

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

### **DELINEATION WORKPLAN**

OXY – YVONNE 21 FEDERAL 1 BATTERY (Leak Date: 10/25/17)

### RP # 2RP-4475 API # 30-015-28850

This delineation workplan and remediation proposal addresses the release associated with RP # 2RP-4475.

The following information includes:

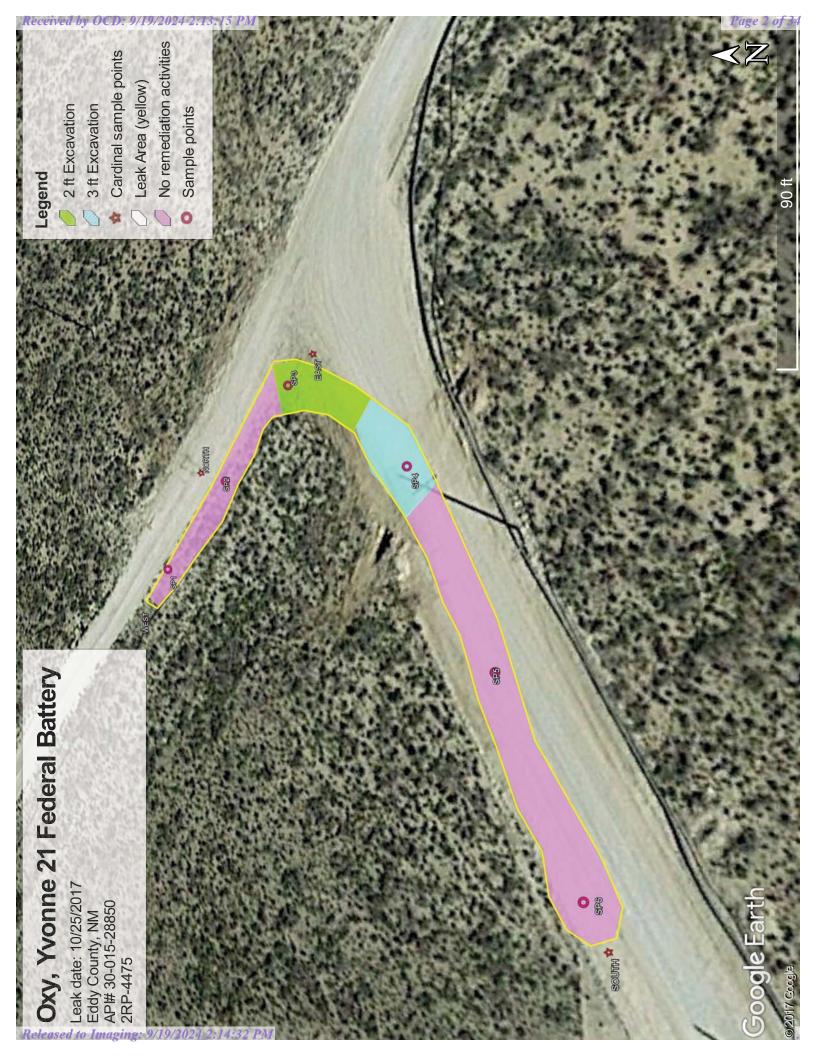
- 1. Scaled digital site map with spill area demarcated and leak point identified along with sample point locations and areas of remediation at appropriate depths.
- 2. GPS information for sample points and sample methodology
- 3. Depth to groundwater information (i.e., pdf of OSE search results and/or copy of Chevron groundwater trend map).
- 4. Laboratory analysis results summary table and original laboratory analysis reports
- 5. A copy of the initial C-141
- 6. Potentially other pertinent information as necessary for site specific purposes.

### Based on the information included in this package and the NMOCD guidelines, the following remediation is proposed:

OXY will excavate the spill area as depicted on the following site diagram. The leak area near SP1, SP2, SP5, and SP6 (pink shade on diagram) will require zero remediation activities. The leak area near SP3 (green shade on diagram) will be excavated to a depth of 2 feet. The leak area near SP4 (blue shade on diagram) will be excavated to a depth of 3 feet.

The entire site will then be backfilled with clean soil and revegetated (if warranted) to the standards of the appropriate regulatory agency or private surface owner.

All excavated materials will be disposed of at an NMOCD-approved disposal facility.



Oxy, Yvonne 21 Federal 1 Battery

Sample points, hand auger SP1, N 32.20386 W-103.98856 SP2, N 32.20379 W-103.98846 SP3, N 32.20371 W-103.98836 SP4, N 32.20359 W-103.98845 SP5, N 32.20350 W-103.98865 SP6, N 32.20342 W-103.98885 NORTH, N 32.20382 W-103.98889 EAST, N 32.20368 W-103.98833 WEST, N 32.20389 W-103.98862

### Oxy, Yvonne 21 Federal 1 Battery U/L G, Section 21, T24S, R29E Groundwater: 75'-100'



2	Wat					-			e Engir pth t	neer o Wa	ter	
(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)	(R=POD has ber replaced, O=orphaned, C=the file is closed)	en			NW 2=NE : allest to lar		SE) (NAD83 U	TM in m	eters)	(In	feet)	
POD Number	POE Sub- Code basin	-	QQQ 64 16 4	-	ws Rng		X	Y	DistanceD	epthWellDer		Water
<u>C_00463</u>	С	ED	4 4 4		4S 29E	59433	32 356428	32*	1315	260	4	256
								Averag	ge Depth to W	ater:	4 fe	et
									Minimum I	Depth:	4 fe	et
									Maximum D	epth:	4 fe	et
Record Count: 1												
UTMNAD83 Radiu	<u>ıs Search (in mete</u>	<u>:rs):</u>										
Easting (X): 595	5447	Nort	hing (Y):	3563584	1		Radius:	1700				
*UTM location was derive	ed from PLSS - see	Help										
The data is furnished by the the accuracy, completeness,		1 2	1		1		ling that the C	OSE/ISC 1	make no warran	ties, expressed	or implied, co	ncerning
10/31/17 10:48 AM									WATER CO	DLUMN/ AVE	RAGE DEP	TH TO

WATER

*Released to Imaging: 9/19/2024 2:14:32 PM* http://nmwrrs.ose.state.nm.us/...22%203563584.0%20%22%2C%0A%22R%22%3A%221700%22%2C%0A%22PLSSDiv%22%3A%22false%22%7D[10/31/2017 10:48:28 AM]

О Q64:	Public Land S     Q16:   SW     Q4:   NE	Sec: 21 Tws: 245 Rng: 2	99E
O X: O ft	State Plane Coo Y: 0 ft	rdinate System - NAD27 Zone:	
O X: 0 ft	State Plane Coo Y: 0 ft	rdinate System - NAD83 Zone:	
O Longitude (X): Latitude (Y):	Degrees: 0 °	Minutes/Seconds Minutes: 0 ' Seconds: 0 " Minutes: 0 ' Seconds: 0 "	
O Easting (X): 0	mtrs Northing (Y): 0		
AI	mtrs Northing (Y): 0	mtrs       Zone:         SUBMIT         lisplayed as       NAD 1983 UTM Zone 13         Northing (Y):       3563584.0	
AI	mtrs Northing (Y): 0	mtrs       Zone:         SUBMIT         lisplayed as NAD 1983 UTM Zone 13	5
AI	mtrs Northing (Y): 0	mtrs       Zone:         SUBMIT         lisplayed as       NAD 1983 UTM Zone 13         Northing (Y):       3563584.0	5

Laboratory Analytical Results Summary Yvonne 21 Federal 1 Battery	
--	--

			SP1 @	
		Sample ID	SURFACE	SP1@2'
Analyte	Method	Date	10/31/17	10/31/17
			mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050
Toluene	BTEX 8021B		<0.050	<0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300
Chloride	SM4500CI-B		64	80
GRO	TPH 8015M		<10.0	<10.0
DRO	TPH 8015M		<10.0	<10.0
EXT DRO	TPH 8015M		<10.0	<10.0

			0.0.7	0.017
			SP2 @	
		Sample ID SURFACE	SURFACE	SP2 @ 2'
Analyte	Method	Date	10/31/17	10/31/17
			mg/kg	mg/kg
Chloride	SM4500CI-B		128	112

		Sample ID	SP3 @ SURFACE	SP3 @ 1'	SP3 @ 2'	SP3 @ 2.5'
Analyte	Method	Date	10/31/17	10/31/17	10/31/17	11/1/17
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	n/a	<0.050	n/a
Toluene	BTEX 8021B		<0.050	n/a	<0.050	n/a
Ethylbenzene BTEX 8021B	BTEX 8021B		<0.050	n/a	<0.050	n/a
Total Xylenes BTEX 8021B	BTEX 8021B		<0.150	n/a	<0.150	n/a
Total BTEX	BTEX 8021B		<0.300	n/a	<0.300	n/a
Chloride	SM4500CI-B		224	448	912	<16.0
GRO	TPH 8015M		<10.0	n/a	<10.0	n/a
DRO	TPH 8015M		<10.0	n/a	<10.0	n/a
EXT DRO	TPH 8015M		<10.0	n/a	<10.0	n/a
			NORTH @	EAST @	WEST @	SOUTH®
CARDINAL POINTS	INTS	Sample ID	SURFACE	SURFACE	SURFACE	SURFACE
Analyte	Method	Date	11/1/17	11/1/17	11/1/17	71/1/11

11/1/17 mg/kg <16.0

> mg/kg 160

mg/kg 32

mg/kg 32

SM4500CI-B

Chloride

Remple ID         SurFACE         SP4 @ 1'         SP4 @ 2'           e         Method         Date         11/1/17         11/1/17         11/1/17           B TEX 8021B         mg/kg         mg/kg         mg/kg         mg/kg           B TEX 8021B         <0.050         n/a         <0.050           B TEX 8021B         <0.050         n/a         <0.050           ene B TEX 8021B         <0.050         n/a         <0.050           nes B TEX 8021B         <0.050         n/a         <0.050           R B TEX 8021B         <0.050         n/a         <0.050           R B TEX 8021B         <0.050         n/a         <0.050           R B TEX 8021B         <0.0300         n/a         <0.050           R B TEX 8021B         <0.0300         n/a         <0.050           R B TEX 8021B         <0.300         n/a         <0.050           R B TEX 8021B         <0.0300         n/a         <0.050           R B TEX 8021B         <0.0300         n/a         <0.050           R B TEX 8021B         <0.010         n/a         <0.010           R B TEX 8021B         <0.010         n/a         <0.050           R B TEX 8021B         <0.050				SP4 @					
e         Method         Date         11/1/17         11/1/17         11/1/17           BTEX 8021B         mg/kg         mg/kg         mg/kg         mg/kg         mg/kg         mg/kg           BTEX 8021B         <0.050         n/a         -			Sample ID	SURFACE	SP4 @ 1'	SP4 @ 2'	SP4 @ 3'	SP4 @ 4'	SP4 @ 5'
mgkg         mgkg <th< th=""><th>Analyte</th><th>Method</th><th>Date</th><th>11/1/17</th><th>11/1/17</th><th>11/1/17</th><th>21/1/11</th><th>21/1/11</th><th>11/1/11</th></th<>	Analyte	Method	Date	11/1/17	11/1/17	11/1/17	21/1/11	21/1/11	11/1/11
BTEX 8021B         <0.050				mg/kg	mg/kg	mg/kg	64/6m	mg/kg	mg/kg
BTEX 8021B         <0.050		TEX 8021B		<0:050	n/a	<0.050	n/a	n/a	n/a
ene         BTEX 8021B         <0.050		TEX 8021B		<0:050	n/a	<0.050	n/a	n/a	n/a
nes         BTEX 8021B         <0.150	Ethylbenzene B	TEX 8021B		<0:050	n/a	<0.050	n/a	n/a	n/a
X         BTEX 8021B         <0.300		TEX 8021B		<0.150	n/a	<0.150	n/a	n/a	n/a
SM4500CLB         496         1170           TPH 8015M         <10.0         n/a           TPH 8015M         <10.0         n/a           TPH 8015M         <10.0         n/a		TEX 8021B		<0.300	n/a	<0.300	n/a	n/a	n/a
TPH 8015M         <10.0		M4500CI-B		496	1170	4320	4800	889	08
TPH 8015M         <10.0		PH 8015M		<10.0	n/a	<10.0	n/a	n/a	n/a
TPH 8015M <10 0/a		PH 8015M		<10.0	n/a	<10.0	n/a	n/a	n/a
0.01	<b>ΕΧΤ DRO</b> ΤΙ	TPH 8015M		<10.0	n/a	<10.0	n/a	n/a	n/a

		Sample ID	Sample ID SURFACE	SP5 @ 2'
Analyte	Method	Date	11/1/1	21/1/11
			64/6w	by/bu
Chloride	SM4500CI-B		160	96
		SP6 @	SP6 @	SP6.@ 2'

		Sample ID SURFACE	SP6 @ SURFACE	SP6 @ 2'
Analyte	Method	Date	11/1/17	11/1/17
			mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050
Toluene	BTEX 8021B		<0.050	<0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300
Chloride	SM4500CI-B		176	64
GRO	<b>TPH 8015M</b>		<10.0	<10.0
DRO	<b>TPH 8015M</b>		<10.0	<10.0
EXT DRO	<b>TPH 8015M</b>		<10.0	<10.0



November 08, 2017

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: YVONNE 21 FEDERAL 1 BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 11/02/17 12:50.

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

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,

Celecz D. Keine

Celey D. Keene Lab Director/Quality Manager



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

Received:	11/02/2017	Sampling Date:	10/31/2017
Reported:	11/08/2017	Sampling Type:	Soil
Project Name:	YVONNE 21 FEDERAL 1 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY- EDDY CO NM		

### Sample ID: SP1 @ SURFACE (H703019-01)

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	11/07/2017	ND	1.74	86.8	2.00	0.947	
Toluene*	<0.050	0.050	11/07/2017	ND	1.75	87.3	2.00	2.15	
Ethylbenzene*	<0.050	0.050	11/07/2017	ND	1.72	85.8	2.00	1.61	
Total Xylenes*	<0.150	0.150	11/07/2017	ND	5.45	90.9	6.00	0.914	
Total BTEX	<0.300	0.300	11/07/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	103 9	% 72-148							
Chloride, SM4500Cl-B	mg/	′kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Chloride	64.0	16.0	11/03/2017	ND	432	108	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	11/06/2017	ND	192	96.0	200	3.03	
DRO >C10-C28	<10.0	10.0	11/06/2017	ND	207	103	200	3.63	
EXT DRO >C28-C36	<10.0	10.0	11/06/2017	ND					
Surrogate: 1-Chlorooctane	74.6	% 28.3-16	4						
Surrogate: 1-Chlorooctadecane	82.5	% 34.7-15	7						

### Cardinal Laboratories

### \*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	11/02/2017	Sampling Date:	10/31/2017
Reported:	11/08/2017	Sampling Type:	Soil
Project Name:	YVONNE 21 FEDERAL 1 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY- EDDY CO NM		

### Sample ID: SP1 @ 2' (H703019-02)

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	11/07/2017	ND	1.74	86.8	2.00	0.947	
Toluene*	<0.050	0.050	11/07/2017	ND	1.75	87.3	2.00	2.15	
Ethylbenzene*	<0.050	0.050	11/07/2017	ND	1.72	85.8	2.00	1.61	
Total Xylenes*	<0.150	0.150	11/07/2017	ND	5.45	90.9	6.00	0.914	
Total BTEX	<0.300	0.300	11/07/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	103 9	% 72-148							
Chloride, SM4500Cl-B	mg/	′kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	11/03/2017	ND	432	108	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	11/06/2017	ND	192	96.0	200	3.03	
DRO >C10-C28	<10.0	10.0	11/06/2017	ND	207	103	200	3.63	
EXT DRO >C28-C36	<10.0	10.0	11/06/2017	ND					
Surrogate: 1-Chlorooctane	77.2	% 28.3-16	4						
Surrogate: 1-Chlorooctadecane	80.3	% 34.7-15	7						

### Cardinal Laboratories

### \*=Accredited Analyte

Celeg D. Keene

Celey D. Keene, Lab Director/Quality Manager



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

Received:	11/02/2017	Sampling Date:	10/31/2017
Reported:	11/08/2017	Sampling Type:	Soil
Project Name:	YVONNE 21 FEDERAL 1 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY- EDDY CO NM		

### Sample ID: SP2 @ SURFACE (H703019-03)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	11/03/2017	ND	432	108	400	0.00	

### Sample ID: SP2 @ 2' (H703019-04)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	11/03/2017	ND	432	108	400	0.00	

### **Cardinal Laboratories**

\*=Accredited Analyte

Celeg D. Keene

Celey D. Keene, Lab Director/Quality Manager



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

Received:	11/02/2017	Sampling Date:	10/31/2017
Reported:	11/08/2017	Sampling Type:	Soil
Project Name:	YVONNE 21 FEDERAL 1 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY- EDDY CO NM		

### Sample ID: SP3 @ SURFACE (H703019-05)

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	11/07/2017	ND	1.74	86.8	2.00	0.947	
Toluene*	<0.050	0.050	11/07/2017	ND	1.75	87.3	2.00	2.15	
Ethylbenzene*	<0.050	0.050	11/07/2017	ND	1.72	85.8	2.00	1.61	
Total Xylenes*	<0.150	0.150	11/07/2017	ND	5.45	90.9	6.00	0.914	
Total BTEX	<0.300	0.300	11/07/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	103 9	% 72-148							
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	11/03/2017	ND	432	108	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	11/06/2017	ND	192	96.0	200	3.03	
DRO >C10-C28	<10.0	10.0	11/06/2017	ND	207	103	200	3.63	
EXT DRO >C28-C36	<10.0	10.0	11/06/2017	ND					
Surrogate: 1-Chlorooctane	87.0	28.3-164	1						
Surrogate: 1-Chlorooctadecane	91.0	% 34.7-157	7						

### Cardinal Laboratories

### \*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	11/02/2017	Sampling Date:	10/31/2017
Reported:	11/08/2017	Sampling Type:	Soil
Project Name:	YVONNE 21 FEDERAL 1 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY- EDDY CO NM		

### Sample ID: SP3 @ 1' (H703019-06)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	448	16.0	11/03/2017	ND	432	108	400	0.00	

### Cardinal Laboratories

### \*=Accredited Analyte

Celeg D. Keene

Celey D. Keene, Lab Director/Quality Manager



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

Received:	11/02/2017	Sampling Date:	10/31/2017
Reported:	11/08/2017	Sampling Type:	Soil
Project Name:	YVONNE 21 FEDERAL 1 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY- EDDY CO NM		

### Sample ID: SP3 @ 2' (H703019-07)

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	11/07/2017	ND	1.74	86.8	2.00	0.947	
Toluene*	<0.050	0.050	11/07/2017	ND	1.75	87.3	2.00	2.15	
Ethylbenzene*	<0.050	0.050	11/07/2017	ND	1.72	85.8	2.00	1.61	
Total Xylenes*	<0.150	0.150	11/07/2017	ND	5.45	90.9	6.00	0.914	
Total BTEX	<0.300	0.300	11/07/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	103 9	% 72-148							
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	912	16.0	11/03/2017	ND	432	108	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	11/06/2017	ND	192	96.0	200	3.03	
DRO >C10-C28	<10.0	10.0	11/06/2017	ND	207	103	200	3.63	
EXT DRO >C28-C36	<10.0	10.0	11/06/2017	ND					
Surrogate: 1-Chlorooctane	70.0	% 28.3-16-	4						
Surrogate: 1-Chlorooctadecane	77.7	% 34.7-15	7						

### Cardinal Laboratories

### \*=Accredited Analyte

Celeg D. Keene

Celey D. Keene, Lab Director/Quality Manager



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

Received:	11/02/2017	Sampling Date:	11/01/2017
Reported:	11/08/2017	Sampling Type:	Soil
Project Name:	YVONNE 21 FEDERAL 1 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY- EDDY CO NM		

### Sample ID: SP3 @ 2.5' (H703019-08)

Chloride, SM4500Cl-B	mg/kg			Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/03/2017	ND	432	108	400	0.00	

### **Cardinal Laboratories**

### \*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	11/02/2017	Sampling Date:	11/01/2017
Reported:	11/08/2017	Sampling Type:	Soil
Project Name:	YVONNE 21 FEDERAL 1 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY- EDDY CO NM		

### Sample ID: SP4 @ SURFACE (H703019-09)

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	11/07/2017	ND	1.74	86.8	2.00	0.947	
Toluene*	<0.050	0.050	11/07/2017	ND	1.75	87.3	2.00	2.15	
Ethylbenzene*	<0.050	0.050	11/07/2017	ND	1.72	85.8	2.00	1.61	
Total Xylenes*	<0.150	0.150	11/07/2017	ND	5.45	90.9	6.00	0.914	
Total BTEX	<0.300	0.300	11/07/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	104 9	6 72-148							
Chloride, SM4500Cl-B	mg/	kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	496	16.0	11/03/2017	ND	432	108	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	11/06/2017	ND	192	96.0	200	3.03	
DRO >C10-C28	<10.0	10.0	11/06/2017	ND	207	103	200	3.63	
EXT DRO >C28-C36	<10.0	10.0	11/06/2017	ND					
Surrogate: 1-Chlorooctane	78.4	28.3-16	4						
Surrogate: 1-Chlorooctadecane	85.7	34.7-15	7						

### Cardinal Laboratories

### \*=Accredited Analyte

Celeg D. Keene

Celey D. Keene, Lab Director/Quality Manager



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

Received:	11/02/2017	Sampling Date:	11/01/2017
Reported:	11/08/2017	Sampling Type:	Soil
Project Name:	YVONNE 21 FEDERAL 1 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY- EDDY CO NM		

### Sample ID: SP4 @ 1' (H703019-10)

Chloride, SM4500Cl-B	mg,	′kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1170	16.0	11/03/2017	ND	432	108	400	3.64	

### **Cardinal Laboratories**

### \*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	11/02/2017	Sampling Date:	11/01/2017
Reported:	11/08/2017	Sampling Type:	Soil
Project Name:	YVONNE 21 FEDERAL 1 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY- EDDY CO NM		

### Sample ID: SP4 @ 2' (H703019-11)

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	11/07/2017	ND	1.74	86.8	2.00	0.947	
Toluene*	<0.050	0.050	11/07/2017	ND	1.75	87.3	2.00	2.15	
Ethylbenzene*	<0.050	0.050	11/07/2017	ND	1.72	85.8	2.00	1.61	
Total Xylenes*	<0.150	0.150	11/07/2017	ND	5.45	90.9	6.00	0.914	
Total BTEX	<0.300	0.300	11/07/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	105 9	% 72-148							
Chloride, SM4500Cl-B	mg/	'kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4320	16.0	11/03/2017	ND	432	108	400	3.64	
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	11/06/2017	ND	192	96.0	200	3.03	
DRO >C10-C28	<10.0	10.0	11/06/2017	ND	207	103	200	3.63	
EXT DRO >C28-C36	<10.0	10.0	11/06/2017	ND					
Surrogate: 1-Chlorooctane	78.7	% 28.3-16-	4						
Surrogate: 1-Chlorooctadecane	80.7	% 34.7-15	7						

### Cardinal Laboratories

### \*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	11/02/2017	Sampling Date:	11/01/2017
Reported:	11/08/2017	Sampling Type:	Soil
Project Name:	YVONNE 21 FEDERAL 1 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY- EDDY CO NM		

### Sample ID: SP4 @ 3' (H703019-12)

Chloride, SM4500Cl-B	hloride, SM4500Cl-B mg/kg			Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4800	16.0	11/03/2017	ND	432	108	400	3.64	

### Sample ID: SP4 @ 4' (H703019-13)

Chloride, SM4500Cl-B	oride, SM4500Cl-B mg/kg								
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	688	16.0	11/03/2017	ND	432	108	400	3.64	

### Sample ID: SP4 @ 5' (H703019-14)

Chloride, SM4500Cl-B	-B mg/kg			Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	11/03/2017	ND	432	108	400	3.64	

### Sample ID: SP5 @ SURFACE (H703019-15)

Chloride, SM4500CI-B	mg/kg			Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	11/03/2017	ND	432	108	400	3.64	

### Sample ID: SP5 @ 2' (H703019-16)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	11/03/2017	ND	432	108	400	3.64	

### Cardinal Laboratories

\*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	11/02/2017	Sampling Date:	11/01/2017
Reported:	11/08/2017	Sampling Type:	Soil
Project Name:	YVONNE 21 FEDERAL 1 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY- EDDY CO NM		

### Sample ID: SP6 @ SURFACE (H703019-17)

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	11/07/2017	ND	1.74	86.8	2.00	0.947	
Toluene*	<0.050	0.050	11/07/2017	ND	1.75	87.3	2.00	2.15	
Ethylbenzene*	<0.050	0.050	11/07/2017	ND	1.72	85.8	2.00	1.61	
Total Xylenes*	<0.150	0.150	11/07/2017	ND	5.45	90.9	6.00	0.914	
Total BTEX	<0.300	0.300	11/07/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	104 9	% 72-148							
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	11/03/2017	ND	432	108	400	3.64	
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	11/06/2017	ND	192	96.0	200	3.03	
DRO >C10-C28	<10.0	10.0	11/06/2017	ND	207	103	200	3.63	
EXT DRO >C28-C36	<10.0	10.0	11/06/2017	ND					
Surrogate: 1-Chlorooctane	64.0	28.3-164	4						
Surrogate: 1-Chlorooctadecane	70.6	% 34.7-157	7						

### Cardinal Laboratories

### \*=Accredited Analyte

Celeg D. Keene

Celey D. Keene, Lab Director/Quality Manager



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

Received:	11/02/2017	Sampling Date:	11/01/2017
Reported:	11/08/2017	Sampling Type:	Soil
Project Name:	YVONNE 21 FEDERAL 1 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY- EDDY CO NM		

### Sample ID: SP6 @ 2' (H703019-18)

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	11/07/2017	ND	1.74	86.8	2.00	0.947	
Toluene*	<0.050	0.050	11/07/2017	ND	1.75	87.3	2.00	2.15	
Ethylbenzene*	<0.050	0.050	11/07/2017	ND	1.72	85.8	2.00	1.61	
Total Xylenes*	<0.150	0.150	11/07/2017	ND	5.45	90.9	6.00	0.914	
Total BTEX	<0.300	0.300	11/07/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	105 9	% 72-148							
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	11/03/2017	ND	432	108	400	3.64	
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	11/06/2017	ND	194	97.0	200	11.2	
DRO >C10-C28	<10.0	10.0	11/06/2017	ND	225	113	200	4.17	
EXT DRO >C28-C36	<10.0	10.0	11/06/2017	ND					
Surrogate: 1-Chlorooctane	78.3	28.3-16-	4						
Surrogate: 1-Chlorooctadecane	88.1	34.7-15	7						

### Cardinal Laboratories

### \*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	11/02/2017	Sampling Date:	11/01/2017
Reported:	11/08/2017	Sampling Type:	Soil
Project Name:	YVONNE 21 FEDERAL 1 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	OXY- EDDY CO NM		

### Sample ID: NORTH @ SURFACE (H703019-19)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/03/2017	ND	432	108	400	3.64	

### Sample ID: EAST @ SURFACE (H703019-20)

Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/03/2017	ND	432	108	400	3.64	

### Sample ID: WEST @ SURFACE (H703019-21)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	11/03/2017	ND	432	108	400	3.64	

### Sample ID: SOUTH @ SURFACE (H703019-22)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/03/2017	ND	432	108	400	3.64	

### Cardinal Laboratories

\*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



### **Notes and Definitions**

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

### **Cardinal Laboratories**

### \*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatscever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including whose shate the amount paid by client for analyses. All claims, including those for negligence and any other cause whatscever shall be deemed waived unless made in writing and received by Q cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, whose sinterruptors, loss of use, or loss of profits incurred by client, its subsidiaries, afflicate or successor arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such clim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 17 of 19

101 East Marland, Hobbs, NM 88240

Company Name: BBC International, Inc.		BILL TO	and a second sec		ANALYSIS REQUEST
Project Manager: Cliff Brunson			_	_	
Address: P.O. Box 805		company: OX4			
city: Hobbs State: NM	Zip: 88241	Attn: Wade DAAnd	(		
5-397-6388 Fax #:	-0397	Address:			
Project #: Project Owner: Oxy		City:			
ame: Yvonne 21 Federal 1		State: Zip:			
m: Eddy County, NM		*			
		Fax #:			
	MATRIX	PRESERV. SAMPLING		Γ	
Lab I.D. Sample I.D.	(G)RAB OR (C)OMF # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE	OTHER : ACID/BASE: ICE / COOL OTHER : DATE	TIME C1	BTEX TPHEX	
SP1 @ SURFACE		10/31/17	11:11 AM	< <	
2 SP1 @ 2'	6- 2	10/31/17 11:3	11:33 AM	< <	
3 SP2 @ SURFACE	5- 2	V 10/31/17 11:5	11:58 AM		
SP2 @	611	10/31/17 12:5	12:53 PM		
SP3 @	5	V 10/31/17 1:11	1:11 PM 🗸	< <	
6 SP3 @ 1'	5 1 2	V 10/31/17 1:45 PM	PM 🗸		
SP3	5 - 1	10/31/17 2:22 PM	PM V	< <	
😵 SP3 @ 2.5'	6 1	11/1/17 9:01	9:01 AM		
	611	J 11/1/17 9:19 AM	AM V	~ ~	
10 SP4 @ 1' PLEASE MOTE: Lubility and Damages. Cardinal's liability and client's exclusive remody for a	C 1 V I V	in contract or tort, shall be limited to the amount paid by the client for the	AM 🗸	-	
ms including those for negligence and any other cause whatsoever ent shall Cardinal be liable for incidential or consequential damages, ssors arising out of or related to the performance of services hereur	seemed waived unless made in writing and without limitation, business interruptions, ic ardinal, regardless pf whether such claim is	Cardinal within 30 day or loss of profits incurre n apy of the above sta	completion of the applicable rnt, its subsidiaries, pns or otherwise	ē	
Relinquished By:	Received By:	Pho Fax	Phone Result: Fax Result:	Ves INO	Add'I Phone #: Add'I Fax #:
	Received By:	(Il Malley	REMARKS:		
Sampler - UPS - Bus - Other:	Cool Intact	on CHECKED BY: (Initials) A. #/S	Sin	e hear	Source of

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 18 of 19

### ARDINAL LABORATORIES 101 East Marland, Hobbs, NM 88240

(505) 393-2326 FAX (505) 393-2476	-2476						
Company Name: BBC International, Inc.		BILL TO			ANALYSIS F	REQUEST	
Project Manager: Cliff Brunson	7	P.O. #:		_	-	_	
Address: P.O. Box 805	0	Company: OKU					
city: Hobbs State: NM	zip: 88241	Attn: Wade BA	nich		_		_
5-397-6388 Fax #:	5-397-0397	Address:					
Project #: Project Owner: OXY		City:					
Project Name: Yvonne 21 Federal 1 Battery		State: Zip:					
Project Location: Eddy County, NM	-	Phone #:					
Sampler Name: Jeff Ornelas	-	Fax #:					
	MATRIX	PRESERV. SAMPLING	ING	T			
Lab I.D. Sample I.D.	(G)RAB OR (C)OMF # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE	OTHER : ACID/BASE: ICE / COOL OTHER : DATE	TIME C (	BTEX			
11 SP4 @ 2'	- /	1	9:58 AM 🗸	~ ~			
[2 SP4 @ 3'	6- 1	11/1/17	10:20 AM 🖌				
13 SP4 @ 4'	5	11/1/17	10:49 AM 🖌				
	6	11/1/17	11:30 AM				
SP5 @ SURFACE	6 1	11/1/17	12:30 PM 🗸				
16 SP5 @ 2'	5	/ 11/1/17	1:11 PM 🖌				
17 SP6 @ SURFACE	6 - <	11/1/17	1:33 PM 🗸	< <			
18 SP6 @ 2'	5	11/1/17	2:17 PM 🖌	< <			
19 NORTH @ SURFACE	-	× 11/1/17	2:15 PM 🗸				
ZU EAST @ SURFACE	61 1	/ 11/1/17	2:22 PM 🖌				
PLEASE NOTE: Lubikity and Damages Cardina's labikity and clenit's exclusive enroly for any claim anxing whether based in contrast or fort, shall be limited to the anount paid by the clenit for the analyses. At claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be lable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of parts incurred by clenit, its subsidiaries, afficiants or successor anxietors out for earlormance of services hereunder by Cardinal meandless of whether such claim is based usors and the above stated reasons or otherwise.	or any claim arising whether based in contrast or the be deemed waived unless made in writing and re- ting without limitation, business interruptions, loss w Cardinal meantdees of whether such claim is be	Tort, shall be limited to the amount pa sceived by Cardinal within 30 days aft is of use, or loss of profits incurred by based upon any of the above stated re	id by the client for the er completion of the applicable client, its subsidiaries, ascons or otherwise.	*			
hed By: Date Date	_	W/ 11. 1	ult:	Ves No	Add'l Phone #: Add'l Fax #:		
Relinquished By: Time: 204	Received By:	Udator					
Delivered By: (Circle One) 0.66 Sampler - UPS - Bus - Other: 0880000000000000000000000000000000000	Sample Condition Cool Intact Tes Tes No No	n CHECKED BY: (Initials) 70.775	Son	u Au	nd Sa	a in	me
† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476	se fax written changes to 50	05-393-2476			0		

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 19 of 19

### ARDINAL LABORATORIES 101 East Marland, Hobbs, NM 88240

	(505) 393-2326 FAX (505) 393-2476	76				
<b>Company Name</b>	Company Name: BBC International, Inc.		BILL TO		ANALYSIS	SIS REQUEST
Project Manage	Project Manager: Cliff Brunson		P.O. #:			
Address: P.O	P.O. Box 805		Company: OKU			
city: Hobbs	State: NM	zip: 88241	Attn: Wade Kitt	Nor		
Phone #: 575-397-6388	Fax #:	575-397-0397	Address:			
Project #:	Project Owner: Oxy	ar: Oxy	City:			
ame:	Yvonne 21 Federal 1 Battery		State: Zip:			
Project Location:	n: Eddy County, NM		Phone #:			
Sampler Name:	Jeff Ornelas		Fax #:			
FOR LAB USE ONLY		MATRIX	PRESERV. SAMPLING	NG		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMF # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE	OTHER : ACID/BASE: ICE / COOL OTHER : DATE	TIME		
2	WEST @ SURFACE	- ~	11/1/17	2:33 PM 🗸		
and	SOUTH @ SURFACE	6 - 4	/ 11/1/17	2:45 PM 🗸		
	HAR AN					
	T ANI					
PLEASE NOTE: Liability analyses. All claims includ service. In no event shall	PLEASE NOTE: Lubility and Damages. Cardinal's lability and client's exclusive remody for any daim anising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for moligence and any other cause whatsoewer shall be deemed waived unless made in writing and received by Candinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidential or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries.	x any claim arising whether based in contra- be deemed waived unless made in writing ar ang without limitation, business interruptions	ct or tort, shall be limited to the amount pa nd received by Cardinal within 30 days aft loss of use, or loss of profits incurred by	id by the client for the er completion of the appli client, its subsidiaries,	cable	
Relinquished By	c: Date: /	Received By:	11111	Phone Result:		one #:
Relinquished By	Mules		Malage	Fax Result REMARKS:		X
Delivered By Sampler - UPS	Delivered By: (Circle One) D. be Sampler - UPS - Bus - Other: Publicated N. 852	Sample Condition Cool Intact Pres Pres No No No	tion CHECKED BY: (Initials) Do TO, HAS	Se l	ne head So	Joed in Sme
	1 NE HOURANN	ſ				

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



### NM OIL CONCEDUATION

Page 27 of 34
---------------

									esia dist		N
District I         State of           1625 N. French Dr., Hobbs, NM 88240         Energy Minerals           District II         811 S. First St., Artesia, NM 88210						New Mex and Natura		NC	OV 08 2	D17	Form C-141 Revised April 3, 2017
<u>이 같은 것이라. 것은 것은 것을 하지 않는 것이라. 전 이 것은 것은 것이 있는 데 안 되었다. 것이 있다. 이 가 있는 것이 없다. 이 가 있는 것이 없다. 이 것이 없다. 이 있는 것이 없다. 이 없다. 이 있는 것이 없다. 이 있는 것이 없다. 이 없다. 이 없다. 이 없다.</u>						Survey CEnorte appropriate District			te District Office in		
District IV						St. Franc			220 220	ordance wi	th 19.15.29 NMAC.
1220 S. St. Franc	cis Dr., Santa	Fe, NM 87505		Sa	inta Fe	, NM 875	05				
			Rele	ase Notific	ation	and Co	orrective A	ction	l		
DAB173	312520	071				OPERAT	<b>FOR</b>		🛛 Initia	Report	Final Report
Name of Co				Ilologle		the second s	VADE DITTRI				
Address F Facility Nan		294; HOUS		77210 1 BATTERY		Celephone N	The second division of		<u></u>		
			DERAL			Facility Typ	e BATTERY				
Surface Own	ner BLM	1		Mineral C	wner	BLM			API No.	30-015	-28850
				LOCA		OF REI	LEASE				
Unit Letter	Section	Township	Range	Feet from the	North/	South Line	Feet from the	East/V	Vest Line		County
F	22	245	29E	1800	N	ORTH	2310	W	EST		EDDY
			Latit	ude 32.205360	4 Lo	ngitude -1	03.9905319_ N	AD83	8.0		
						OF REL					
Type of Relea	ase OIL & I	PRODUCED	WATER	IAN	URE	- Marine Contractor	Release 4 BBL	SOIL	Volume R	ecovered	TBD
Course (Da)		VI INF OT	NICK DV	CONTRA OTOR		the state of the second se	PRODUCED WA	the second day of the second d	<b>D</b>		
Source of Rel	lease POL	LILINESI	CUCK BY	CONTRACTOR		10/25/201	Iour of Occurrenc 7	e	10/25/201	lour of Dis 7	covery
Was Immedia	ate Notice G		N. 5			If YES, To					OCD SUFLIN
			res [	No 🗋 Not Re	equired	TUCKER-	ATCHER-NMOC BLM	D; CR1	STAL WE	AVER-NM	OCD; SHELLY
By Whom?							lour 10-26-201				
Was a Watero	course React		Yes 🛛	No		IT YES, VO	olume Impacting (	he Wate	ercourse.		1
If a Watercou	irse was Imr					L					
ti u mutoreou	noo nuo mip	acted, Doser	loc rung.								
									مناشد المعدة المعور العس		
Describe Cau	se of Proble	em and Reme	dial Action	n Taken.*							
Poly line stru	ck by contra	actor and caus	sed a relea	sed. Repairs will	be made	e and then re	turned to service.				
											1
Describe Are	a Affected a	and Cleanup A	Action Tak	ken.*							
Affected are	as are 2x4	0 and 20x16	Ox4 (me	asprements are	subject	o change w	ith GPS trackin	p)-Leal	k is 1500 f	Southeas	of Battery.
							NMOCD and the			Dounious	
I hereby certi	fy that the in	nformation gi	iven above	is true and comm	lete to th	e best of my	knowledge and u	Indersta	nd that nurs	uant to NM	OCD rules and
regulations al	Il operators a	are required t	o report an	nd/or file certain i	elease no	otifications a	nd perform correct	tive act	ions for rele	ases which	may endanger
							arked as "Final R				rator of liability ater, human health
							e the operator of				
federal, state,								· ·			
	1	11	*	1			OIL CON	SERV	ATION	DIVISIO	<u>DN</u>
Signature:	11 Sca	lille	as	4			C'ama d D	- Al	1.1		
Printed Name	WADE	DITTRICH		5		Approved by	Signed By Environmental S	pecialis	te DA	apotel care	
T TINCO INAINO	. TAPE	britkich					ulal.a	Т			0
Title: ENV	IROMENT	AL COORD	INATOR			Approval Da	te: 11817		Expiration	Date: N	H
E-mail Addre	ess: wade	dittrich@ox	v.com			Conditions o	f Approval;			Attached	
Date: 11-	8.1-	ם ל		5 300 2929			SAA	HA(	rached	Anacheu	120-4475
Date: //-	DI	PR	one: 57	5-390-2828	L		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	w	incition	1(	

Date: Phone: \* Attach Additional Sheets If Necessary

Operator/Responsible Party,

The OCD has received the form C-141 you provided on 11/8/2017 regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 2RP-4415 has been assigned. Please refer to this case number in all future correspondence.

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

The responsible person shall complete <u>division-approved corrective action</u> for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC. [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District 2 office in <u>ARTESIA</u> on or before <u>12/8/2017</u>. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

• Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C<sub>6</sub> thru C<sub>36</sub>), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.

• Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C<sub>6</sub> thru C<sub>36</sub>), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.

- Nominal detection limits for field and laboratory analyses must be provided.
- Composite sampling is not generally allowed.

• Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

•Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

• If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

• Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold OCD Environmental Bureau Chief 1220 South St. Francis Drive Santa Fe, New Mexico 87505 505-476-3465 jim.griswold@state.nm.us

### Bratcher, Mike, EMNRD

From:	Bratcher, Mike, EMNRD
Sent:	Monday, March 5, 2018 10:55 AM
То:	'Cliff Brunson'; Shelly Tucker
Cc:	Weaver, Crystal, EMNRD; Wade Dittrich; Jennifer_Smith@oxy.com; Ken Swinney; Jennifer Gilkey; Kathy Purvis
Subject:	RE: OXY Yvonne 21 Federal 1 Battery (2RP-4475) - Delineation Workplan

RE: OXY USA \* Yvonne 21 Fed 1 Btry \* 2RP-4475 \* DOR: 10/25/17

Cliff,

Your proposal for remediation of the above referenced release is approved. Federal sites will require like approval from BLM.

Mike Bratcher NMOCD District 2 811 South First Street Artesia, NM 88210 575-748-1283 Ext 108

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

From: Cliff Brunson [mailto:cbrunson@bbcinternational.com]
Sent: Tuesday, November 28, 2017 3:08 PM
To: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Shelly Tucker <stucker@blm.gov>
Cc: Weaver, Crystal, EMNRD <Crystal.Weaver@state.nm.us>; Wade Dittrich <Wade\_Dittrich@oxy.com>;
Jennifer\_Smith@oxy.com; Ken Swinney <kswinney@bbcinternational.com>; Jennifer Gilkey
<jgilkey@bbcinternational.com>; Kathy Purvis <kathy@bbcinternational.com>
Subject: OXY Yvonne 21 Federal 1 Battery (2RP-4475) - Delineation Workplan

Mike and Shelly,

Please find the attached Delineation Workplan and remediation proposal for the OXY Yvonne 21 Federal 1 Battery (2RP-4475). OXY is requesting that you review this plan and is looking forward to both the OCD's and BLM's approval.

If you have any questions, please let me know.

Thanks, Cliff

Cliff P. Brunson, CEI, CRS President BBC International, Inc. World-Wide Environmental Specialists Mailing Address: P. O. Box 805

### Received by OCD: 9/19/2024 2:13:15 PM

Hobbs, NM 88241-0805 USA Shipping Address: 1324 W. Marland St. Hobbs, NM 88240 USA Phone: (575) 397-6388 Fax: (575) 397-0397 E-Mail: <u>cbrunson@bbcinternational.com</u>



Confidentiality Notice: This electronic transmission (and any attached documents) is intended only for the person(s) to whom it is addressed and may contain information that is privileged, confidential, or otherwise protected from disclosure. If you have received this transmission in error, please immediately notify the sender by e-mail or by telephone call to (575) 397-6388 for handling instructions. Any disclosure or distribution of the contents of this transmission by anyone other than the named recipient(s) is strictly prohibited.

\*\*\*\*\*

From:	Tucker, Shelly
To:	Katherine Purvis
Cc:	<u>Bratcher, Mike, EMNRD; Pruett, Maria, EMNRD; Wade Dittrich; Rebecca Moore; Cliff Brunson; Ken Swinney;</u> Jennifer Gilkey
Subject:	[EXT] Re: [EXTERNAL] Closure Report, Yvonne 21 Federal 1 Battery
Date:	Tuesday, November 20, 2018 1:25:46 PM

BLM accepts your request for closure.

If you have any questions or concerns, please do not hesitate to contact me.

Please be aware if you need to meet with me in person, I am currently working out of the Hobbs Field Office on a temporary basis. I will be in and out of both field offices. I am unsure at this time how long I will be based out of Hobbs. I can still be contacted at any of the numbers listed below.

Sincerely,

Shelly J'Tucker

Environmental Protection Specialist O&G Spill/Release Coordinator

575.234.5905 - Direct 575.361.0084 - Cellular 575.234.6235 - Emergency Spill Number

stucker@blm.gov

**Bureau of Land Management** 620 E. Greene St Carlsbad, NM 88220

The **BLM acceptance/approval does not** relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that may pose a threat to groundwater, surface water, human health or the environment or if the location fails to reclaim properly. <u>In such an event a site does not achieve successful restoration, or future issues with</u> contaminants are encountered, the operator will be asked to address these issues until they are fully mitigated and the location is successfully reclaimed. In addition, BLM approval does not relieve the operator of responsibility for compliance with any other federal, state or local laws/regulations.

**Confidentiality Warning:** This message along with any attachments are intended only for use of the individual or entity to which it is addressed and may contain information that is privileged or confidential and exempt from disclosure under applicable law. If the reader of this message is not the intended recipient or the employee or agent responsible for delivering this message to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited. If you have received this communication in error, please notify the sender immediately.

**NOTE:** LPC Timing Stipulations - from **March 1st through June 15th**. Please plan remedial activities accordingly. Check for African Rue...treat (before it gets out of control).

On Wed, Nov 7, 2018 at 10:24 AM Kathy Purvis <<u>kathy@bbcinternational.com</u>> wrote:

Attached is the closure report for a leak that occurred at the Yvonne 21 Federal 1 Battery on 10/25/17 in Eddy County, NM. Receipt notification and closure approval via email is greatly appreciated. The RP number for this event is 2RP-4475

### **Kathy Purvis**

**BBC International, Inc.** 

1324 W. Marland Blvd.

Hobbs, NM 88240

Business: (575) 397-6388

Cell: (575) 441-8619

kathy@bbcinternational.com

District I 1625 N. French Dr., Hobbs, NM 88240 Phone:(575) 393-6161 Fax:(575) 393-0720 District II

811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3470 Fax: (505) 476-3462

### **State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division** 1220 S. St Francis Dr. Santa Fe, NM 87505

CONDITIONS

Operator:	OGRID:
OXY USA INC	16696
P.O. Box 4294	Action Number:
Houston, TX 772104294	385218
	Action Type:
	[IM-SD] Incident File Support Doc (ENV) (IM-BNF)

### CONDITIONS

Created By		Condition Date
amaxwell	Historical document upload,	9/19/2024

Page 34 of 34

Action 385218