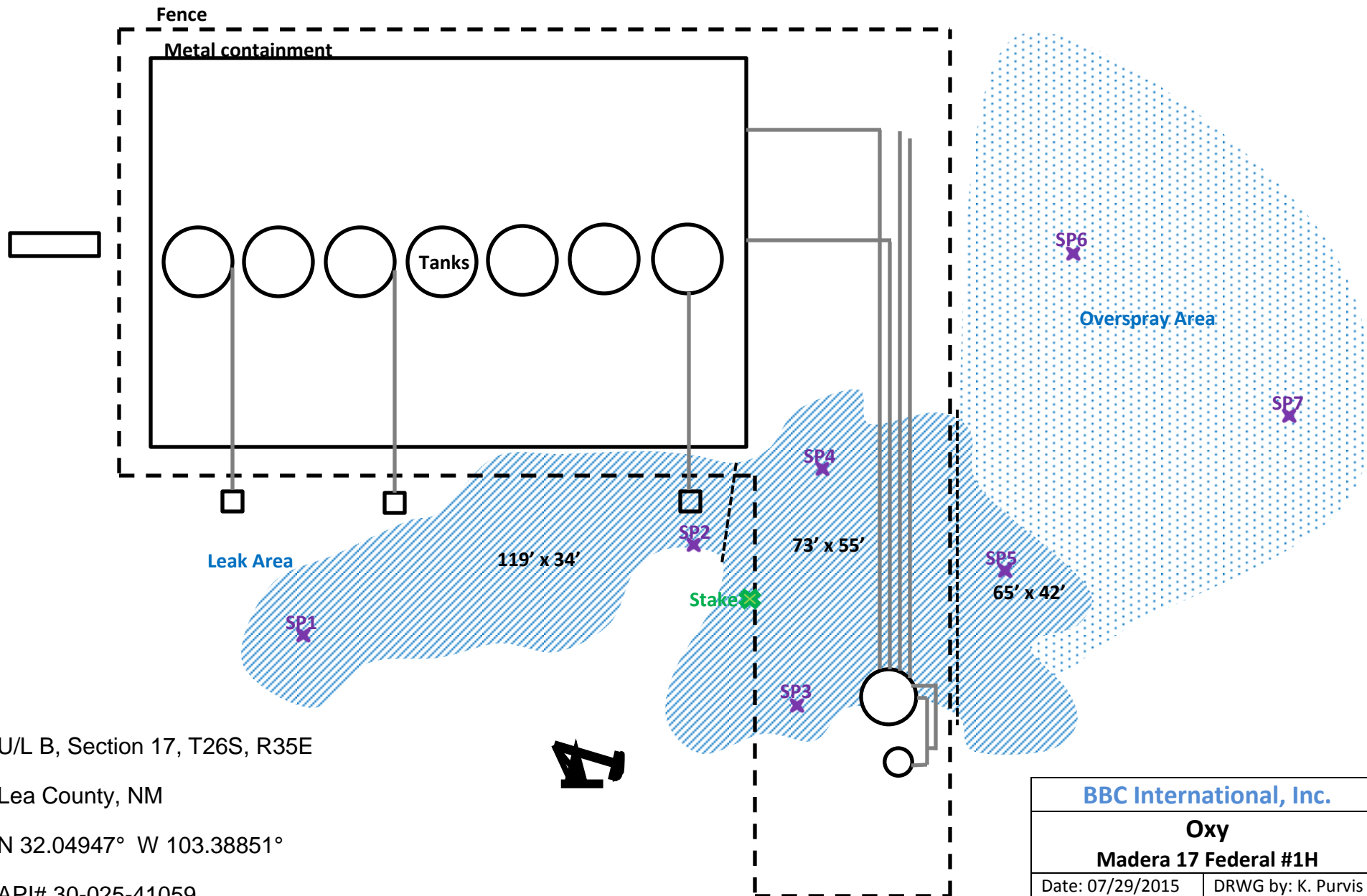
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OXY will surface scrape to a depth of 6 inches in the area covered by sample points SP1-SP5 as depicted on the following site diagram. The overspray area covered by sample points SP6 and SP7 will be back dragged. All excavated materials will be disposed of at an NMOCD-approved disposal facility.

The site will then be backfilled with clean soil.

Oxy

# Madera 17 Federal #1H



U/L B, Section 17, T26S, R35E

Lea County, NM

N 32.04947° W 103.38851°

API# 30-025-41059

**BBC International, Inc.**

**Oxy**  
**Madera 17 Federal #1H**

Date: 07/29/2015

DRWG by: K. Purvis

NOT TO SCALE

File: Oxy 2015

# Groundwater Plot

Oxy Madera 17 Federal #1H

County  
Lea

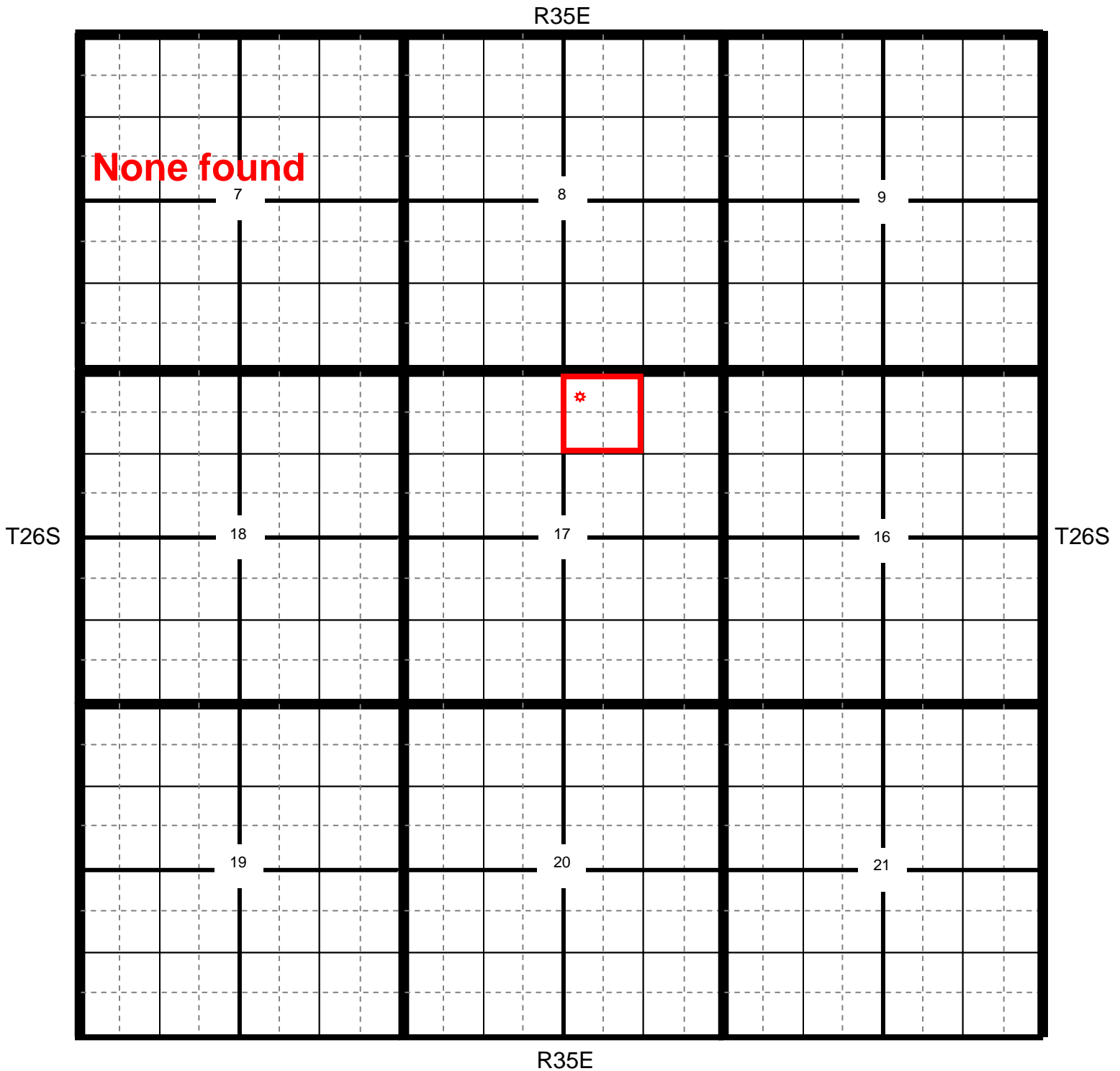
Unit Letter  
B

Section  
17

Township  
T26S

Range  
R35E

Trend Map <150'



★ Location

● OCD

● USGS

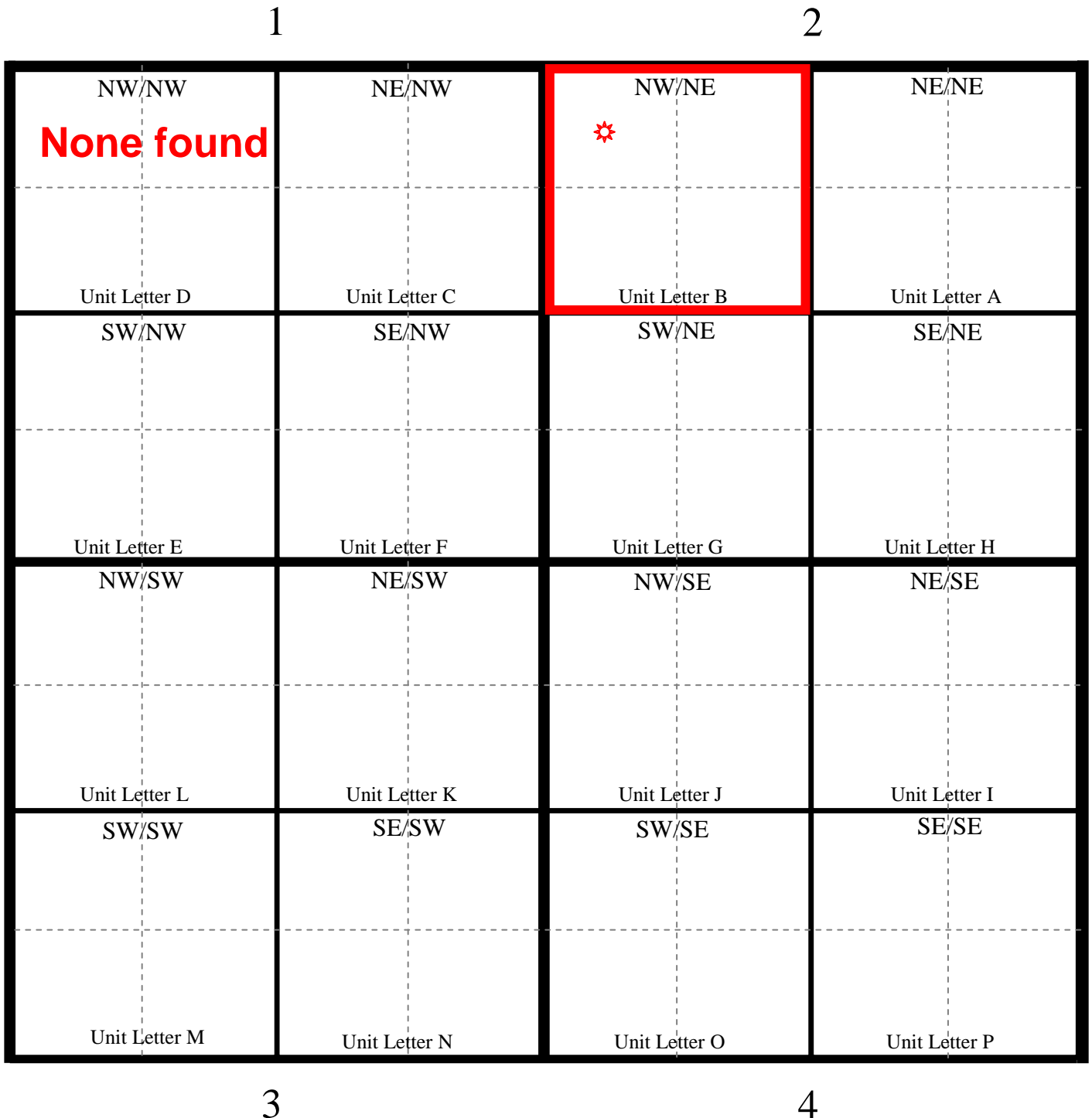
● SEO

● All Databases

## Oxy Madera 17 Federal #1H

<b>County</b>	<b>Unit Letter</b>	<b>Section</b>	<b>Township</b>	<b>Range</b>
Lea	B	17	26S	35E

Trend Map 150'



**Laboratory Analytical Results Summary  
Madera 17 Federal #1H**

		Sample	SP1 @ 1'	SP1 @ 2'	SP1 @ 3'
Analyte	Method	Date	8/6/15	8/6/15	8/6/15
			mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050
Toluene	BTEX 8021B		0.052	<0.050	<0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300	<0.300
Chloride	SM4500Cl-B		368	272	32
GRO	TPH 8015M		<10.0	<10.0	<10.0
DRO	TPH 8015M		<10.0	<10.0	<10.0

		Sample	SP2 @ 1'	SP2 @ 2'	SP2 @ 3'
Analyte	Method	Date	8/6/15	8/6/15	8/6/15
			mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050
Toluene	BTEX 8021B		<0.050	<0.050	<0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300	<0.300
Chloride	SM4500Cl-B		32	<16.0	16
GRO	TPH 8015M		<10.0	<10.0	<10.0
DRO	TPH 8015M		<10.0	<10.0	<10.0

		Sample	SP3 @ 1'	SP3 @ 2'	SP3 @ 3'
Analyte	Method	Date	8/6/15	8/6/15	8/6/15
			mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050
Toluene	BTEX 8021B		<0.050	<0.050	<0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300	<0.300
Chloride	SM4500Cl-B		<16.0	<16.0	32
GRO	TPH 8015M		<10.0	<10.0	<10.0
DRO	TPH 8015M		<10.0	<10.0	<10.0

		Sample	SP4 @ 1'	SP4 @ 2'	SP4 @ 3'
Analyte	Method	Date	8/6/15	8/6/15	8/6/15
			mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050
Toluene	BTEX 8021B		<0.050	<0.050	<0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300	<0.300
Chloride	SM4500Cl-B		32	<16.0	<16.0
GRO	TPH 8015M		<10.0	<10.0	<10.0
DRO	TPH 8015M		<10.0	<10.0	<10.0

		Sample	SP5 @ 1'	SP5 @ 2'	SP5 @ 3'
Analyte	Method	Date	8/6/15	8/6/15	8/6/15
			mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050
Toluene	BTEX 8021B		<0.050	<0.050	<0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300	<0.300
Chloride	SM4500Cl-B		32	<16.0	32
GRO	TPH 8015M		<10.0	<10.0	<10.0
DRO	TPH 8015M		<10.0	<10.0	<10.0

		Sample	SP6 @ 1'
Analyte	Method	Date	8/6/15
			mg/Kg
Benzene	BTEX 8021B		<0.050
Toluene	BTEX 8021B		<0.050
Ethylbenzene	BTEX 8021B		<0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		<0.300
Chloride	SM4500Cl-B		<16.0
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0

		Sample	SP7 @ 1'
Analyte	Method	Date	8/6/15
			mg/Kg
Benzene	BTEX 8021B		<0.050
Toluene	BTEX 8021B		<0.050
Ethylbenzene	BTEX 8021B		<0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		<0.300
Chloride	SM4500Cl-B		48
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0



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

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August 14, 2015

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: MADERA 17 FED 1H

Enclosed are the results of analyses for samples received by the laboratory on 08/07/15 13:59.

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.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

BBC International, Inc.  
Cliff Brunson  
P.O. Box 805  
Hobbs NM, 88241  
Fax To: (575) 397-0397

Received: 08/07/2015  
Reported: 08/14/2015  
Project Name: MADERA 17 FED 1H  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/06/2015  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Judy Garcia

**Sample ID: SP1 @ 1' (H502069-01)**

BTX 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	08/11/2015	ND	2.00	99.9	2.00	1.69	
Toluene*	0.052	0.050	08/11/2015	ND	2.14	107	2.00	4.39	
Ethylbenzene*	<0.050	0.050	08/11/2015	ND	2.06	103	2.00	7.49	
Total Xylenes*	<0.150	0.150	08/11/2015	ND	6.12	102	6.00	6.95	
Total BTX	<0.300	0.300	08/11/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 85.6-137

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	08/12/2015	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/08/2015	ND	205	102	200	1.07	
DRO >C10-C28	<10.0	10.0	08/08/2015	ND	190	95.2	200	1.70	

Surrogate: 1-Chlorooctane 115 % 47.2-157

Surrogate: 1-Chlorooctadecane 126 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

BBC International, Inc.  
Cliff Brunson  
P.O. Box 805  
Hobbs NM, 88241  
Fax To: (575) 397-0397

Received: 08/07/2015  
Reported: 08/14/2015  
Project Name: MADERA 17 FED 1H  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/06/2015  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Judy Garcia

**Sample ID: SP1 @ 2' (H502069-02)**

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	08/11/2015	ND	2.22	111	2.00	0.0643		
Toluene*	<0.050	0.050	08/11/2015	ND	2.14	107	2.00	0.619		
Ethylbenzene*	<0.050	0.050	08/11/2015	ND	2.36	118	2.00	0.403		
Total Xylenes*	<0.150	0.150	08/11/2015	ND	6.68	111	6.00	0.406		
Total BTEx	<0.300	0.300	08/11/2015	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 85.6-137

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	08/12/2015	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/08/2015	ND	205	102	200	1.07	
DRO >C10-C28	<10.0	10.0	08/08/2015	ND	190	95.2	200	1.70	

Surrogate: 1-Chlorooctane 111 % 47.2-157

Surrogate: 1-Chlorooctadecane 124 % 52.1-176

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P.O. Box 805  
Hobbs NM, 88241  
Fax To: (575) 397-0397

Received: 08/07/2015  
Reported: 08/14/2015  
Project Name: MADERA 17 FED 1H  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/06/2015  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Judy Garcia

**Sample ID: SP1 @ 3' (H502069-03)**

BTX 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	08/11/2015	ND	2.22	111	2.00	0.0643	
Toluene*	<0.050	0.050	08/11/2015	ND	2.14	107	2.00	0.619	
Ethylbenzene*	<0.050	0.050	08/11/2015	ND	2.36	118	2.00	0.403	
Total Xylenes*	<0.150	0.150	08/11/2015	ND	6.68	111	6.00	0.406	
Total BTX	<0.300	0.300	08/11/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 85.6-137

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	08/12/2015	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/08/2015	ND	205	102	200	1.07	
DRO >C10-C28	<10.0	10.0	08/08/2015	ND	190	95.2	200	1.70	

Surrogate: 1-Chlorooctane 110 % 47.2-157

Surrogate: 1-Chlorooctadecane 139 % 52.1-176

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Fax To: (575) 397-0397

Received: 08/07/2015  
Reported: 08/14/2015  
Project Name: MADERA 17 FED 1H  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/06/2015  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Judy Garcia

**Sample ID: SP2 @ 1' (H502069-04)**

BTX 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	08/11/2015	ND	2.22	111	2.00	0.0643	
Toluene*	<0.050	0.050	08/11/2015	ND	2.14	107	2.00	0.619	
Ethylbenzene*	<0.050	0.050	08/11/2015	ND	2.36	118	2.00	0.403	
Total Xylenes*	<0.150	0.150	08/11/2015	ND	6.68	111	6.00	0.406	
Total BTX	<0.300	0.300	08/11/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 85.6-137

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/12/2015	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/08/2015	ND	205	102	200	1.07	
DRO >C10-C28	<10.0	10.0	08/08/2015	ND	190	95.2	200	1.70	

Surrogate: 1-Chlorooctane 110 % 47.2-157

Surrogate: 1-Chlorooctadecane 125 % 52.1-176

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Fax To: (575) 397-0397

Received: 08/07/2015  
Reported: 08/14/2015  
Project Name: MADERA 17 FED 1H  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/06/2015  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Judy Garcia

**Sample ID: SP2 @ 2' (H502069-05)**

BTX 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	08/11/2015	ND	2.22	111	2.00	0.0643	
Toluene*	<0.050	0.050	08/11/2015	ND	2.14	107	2.00	0.619	
Ethylbenzene*	<0.050	0.050	08/11/2015	ND	2.36	118	2.00	0.403	
Total Xylenes*	<0.150	0.150	08/11/2015	ND	6.68	111	6.00	0.406	
Total BTX	<0.300	0.300	08/11/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 85.6-137

Chloride, SM4500CI-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	08/12/2015	ND	432	108	400	3.77	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/08/2015	ND	205	102	200	1.07	
DRO >C10-C28	<10.0	10.0	08/08/2015	ND	190	95.2	200	1.70	

Surrogate: 1-Chlorooctane 115 % 47.2-157

Surrogate: 1-Chlorooctadecane 136 % 52.1-176

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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P.O. Box 805  
Hobbs NM, 88241  
Fax To: (575) 397-0397

Received: 08/07/2015  
Reported: 08/14/2015  
Project Name: MADERA 17 FED 1H  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/06/2015  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Judy Garcia

**Sample ID: SP2 @ 3' (H502069-06)**

BTX 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	08/11/2015	ND	2.22	111	2.00	0.0643	
Toluene*	<0.050	0.050	08/11/2015	ND	2.14	107	2.00	0.619	
Ethylbenzene*	<0.050	0.050	08/11/2015	ND	2.36	118	2.00	0.403	
Total Xylenes*	<0.150	0.150	08/11/2015	ND	6.68	111	6.00	0.406	
Total BTX	<0.300	0.300	08/11/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 85.6-137

Chloride, SM4500CI-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	08/12/2015	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/08/2015	ND	205	102	200	1.07	
DRO >C10-C28	<10.0	10.0	08/08/2015	ND	190	95.2	200	1.70	

Surrogate: 1-Chlorooctane 122 % 47.2-157

Surrogate: 1-Chlorooctadecane 156 % 52.1-176

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

BBC International, Inc.  
Cliff Brunson  
P.O. Box 805  
Hobbs NM, 88241  
Fax To: (575) 397-0397

Received: 08/07/2015  
Reported: 08/14/2015  
Project Name: MADERA 17 FED 1H  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/06/2015  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Judy Garcia

**Sample ID: SP3 @ 1' (H502069-07)**

BTX 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	08/11/2015	ND	2.22	111	2.00	0.0643	
Toluene*	<0.050	0.050	08/11/2015	ND	2.14	107	2.00	0.619	
Ethylbenzene*	<0.050	0.050	08/11/2015	ND	2.36	118	2.00	0.403	
Total Xylenes*	<0.150	0.150	08/11/2015	ND	6.68	111	6.00	0.406	
Total BTX	<0.300	0.300	08/11/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 85.6-137

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	08/12/2015	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/08/2015	ND	205	102	200	1.07	
DRO >C10-C28	<10.0	10.0	08/08/2015	ND	190	95.2	200	1.70	

Surrogate: 1-Chlorooctane 116 % 47.2-157

Surrogate: 1-Chlorooctadecane 147 % 52.1-176

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Cliff Brunson  
P.O. Box 805  
Hobbs NM, 88241  
Fax To: (575) 397-0397

Received: 08/07/2015  
Reported: 08/14/2015  
Project Name: MADERA 17 FED 1H  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/06/2015  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Judy Garcia

**Sample ID: SP3 @ 2' (H502069-08)**

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	08/11/2015	ND	2.22	111	2.00	0.0643		
Toluene*	<0.050	0.050	08/11/2015	ND	2.14	107	2.00	0.619		
Ethylbenzene*	<0.050	0.050	08/11/2015	ND	2.36	118	2.00	0.403		
Total Xylenes*	<0.150	0.150	08/11/2015	ND	6.68	111	6.00	0.406		
Total BTEx	<0.300	0.300	08/11/2015	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 85.6-137

Chloride, SM4500CI-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	08/12/2015	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/10/2015	ND	204	102	200	5.09	
DRO >C10-C28	<10.0	10.0	08/10/2015	ND	189	94.4	200	13.2	

Surrogate: 1-Chlorooctane 125 % 47.2-157

Surrogate: 1-Chlorooctadecane 155 % 52.1-176

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Cliff Brunson  
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Hobbs NM, 88241  
Fax To: (575) 397-0397

Received: 08/07/2015  
Reported: 08/14/2015  
Project Name: MADERA 17 FED 1H  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/06/2015  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Judy Garcia

**Sample ID: SP3 @ 3' (H502069-09)**

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	08/11/2015	ND	2.22	111	2.00	0.0643	
Toluene*	<0.050	0.050	08/11/2015	ND	2.14	107	2.00	0.619	
Ethylbenzene*	<0.050	0.050	08/11/2015	ND	2.36	118	2.00	0.403	
Total Xylenes*	<0.150	0.150	08/11/2015	ND	6.68	111	6.00	0.406	
Total BTEx	<0.300	0.300	08/11/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 85.6-137

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/12/2015	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/10/2015	ND	204	102	200	5.09	
DRO >C10-C28	<10.0	10.0	08/10/2015	ND	189	94.4	200	13.2	

Surrogate: 1-Chlorooctane 118 % 47.2-157

Surrogate: 1-Chlorooctadecane 130 % 52.1-176

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Hobbs NM, 88241  
Fax To: (575) 397-0397

Received: 08/07/2015  
Reported: 08/14/2015  
Project Name: MADERA 17 FED 1H  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/06/2015  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Judy Garcia

**Sample ID: SP4 @ 1' (H502069-10)**

BTX 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	08/11/2015	ND	2.22	111	2.00	0.0643	
Toluene*	<0.050	0.050	08/11/2015	ND	2.14	107	2.00	0.619	
Ethylbenzene*	<0.050	0.050	08/11/2015	ND	2.36	118	2.00	0.403	
Total Xylenes*	<0.150	0.150	08/11/2015	ND	6.68	111	6.00	0.406	
Total BTX	<0.300	0.300	08/11/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 85.6-137

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	08/12/2015	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/10/2015	ND	204	102	200	5.09	
DRO >C10-C28	<10.0	10.0	08/10/2015	ND	189	94.4	200	13.2	

Surrogate: 1-Chlorooctane 120 % 47.2-157

Surrogate: 1-Chlorooctadecane 141 % 52.1-176

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Hobbs NM, 88241  
Fax To: (575) 397-0397

Received: 08/07/2015  
Reported: 08/14/2015  
Project Name: MADERA 17 FED 1H  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/06/2015  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Judy Garcia

**Sample ID: SP4 @ 2' (H502069-11)**

BTX 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	08/11/2015	ND	2.22	111	2.00	0.0643	
Toluene*	<0.050	0.050	08/11/2015	ND	2.14	107	2.00	0.619	
Ethylbenzene*	<0.050	0.050	08/11/2015	ND	2.36	118	2.00	0.403	
Total Xylenes*	<0.150	0.150	08/11/2015	ND	6.68	111	6.00	0.406	
Total BTX	<0.300	0.300	08/11/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 85.6-137

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	08/12/2015	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/10/2015	ND	204	102	200	5.09	
DRO >C10-C28	<10.0	10.0	08/10/2015	ND	189	94.4	200	13.2	

Surrogate: 1-Chlorooctane 119 % 47.2-157

Surrogate: 1-Chlorooctadecane 134 % 52.1-176

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Cliff Brunson  
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Hobbs NM, 88241  
Fax To: (575) 397-0397

Received: 08/07/2015  
Reported: 08/14/2015  
Project Name: MADERA 17 FED 1H  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/06/2015  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Judy Garcia

**Sample ID: SP4 @ 3' (H502069-12)**

BTX 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	08/11/2015	ND	2.22	111	2.00	0.0643	
Toluene*	<0.050	0.050	08/11/2015	ND	2.14	107	2.00	0.619	
Ethylbenzene*	<0.050	0.050	08/11/2015	ND	2.36	118	2.00	0.403	
Total Xylenes*	<0.150	0.150	08/11/2015	ND	6.68	111	6.00	0.406	
Total BTX	<0.300	0.300	08/11/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 85.6-137

Chloride, SM4500CI-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	08/12/2015	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/10/2015	ND	204	102	200	5.09	
DRO >C10-C28	<10.0	10.0	08/10/2015	ND	189	94.4	200	13.2	

Surrogate: 1-Chlorooctane 122 % 47.2-157

Surrogate: 1-Chlorooctadecane 139 % 52.1-176

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Hobbs NM, 88241  
Fax To: (575) 397-0397

Received: 08/07/2015  
Reported: 08/14/2015  
Project Name: MADERA 17 FED 1H  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/06/2015  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Judy Garcia

**Sample ID: SP5 @ 1' (H502069-13)**

BTX 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	08/11/2015	ND	2.22	111	2.00	0.0643	
Toluene*	<0.050	0.050	08/11/2015	ND	2.14	107	2.00	0.619	
Ethylbenzene*	<0.050	0.050	08/11/2015	ND	2.36	118	2.00	0.403	
Total Xylenes*	<0.150	0.150	08/11/2015	ND	6.68	111	6.00	0.406	
Total BTX	<0.300	0.300	08/11/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 85.6-137

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/12/2015	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/10/2015	ND	204	102	200	5.09	
DRO >C10-C28	<10.0	10.0	08/10/2015	ND	189	94.4	200	13.2	

Surrogate: 1-Chlorooctane 117 % 47.2-157

Surrogate: 1-Chlorooctadecane 130 % 52.1-176

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Hobbs NM, 88241  
Fax To: (575) 397-0397

Received: 08/07/2015  
Reported: 08/14/2015  
Project Name: MADERA 17 FED 1H  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/06/2015  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Judy Garcia

**Sample ID: SP5 @ 2' (H502069-14)**

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	08/11/2015	ND	2.22	111	2.00	0.0643	
Toluene*	<0.050	0.050	08/11/2015	ND	2.14	107	2.00	0.619	
Ethylbenzene*	<0.050	0.050	08/11/2015	ND	2.36	118	2.00	0.403	
Total Xylenes*	<0.150	0.150	08/11/2015	ND	6.68	111	6.00	0.406	
Total BTEx	<0.300	0.300	08/11/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 85.6-137

Chloride, SM4500CI-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	08/12/2015	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/10/2015	ND	204	102	200	5.09	
DRO >C10-C28	<10.0	10.0	08/10/2015	ND	189	94.4	200	13.2	

Surrogate: 1-Chlorooctane 120 % 47.2-157

Surrogate: 1-Chlorooctadecane 135 % 52.1-176

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Fax To: (575) 397-0397

Received: 08/07/2015  
Reported: 08/14/2015  
Project Name: MADERA 17 FED 1H  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/06/2015  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Judy Garcia

**Sample ID: SP5 @ 3' (H502069-15)**

BTX 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	08/11/2015	ND	2.22	111	2.00	0.0643	
Toluene*	<0.050	0.050	08/11/2015	ND	2.14	107	2.00	0.619	
Ethylbenzene*	<0.050	0.050	08/11/2015	ND	2.36	118	2.00	0.403	
Total Xylenes*	<0.150	0.150	08/11/2015	ND	6.68	111	6.00	0.406	
Total BTX	<0.300	0.300	08/11/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 85.6-137

Chloride, SM4500CI-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/12/2015	ND	432	108	400	3.77	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/10/2015	ND	204	102	200	5.09	
DRO >C10-C28	<10.0	10.0	08/10/2015	ND	189	94.4	200	13.2	

Surrogate: 1-Chlorooctane 125 % 47.2-157

Surrogate: 1-Chlorooctadecane 161 % 52.1-176

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

BBC International, Inc.  
Cliff Brunson  
P.O. Box 805  
Hobbs NM, 88241  
Fax To: (575) 397-0397

Received: 08/07/2015  
Reported: 08/14/2015  
Project Name: MADERA 17 FED 1H  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/06/2015  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Judy Garcia

**Sample ID: SP6 @ 1' (H502069-16)**

BTX 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	08/11/2015	ND	2.22	111	2.00	0.0643	
Toluene*	<0.050	0.050	08/11/2015	ND	2.14	107	2.00	0.619	
Ethylbenzene*	<0.050	0.050	08/11/2015	ND	2.36	118	2.00	0.403	
Total Xylenes*	<0.150	0.150	08/11/2015	ND	6.68	111	6.00	0.406	
Total BTX	<0.300	0.300	08/11/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 85.6-137

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	08/12/2015	ND	432	108	400	3.77	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/10/2015	ND	204	102	200	5.09	
DRO >C10-C28	<10.0	10.0	08/10/2015	ND	189	94.4	200	13.2	

Surrogate: 1-Chlorooctane 120 % 47.2-157

Surrogate: 1-Chlorooctadecane 151 % 52.1-176

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

BBC International, Inc.  
Cliff Brunson  
P.O. Box 805  
Hobbs NM, 88241  
Fax To: (575) 397-0397

Received: 08/07/2015  
Reported: 08/14/2015  
Project Name: MADERA 17 FED 1H  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/06/2015  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Judy Garcia

**Sample ID: SP7 @ 1' (H502069-17)**

BTX 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	08/11/2015	ND	2.22	111	2.00	0.0643	
Toluene*	<0.050	0.050	08/11/2015	ND	2.14	107	2.00	0.619	
Ethylbenzene*	<0.050	0.050	08/11/2015	ND	2.36	118	2.00	0.403	
Total Xylenes*	<0.150	0.150	08/11/2015	ND	6.68	111	6.00	0.406	
Total BTX	<0.300	0.300	08/11/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 85.6-137

Chloride, SM4500CI-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/12/2015	ND	432	108	400	3.77	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/10/2015	ND	204	102	200	5.09	
DRO >C10-C28	<10.0	10.0	08/10/2015	ND	189	94.4	200	13.2	

Surrogate: 1-Chlorooctane 124 % 47.2-157

Surrogate: 1-Chlorooctadecane 136 % 52.1-176

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

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

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Celey D. Keene, Lab Director/Quality Manager





101 East Marland, Hobbs, NM 88240

(505) 393-2326 FAX (505) 393-2476

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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



**ARDINAL LABORATORIES**

101 East Marland, Hobbs, NM 88240  
(505) 393-2326 FAX (505) 393-2476

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



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

State of New Mexico  
Energy Minerals and Natural Resources

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

Form C-141  
Revised August 8, 2011

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

## Release Notification and Corrective Action

### OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	Oxy Permian Ltd.	Contact	Chancey Summers
Address	6 Desta Drive, Midland, TX 79705	Telephone No.	(432) 685-5824
Facility Name	Madera 17 Federal #1H	Facility Type	Well
Surface Owner	BLM	Mineral Owner	API No. 30-25-41059

### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	17	26S	35E					Lea County, NM

Latitude N 32.04947° Longitude W 103.38851°

### NATURE OF RELEASE

Type of Release	Oil and produced water	Volume of Release	135 bbls oil, 20 bbls produced water	Volume Recovered	130 bbls oil, 13 bbls produced water
Source of Release	Over-pressure of a line caused the heater treater fire tube gasket to fail	Date and Hour of Occurrence	07/21/2015	Date and Hour of Discovery	
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Kellie Jones- NMOCD; Shelly Tucker and James Amos- BLM		
By Whom?	Kathy Purvis, BBC International	Date and Hour	07/21/2015 @ 4:45 pm		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.\*


Describe Cause of Problem and Remedial Action Taken.\*

Over-pressure of a line caused the heater treater fire tube gasket to fail thus spilling 135 bbls of oil and 20 bbls of produced water onto the ground. A vacuum truck recovered 130 bbls of oil and 13 bbls of produced water and the gasket was repaired/replaced.

Describe Area Affected and Cleanup Action Taken.\*

The affected area is approximately 250' x 50' both on and off location. Remediation will be completed in accordance with a remediation plan approved by NMOCD and the BLM.

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

Signature: 	<b>OIL CONSERVATION DIVISION</b>		
Printed Name: Chancey Summers	Approved by Environmental Specialist:		
Title: HES Lead	Approval Date:	Expiration Date:	
E-mail Address: <u>Chancey_Summers@oxy.com</u>	Conditions of Approval:		Attached <input type="checkbox"/>
Date: <u>8-13-15</u> Phone: (432) 685-5824			

\* Attach Additional Sheets If Necessary