



DELINEATION WORKPLAN

OXY – RIVERBEND FEDERAL B-11 CTB (Leak Date: 10/30/18)

RP # 2RP-5057

This delineation workplan and remediation proposal addresses the releases associated with RP # 2RP-5057.

The following information includes:

1. Appropriate completed and signed C-141 pages.
2. Scaled digital site map with spill area demarcated and leak point identified along with sample point locations and areas of remediation at appropriate depths.
3. GPS information for sample points and sample methodology.
4. Depth to groundwater information (i.e., pdf of OSE search results, USGS search results, and/or copy of Chevron groundwater trend map).
5. Watercourse/features map within 1000 feet.
6. BLM Cave Karst map.
7. FEMA National Flood map.
8. Laboratory analysis results summary table and original laboratory analysis reports.
9. Potentially other pertinent information as necessary for site specific purposes.

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

OXY will excavate the spill area as depicted on the following site diagram. The entire leak area (YELLOW shade on diagram) will be excavated to a depth of 2 feet.

Bottom confirmation samples will be collected at no greater than 50 ft. intervals. Estimated volume of material to be removed is 609 cubic yards. The remediation will be completed within 90 days of plan approval.

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.

Incident ID	
District RP	2RP-5057
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	125 (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: *Each of the following items must be included in the report.*

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☐ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☐ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5057
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

Printed Name: Wade DittrichTitle: Environmental CoordinatorSignature: Date: 5-31-19email: wade_dittrich@oxy.comTelephone: (575) 390-2828**OCD Only**

Received by: _____

Date: _____

Incident ID	
District RP	2RP-5057
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- ☒ Detailed description of proposed remediation technique
- ☒ Scaled sitemap with GPS coordinates showing delineation points
- ☒ Estimated volume of material to be remediated
- ☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☒ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

Printed Name: Wade Dittrich Title: Environmental Coordinator

Signature:  Date: 5-31-19

email: wade_dittrich@oxy.com Telephone: (575) 390-2828

OCD Only

Received by: _____ Date: _____




☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

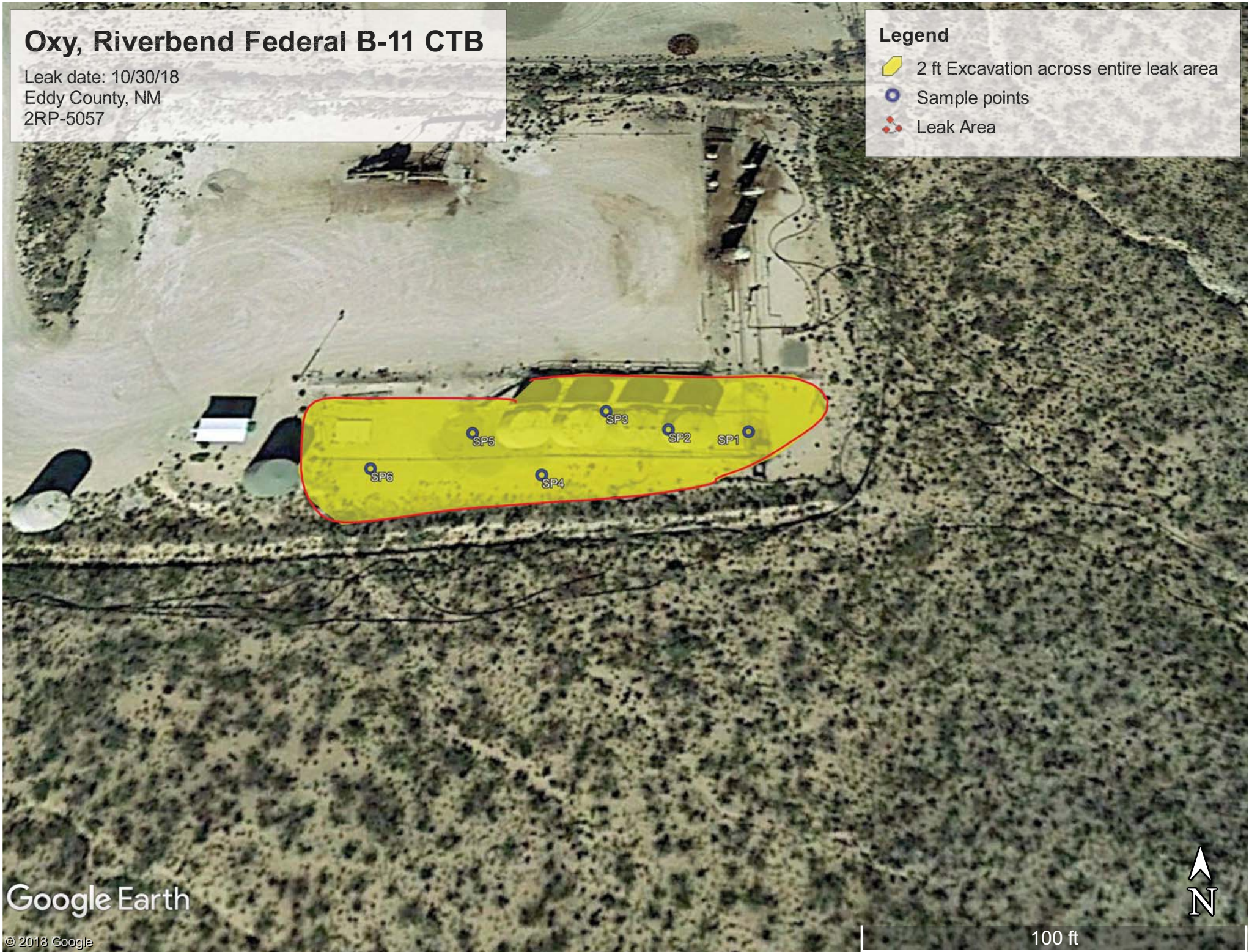
Signature: _____ Date: _____

Oxy, Riverbend Federal B-11 CTB

Leak date: 10/30/18
Eddy County, NM
2RP-5057

Legend

-  2 ft Excavation across entire leak area
-  Sample points
-  Leak Area



Google Earth

© 2018 Google

100 ft

Oxy, Riverbend Federal B-11 CTB

Sample points

SP1, N 32.20363 W-103.96194

SP2, N 32.20363 W-103.96203

SP3, N 32.20365 W-103.96210

SP4, N 32.20358 W-103.96217

SP5, N 32.20363 W-103.96225

NORTH, N 32.20370 W-103.96210

SOUTH, N 32.20358 W-103.96214

EAST, N 32.20362 W-103.96191

WEST, N 32.20364 W-103.96243

Oxy, Riverbend Federal B-11 CTB

U/L E, Section 23, T24S, R29E

Groundwater: 100'-125'





USGS Home
Contact USGS
Search USGS

National Water Information System: Web Interface

[USGS Water Resources](#)

Data Category:

Groundwater

Geographic Area:

New Mexico

GO

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Groundwater levels for New Mexico

Click to hide state-specific text

Search Results -- 1 sites found

Agency code = usgs

site_no list =

- 321205103544701

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

USGS 321205103544701 24S.30E.19.42113

Eddy County, New Mexico

Latitude 32°12'05", Longitude 103°54'47" NAD27

Land-surface elevation 3,188 feet above NAVD88

The depth of the well is 452 feet below land surface.

This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement
1958-10-24		D	227.70				2		U	
1959-03-19		D	227.75				2		U	
1975-12-10		D	231.78				2		U	
1976-01-16		D	237.26				2		U	
1976-12-01		D	230.73				2		U	
1977-01-14		D	230.62				2		U	
1983-02-01		D	235.93				2		U	
1987-10-15		D	233.30				2		S	
1998-01-27		D	231.02				2		S	

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	S	Steel-tape measurement.
Method of measurement	U	Unknown method.

Section	Code	Description
Measuring agency		Not determined
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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Title: Groundwater for New Mexico: Water Levels

URL: <https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?>



Page Contact Information: [New Mexico Water Data Maintainer](#)

Page Last Modified: 2018-11-29 11:55:10 EST





0.51 0.43 nadww01

Oxy, Riverbend Federal B-11 CTB

Leak date: 10/30/18
Eddy County, NM
2RP-5057

BLM CAVE KARST MAP

Legend

-  High potential
-  Low potential
-  Medium potential
-  Riverbend Federal B-11 CTB

 Riverbend Federal B-11 CTB

Google Earth

© 2018 Google



1 mi

National Flood Hazard Layer FIRMette



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance
		17.5 Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **11/29/2018 at 12:11:28 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

32°12'28.61"N



USGS The National Map: Orthoimagery. Data refreshed October 2017.

0 250 500 1,000 1,500 2,000 Feet 1:6,000

32°11'58.17"N

103°57'26.13"W

Laboratory Analytical Results Summary
Riverbend B-11 CTB (10/30/18)

		Sample ID	SP1 @ SURFACE	SP1 @ 1'	SP1 @ 2'	SP1 @ 3'
Analyte	Method	Date	11/16/18	11/16/18	4/10/19	4/10/19
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Toluene	BTEX 8021B		0.837	<0.050	<0.050	<0.050
Ethylbenzene	BTEX 8021B		1.03	0.081	<0.050	<0.050
Total Xylenes	BTEX 8021B		4.73	0.382	<0.150	<0.150
Total BTEX	BTEX 8021B		6.6	0.463	<0.300	<0.300
Chloride	SM4500Cl-B		8800	96	32	48
GRO	TPH 8015M		153	<10.0	<10.0	<10.0
DRO	TPH 8015M		9830	226	<10.0	<10.0
EXT DRO	TPH 8015M		2180	84.2	<10.0	<10.0

		Sample ID	SP2 @ SURFACE	SP2 @ 1'	SP2 @ 2'	SP2 @ 3'
Analyte	Method	Date	11/16/18	11/16/18	4/10/19	4/10/19
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		0.052	<0.050	<0.050	<0.050
Toluene	BTEX 8021B		1.15	0.06	<0.050	<0.050
Ethylbenzene	BTEX 8021B		1.23	0.113	<0.050	<0.050
Total Xylenes	BTEX 8021B		6.05	0.548	<0.150	<0.150
Total BTEX	BTEX 8021B		8.48	0.721	<0.300	<0.300
Chloride	SM4500Cl-B		10200	96	16	<16.0
GRO	TPH 8015M		179	<10.0	<10.0	<10.0
DRO	TPH 8015M		9680	211	<10.0	<10.0
EXT DRO	TPH 8015M		2130	75.4	<10.0	<10.0

		Sample ID	SP3 @ SURFACE	SP3 @ 1'	SP3 @ 2'	SP3 @ 3'
Analyte	Method	Date	11/16/18	11/16/18	4/10/19	4/10/19
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		0.069	<0.050	<0.050	<0.050
Toluene	BTEX 8021B		1.23	0.078	<0.050	<0.050
Ethylbenzene	BTEX 8021B		1.3	0.104	<0.050	<0.050
Total Xylenes	BTEX 8021B		6.36	0.5	<0.150	<0.150
Total BTEX	BTEX 8021B		8.96	0.682	<0.300	<0.300
Chloride	SM4500Cl-B		11800	80	16	32
GRO	TPH 8015M		152	<10.0	<10.0	<10.0
DRO	TPH 8015M		8180	249	<10.0	<10.0
EXT DRO	TPH 8015M		1810	90.1	<10.0	<10.0

		Sample ID	SP4 @ SURFACE	SP4 @ 1'	SP4 @ 2'
Analyte	Method	Date	11/16/18	11/16/18	11/16/18
			mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		0.226	<0.050	<0.050
Toluene	BTEX 8021B		4.87	0.0857	<0.050
Ethylbenzene	BTEX 8021B		5.14	<0.050	<0.050
Total Xylenes	BTEX 8021B		22.6	6.57	<0.150
Total BTEX	BTEX 8021B		32.9	7.43	<0.300
Chloride	SM4500Cl-B		144	32	16
GRO	TPH 8015M		821	100	<10.0
DRO	TPH 8015M		24900	1200	17.5
EXT DRO	TPH 8015M		4640	226	<10.0

		Sample ID	SP5 @ SURFACE	SP5 @ 1'	SP5 @ 2'
Analyte	Method	Date	11/16/18	11/16/18	11/16/18
			mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		0.283	<0.050	<0.050
Toluene	BTEX 8021B		5.43	0.352	<0.050
Ethylbenzene	BTEX 8021B		5.19	<0.050	<0.050
Total Xylenes	BTEX 8021B		23.3	3.34	<0.150
Total BTEX	BTEX 8021B		34.2	3.69	<0.300
Chloride	SM4500Cl-B		144	16	16
GRO	TPH 8015M		549	115	<10.0
DRO	TPH 8015M		17000	1770	28.7
EXT DRO	TPH 8015M		3370	319	11.2

		Sample ID	SP6 @ SURFACE	SP6 @ 1'	SP6 @ 2'
Analyte	Method	Date	11/16/18	11/16/18	11/16/18
			mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		0.285	<0.050	<0.050
Toluene	BTEX 8021B		5.72	0.399	<0.050
Ethylbenzene	BTEX 8021B		5.51	<0.050	<0.050
Total Xylenes	BTEX 8021B		24.6	3.45	<0.150
Total BTEX	BTEX 8021B		36.1	3.85	<0.300
Chloride	SM4500Cl-B		144	32	16
GRO	TPH 8015M		591	117	<10.0
DRO	TPH 8015M		18600	2120	27.1
EXT DRO	TPH 8015M		3550	400	<10.0

		Sample ID	NORTH @ SURFACE	EAST @ SURFACE	SOUTH @ SURFACE	WEST @ SURFACE
Analyte	Method	Date	11/16/18	11/16/18	11/16/18	11/16/18
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Toluene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300	<0.300	<0.300
Chloride	SM4500Cl-B		<16.0	<16.0	<16.0	<16.0
GRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0
DRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0
EXT DRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0

April 16, 2019

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: RIVERBEND B-11 CTB

Enclosed are the results of analyses for samples received by the laboratory on 04/12/19 10:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

Received:	04/12/2019	Sampling Date:	04/10/2019
Reported:	04/16/2019	Sampling Type:	Soil
Project Name:	RIVERBEND B-11 CTB	Sampling Condition:	Cool & Intact
Project Number:	(10/30/18)	Sample Received By:	Tamara Oldaker
Project Location:	OXY - MALAGA, NM		

Sample ID: SP 1 @ 2' (H901352-01)

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	04/13/2019	ND	2.04	102	2.00	0.584	
Toluene*	<0.050	0.050	04/13/2019	ND	1.94	97.0	2.00	1.81	
Ethylbenzene*	<0.050	0.050	04/13/2019	ND	2.01	100	2.00	0.468	
Total Xylenes*	<0.150	0.150	04/13/2019	ND	6.07	101	6.00	0.157	
Total BTX	<0.300	0.300	04/13/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 92.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	04/16/2019	ND	400	100	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	04/12/2019	ND	204	102	200	0.864	
DRO >C10-C28*	<10.0	10.0	04/12/2019	ND	208	104	200	2.17	
EXT DRO >C28-C36	<10.0	10.0	04/12/2019	ND					

Surrogate: 1-Chlorooctane 81.0 % 41-142

Surrogate: 1-Chlorooctadecane 84.8 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 04/12/2019
Reported: 04/16/2019
Project Name: RIVERBEND B-11 CTB
Project Number: (10/30/18)
Project Location: OXY - MALAGA, NM

Sampling Date: 04/10/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 3' (H901352-02)

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	04/13/2019	ND	2.04	102	2.00	0.584	
Toluene*	<0.050	0.050	04/13/2019	ND	1.94	97.0	2.00	1.81	
Ethylbenzene*	<0.050	0.050	04/13/2019	ND	2.01	100	2.00	0.468	
Total Xylenes*	<0.150	0.150	04/13/2019	ND	6.07	101	6.00	0.157	
Total BTX	<0.300	0.300	04/13/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.4 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	04/16/2019	ND	400	100	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	04/12/2019	ND	204	102	200	0.864	
DRO >C10-C28*	<10.0	10.0	04/12/2019	ND	208	104	200	2.17	
EXT DRO >C28-C36	<10.0	10.0	04/12/2019	ND					

Surrogate: 1-Chlorooctane 83.3 % 41-142

Surrogate: 1-Chlorooctadecane 87.2 % 37.6-147

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: 04/12/2019
Reported: 04/16/2019
Project Name: RIVERBEND B-11 CTB
Project Number: (10/30/18)
Project Location: OXY - MALAGA, NM

Sampling Date: 04/10/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 2 @ 2' (H901352-03)

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	04/13/2019	ND	2.04	102	2.00	0.584	
Toluene*	<0.050	0.050	04/13/2019	ND	1.94	97.0	2.00	1.81	
Ethylbenzene*	<0.050	0.050	04/13/2019	ND	2.01	100	2.00	0.468	
Total Xylenes*	<0.150	0.150	04/13/2019	ND	6.07	101	6.00	0.157	
Total BTX	<0.300	0.300	04/13/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.6 % 73.3-129

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	04/16/2019	ND	400	100	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	04/13/2019	ND	194	97.0	200	4.04	
DRO >C10-C28*	<10.0	10.0	04/13/2019	ND	190	95.0	200	4.16	
EXT DRO >C28-C36	<10.0	10.0	04/13/2019	ND					

Surrogate: 1-Chlorooctane 93.5 % 41-142

Surrogate: 1-Chlorooctadecane 94.6 % 37.6-147

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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: 04/12/2019
Reported: 04/16/2019
Project Name: RIVERBEND B-11 CTB
Project Number: (10/30/18)
Project Location: OXY - MALAGA, NM

Sampling Date: 04/10/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 2 @ 3' (H901352-04)

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	04/13/2019	ND	2.04	102	2.00	0.584	
Toluene*	<0.050	0.050	04/13/2019	ND	1.94	97.0	2.00	1.81	
Ethylbenzene*	<0.050	0.050	04/13/2019	ND	2.01	100	2.00	0.468	
Total Xylenes*	<0.150	0.150	04/13/2019	ND	6.07	101	6.00	0.157	
Total BTEx	<0.300	0.300	04/13/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.3 % 73.3-129

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	04/16/2019	ND	400	100	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	04/13/2019	ND	194	97.0	200	4.04	
DRO >C10-C28*	<10.0	10.0	04/13/2019	ND	190	95.0	200	4.16	
EXT DRO >C28-C36	<10.0	10.0	04/13/2019	ND					

Surrogate: 1-Chlorooctane 93.1 % 41-142

Surrogate: 1-Chlorooctadecane 94.9 % 37.6-147

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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: 04/12/2019
Reported: 04/16/2019
Project Name: RIVERBEND B-11 CTB
Project Number: (10/30/18)
Project Location: OXY - MALAGA, NM

Sampling Date: 04/10/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 3 @ 2' (H901352-05)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/13/2019	ND	2.04	102	2.00	0.584	
Toluene*	<0.050	0.050	04/13/2019	ND	1.94	97.0	2.00	1.81	
Ethylbenzene*	<0.050	0.050	04/13/2019	ND	2.01	100	2.00	0.468	
Total Xylenes*	<0.150	0.150	04/13/2019	ND	6.07	101	6.00	0.157	
Total BTEx	<0.300	0.300	04/13/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.0 % 73.3-129

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	04/16/2019	ND	400	100	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	04/13/2019	ND	194	97.0	200	4.04	
DRO >C10-C28*	<10.0	10.0	04/13/2019	ND	190	95.0	200	4.16	
EXT DRO >C28-C36	<10.0	10.0	04/13/2019	ND					

Surrogate: 1-Chlorooctane 91.5 % 41-142

Surrogate: 1-Chlorooctadecane 93.1 % 37.6-147

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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: 04/12/2019
Reported: 04/16/2019
Project Name: RIVERBEND B-11 CTB
Project Number: (10/30/18)
Project Location: OXY - MALAGA, NM

Sampling Date: 04/10/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 3 @ 3' (H901352-06)

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	04/13/2019	ND	2.04	102	2.00	0.584	
Toluene*	<0.050	0.050	04/13/2019	ND	1.94	97.0	2.00	1.81	
Ethylbenzene*	<0.050	0.050	04/13/2019	ND	2.01	100	2.00	0.468	
Total Xylenes*	<0.150	0.150	04/13/2019	ND	6.07	101	6.00	0.157	
Total BTEx	<0.300	0.300	04/13/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	04/16/2019	ND	400	100	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	04/13/2019	ND	194	97.0	200	4.04	
DRO >C10-C28*	<10.0	10.0	04/13/2019	ND	190	95.0	200	4.16	
EXT DRO >C28-C36	<10.0	10.0	04/13/2019	ND					

Surrogate: 1-Chlorooctane 81.8 % 41-142

Surrogate: 1-Chlorooctadecane 82.4 % 37.6-147

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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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

**• CARDINAL LABORATORIES**

101 East Marland, Hobbs, NM 88240

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

Company Name: BBC International, Inc.						BILL TO						ANALYSIS REQUEST							
Project Manager: Cliff Brunson						P.O. #:						<div style="text-align: center;"> TPH Extended BTEX C/- </div>							
Address: P.O. Box 805						Company:													
City: Hobbs State: NM Zip: 88241						Attn:													
Phone #: 575-397-6388 Fax #: 575-397-0397						Address:													
Project #: Project Owner: OXY						City:													
Project Name: Riverbend B-11 CTB - 10-30-18-						State: Zip:													
Project Location: Mz1292, NM						Phone #:													
Sampler Name: ✓						Fax #:													
FOR LAB USE ONLY		(GRAB OR (COMP.# CONTAINERS)	MATRIX					PRESERV.	SAMPLING										
Lab I.D.	Sample I.D.		GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE: ICE / COOL OTHER :	DATE	TIME								
H901352		G-1			.				.	4/10	130	+	X	X					
1	SP1CZ	G-1			.				.		140	+	X	+					
2	3	G-1			.				.		155	+	+	+					
3	SP2CZ	G-1			.				.		209	+	+	+					
4	3	G-1			.				.		219	+	+	+					
5	SP3CZ	G-1			.				.		233	+	+	+					
6	3	G-1			.				.										

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Relinquished By: <i>[Signature]</i>		Date: <i>7-12-19</i>	Received By:	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Phone #:
Time:				Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Fax #:
Relinquished By: <i>[Signature]</i>		Date: <i>7-12-19</i>	Received By:	REMARKS:
Time: <i>10:45</i>		<i>Laura Olden</i>		
Delivered By: (Circle One)		Sample Condition		
Sampler - UPS - Bus - Other:		Cool <input type="checkbox"/> Intact <input type="checkbox"/>	CHECKED BY:	
<i>3.4c #97</i>		Yes <input type="checkbox"/> No <input type="checkbox"/>	(Initials)	
		Yes <input type="checkbox"/> No <input type="checkbox"/>	<i>TO</i>	

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

November 26, 2018

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: RIVERBEND B-11 CTB

Enclosed are the results of analyses for samples received by the laboratory on 11/19/18 16:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

Received: 11/19/2018
Reported: 11/26/2018
Project Name: RIVERBEND B-11 CTB
Project Number: (10/30/18)
Project Location: OXY - EDDY CO NM

Sampling Date: 11/16/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 1 @ SURFACE (H803381-01)

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	11/21/2018	ND	2.01	101	2.00	1.81	
Toluene*	0.837	0.050	11/21/2018	ND	1.98	99.0	2.00	3.56	
Ethylbenzene*	1.03	0.050	11/21/2018	ND	1.93	96.3	2.00	3.07	
Total Xylenes*	4.73	0.150	11/21/2018	ND	5.67	94.4	6.00	2.44	
Total BTX	6.60	0.300	11/21/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 119 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8800	16.0	11/21/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	153	50.0	11/21/2018	ND	213	106	200	4.97		
DRO >C10-C28*	9830	50.0	11/21/2018	ND	224	112	200	7.96		
EXT DRO >C28-C36	2180	50.0	11/21/2018	ND						

Surrogate: 1-Chlorooctane 103 % 41-142

Surrogate: 1-Chlorooctadecane 381 % 37.6-147

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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: 11/19/2018
Reported: 11/26/2018
Project Name: RIVERBEND B-11 CTB
Project Number: (10/30/18)
Project Location: OXY - EDDY CO NM

Sampling Date: 11/16/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 1 @ 1' (H803381-02)

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	11/21/2018	ND	2.01	101	2.00	1.81	
Toluene*	<0.050	0.050	11/21/2018	ND	1.98	99.0	2.00	3.56	
Ethylbenzene*	0.081	0.050	11/21/2018	ND	1.93	96.3	2.00	3.07	
Total Xylenes*	0.382	0.150	11/21/2018	ND	5.67	94.4	6.00	2.44	
Total BTEX	0.463	0.300	11/21/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	11/21/2018	ND	432	108	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	11/21/2018	ND	213	106	200	4.97	
DRO >C10-C28*	226	10.0	11/21/2018	ND	224	112	200	7.96	
EXT DRO >C28-C36	84.2	10.0	11/21/2018	ND					

Surrogate: 1-Chlorooctane 83.5 % 41-142

Surrogate: 1-Chlorooctadecane 93.5 % 37.6-147

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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: 11/19/2018
Reported: 11/26/2018
Project Name: RIVERBEND B-11 CTB
Project Number: (10/30/18)
Project Location: OXY - EDDY CO NM

Sampling Date: 11/16/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 2 @ SURFACE (H803381-03)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.052	0.050	11/21/2018	ND	2.01	101	2.00	1.81	
Toluene*	1.15	0.050	11/21/2018	ND	1.98	99.0	2.00	3.56	
Ethylbenzene*	1.23	0.050	11/21/2018	ND	1.93	96.3	2.00	3.07	
Total Xylenes*	6.05	0.150	11/21/2018	ND	5.67	94.4	6.00	2.44	
Total BTEX	8.48	0.300	11/21/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 129 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	10200	16.0	11/21/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	179	50.0	11/21/2018	ND	213	106	200	4.97		
DRO >C10-C28*	9680	50.0	11/21/2018	ND	224	112	200	7.96		
EXT DRO >C28-C36	2130	50.0	11/21/2018	ND						

Surrogate: 1-Chlorooctane 114 % 41-142

Surrogate: 1-Chlorooctadecane 387 % 37.6-147

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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: 11/19/2018
Reported: 11/26/2018
Project Name: RIVERBEND B-11 CTB
Project Number: (10/30/18)
Project Location: OXY - EDDY CO NM

Sampling Date: 11/16/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 2 @ 1' (H803381-04)

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	11/21/2018	ND	2.01	101	2.00	1.81	
Toluene*	0.060	0.050	11/21/2018	ND	1.98	99.0	2.00	3.56	
Ethylbenzene*	0.113	0.050	11/21/2018	ND	1.93	96.3	2.00	3.07	
Total Xylenes*	0.548	0.150	11/21/2018	ND	5.67	94.4	6.00	2.44	
Total BTEX	0.721	0.300	11/21/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	11/21/2018	ND	432	108	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	11/21/2018	ND	213	106	200	4.97	
DRO >C10-C28*	211	10.0	11/21/2018	ND	224	112	200	7.96	
EXT DRO >C28-C36	75.4	10.0	11/21/2018	ND					

Surrogate: 1-Chlorooctane 85.4 % 41-142

Surrogate: 1-Chlorooctadecane 94.7 % 37.6-147

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Received: 11/19/2018
Reported: 11/26/2018
Project Name: RIVERBEND B-11 CTB
Project Number: (10/30/18)
Project Location: OXY - EDDY CO NM

Sampling Date: 11/16/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 3 @ SURFACE (H803381-05)

BTEx 8021B		mg/kg	Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.069	0.050	11/21/2018	ND	2.01	101	2.00	1.81	
Toluene*	1.23	0.050	11/21/2018	ND	1.98	99.0	2.00	3.56	
Ethylbenzene*	1.30	0.050	11/21/2018	ND	1.93	96.3	2.00	3.07	
Total Xylenes*	6.36	0.150	11/21/2018	ND	5.67	94.4	6.00	2.44	
Total BTEX	8.96	0.300	11/21/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 133 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	11800	16.0	11/21/2018	ND	400	100	400	0.00	QM-07

TPH 8015M		mg/kg	Analyzed By: MS					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	152	50.0	11/21/2018	ND	213	106	200	4.97	
DRO >C10-C28*	8180	50.0	11/21/2018	ND	224	112	200	7.96	
EXT DRO >C28-C36	1810	50.0	11/21/2018	ND					

Surrogate: 1-Chlorooctane 119 % 41-142

Surrogate: 1-Chlorooctadecane 357 % 37.6-147

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 Received: 11/19/2018
 Reported: 11/26/2018
 Project Name: RIVERBEND B-11 CTB
 Project Number: (10/30/18)
 Project Location: OXY - EDDY CO NM

 Sampling Date: 11/16/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SP 3 @ 1' (H803381-06)

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	11/21/2018	ND	2.01	101	2.00	1.81	
Toluene*	0.078	0.050	11/21/2018	ND	1.98	99.0	2.00	3.56	
Ethylbenzene*	0.104	0.050	11/21/2018	ND	1.93	96.3	2.00	3.07	
Total Xylenes*	0.500	0.150	11/21/2018	ND	5.67	94.4	6.00	2.44	
Total BTEX	0.682	0.300	11/21/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	11/21/2018	ND	400	100	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	11/21/2018	ND	213	106	200	4.97	
DRO >C10-C28*	249	10.0	11/21/2018	ND	224	112	200	7.96	
EXT DRO >C28-C36	90.1	10.0	11/21/2018	ND					

Surrogate: 1-Chlorooctane 83.9 % 41-142

Surrogate: 1-Chlorooctadecane 94.5 % 37.6-147

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Received: 11/19/2018
Reported: 11/26/2018
Project Name: RIVERBEND B-11 CTB
Project Number: (10/30/18)
Project Location: OXY - EDDY CO NM

Sampling Date: 11/16/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 4 @ SURFACE (H803381-07)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.226	0.050	11/21/2018	ND	2.01	101	2.00	1.81	
Toluene*	4.87	0.050	11/21/2018	ND	1.98	99.0	2.00	3.56	
Ethylbenzene*	5.14	0.050	11/21/2018	ND	1.93	96.3	2.00	3.07	
Total Xylenes*	22.6	0.150	11/21/2018	ND	5.67	94.4	6.00	2.44	
Total BTEX	32.9	0.300	11/21/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	11/21/2018	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	821	50.0	11/21/2018	ND	213	106	200	4.97		
DRO >C10-C28*	24900	50.0	11/21/2018	ND	224	112	200	7.96		
EXT DRO >C28-C36	4640	50.0	11/21/2018	ND						

Surrogate: 1-Chlorooctane 160 % 41-142

Surrogate: 1-Chlorooctadecane 833 % 37.6-147

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Received: 11/19/2018
Reported: 11/26/2018
Project Name: RIVERBEND B-11 CTB
Project Number: (10/30/18)
Project Location: OXY - EDDY CO NM

Sampling Date: 11/16/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 4 @ 1' (H803381-08)

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	11/22/2018	ND	2.01	101	2.00	1.81	
Toluene*	0.857	0.050	11/22/2018	ND	1.98	99.0	2.00	3.56	
Ethylbenzene*	<0.050	0.050	11/22/2018	ND	1.93	96.3	2.00	3.07	
Total Xylenes*	6.57	0.150	11/22/2018	ND	5.67	94.4	6.00	2.44	
Total BTEX	7.43	0.300	11/22/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	11/21/2018	ND	400	100	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*	100	10.0	11/21/2018	ND	213	106	200	4.97	
DRO >C10-C28*	1200	10.0	11/21/2018	ND	224	112	200	7.96	
EXT DRO >C28-C36	226	10.0	11/21/2018	ND					

Surrogate: 1-Chlorooctane 72.8 % 41-142

Surrogate: 1-Chlorooctadecane 105 % 37.6-147

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Received: 11/19/2018
Reported: 11/26/2018
Project Name: RIVERBEND B-11 CTB
Project Number: (10/30/18)
Project Location: OXY - EDDY CO NM

Sampling Date: 11/16/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 4 @ 2' (H803381-09)

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	11/22/2018	ND	2.01	101	2.00	1.81	
Toluene*	<0.050	0.050	11/22/2018	ND	1.98	99.0	2.00	3.56	
Ethylbenzene*	<0.050	0.050	11/22/2018	ND	1.93	96.3	2.00	3.07	
Total Xylenes*	<0.150	0.150	11/22/2018	ND	5.67	94.4	6.00	2.44	
Total BTEX	<0.300	0.300	11/22/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.1 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	11/21/2018	ND	400	100	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	11/21/2018	ND	213	106	200	4.97	
DRO >C10-C28*	17.5	10.0	11/21/2018	ND	224	112	200	7.96	
EXT DRO >C28-C36	<10.0	10.0	11/21/2018	ND					

Surrogate: 1-Chlorooctane 82.1 % 41-142

Surrogate: 1-Chlorooctadecane 86.0 % 37.6-147

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Fax To: (575) 397-0397

Received:	11/19/2018	Sampling Date:	11/16/2018
Reported:	11/26/2018	Sampling Type:	Soil
Project Name:	RIVERBEND B-11 CTB	Sampling Condition:	Cool & Intact
Project Number:	(10/30/18)	Sample Received By:	Jodi Henson
Project Location:	OXY - EDDY CO NM		

Sample ID: SP 5 @ SURFACE (H803381-10)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.283	0.050	11/22/2018	ND	2.01	101	2.00	1.81	
Toluene*	5.43	0.050	11/22/2018	ND	1.98	99.0	2.00	3.56	
Ethylbenzene*	5.19	0.050	11/22/2018	ND	1.93	96.3	2.00	3.07	
Total Xylenes*	23.3	0.150	11/22/2018	ND	5.67	94.4	6.00	2.44	
Total BTX	34.2	0.300	11/22/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 91.8 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	11/21/2018	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	549	50.0	11/21/2018	ND	213	106	200	4.97	
DRO >C10-C28*	17000	50.0	11/21/2018	ND	224	112	200	7.96	
EXT DRO >C28-C36	3370	50.0	11/21/2018	ND					

Surrogate: 1-Chlorooctane 135 % 41-142

Surrogate: 1-Chlorooctadecane 594 % 37.6-147

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Fax To: (575) 397-0397

Received: 11/19/2018
Reported: 11/26/2018
Project Name: RIVERBEND B-11 CTB
Project Number: (10/30/18)
Project Location: OXY - EDDY CO NM

Sampling Date: 11/16/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 5 @ 1' (H803381-11)

BTX 8021B		mg/kg	Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/22/2018	ND	2.01	101	2.00	1.81	
Toluene*	0.352	0.050	11/22/2018	ND	1.98	99.0	2.00	3.56	
Ethylbenzene*	<0.050	0.050	11/22/2018	ND	1.93	96.3	2.00	3.07	
Total Xylenes*	3.34	0.150	11/22/2018	ND	5.67	94.4	6.00	2.44	
Total BTX	3.69	0.300	11/22/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 156 % 73.3-129

Chloride, SM4500CI-B		mg/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	11/21/2018	ND	400	100	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*	115	10.0	11/21/2018	ND	193	96.6	200	3.04	
DRO >C10-C28*	1770	10.0	11/21/2018	ND	192	95.9	200	4.07	QM-07, QR-03
EXT DRO >C28-C36	319	10.0	11/21/2018	ND					

Surrogate: 1-Chlorooctane 102 % 41-142

Surrogate: 1-Chlorooctadecane 143 % 37.6-147

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Received: 11/19/2018
Reported: 11/26/2018
Project Name: RIVERBEND B-11 CTB
Project Number: (10/30/18)
Project Location: OXY - EDDY CO NM

Sampling Date: 11/16/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 5 @ 2' (H803381-12)

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	11/22/2018	ND	2.01	101	2.00	1.81	
Toluene*	<0.050	0.050	11/22/2018	ND	1.98	99.0	2.00	3.56	
Ethylbenzene*	<0.050	0.050	11/22/2018	ND	1.93	96.3	2.00	3.07	
Total Xylenes*	<0.150	0.150	11/22/2018	ND	5.67	94.4	6.00	2.44	
Total BTX	<0.300	0.300	11/22/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	11/21/2018	ND	400	100	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	11/21/2018	ND	193	96.6	200	3.04	
DRO >C10-C28*	28.7	10.0	11/21/2018	ND	192	95.9	200	4.07	
EXT DRO >C28-C36	11.2	10.0	11/21/2018	ND					

Surrogate: 1-Chlorooctane 85.9 % 41-142

Surrogate: 1-Chlorooctadecane 87.0 % 37.6-147

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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: 11/19/2018
Reported: 11/26/2018
Project Name: RIVERBEND B-11 CTB
Project Number: (10/30/18)
Project Location: OXY - EDDY CO NM

Sampling Date: 11/16/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 6 @ SURFACE (H803381-13)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.285	0.050	11/22/2018	ND	2.01	101	2.00	1.81	
Toluene*	5.72	0.050	11/22/2018	ND	1.98	99.0	2.00	3.56	
Ethylbenzene*	5.51	0.050	11/22/2018	ND	1.93	96.3	2.00	3.07	
Total Xylenes*	24.6	0.150	11/22/2018	ND	5.67	94.4	6.00	2.44	
Total BTEX	36.1	0.300	11/22/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 91.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	11/21/2018	ND	400	100	400	0.00	
TPH 8015M	mg/kg		Analyzed By: MS						S-06

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	591	50.0	11/21/2018	ND	193	96.6	200	3.04	
DRO >C10-C28*	18600	50.0	11/21/2018	ND	192	95.9	200	4.07	
EXT DRO >C28-C36	3550	50.0	11/21/2018	ND					

Surrogate: 1-Chlorooctane 142 % 41-142

Surrogate: 1-Chlorooctadecane 661 % 37.6-147

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

Received: 11/19/2018
Reported: 11/26/2018
Project Name: RIVERBEND B-11 CTB
Project Number: (10/30/18)
Project Location: OXY - EDDY CO NM

Sampling Date: 11/16/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 6 @ 1' (H803381-14)

BTEx 8021B		mg/kg	Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/22/2018	ND	2.01	101	2.00	1.81	
Toluene*	0.399	0.050	11/22/2018	ND	1.98	99.0	2.00	3.56	
Ethylbenzene*	<0.050	0.050	11/22/2018	ND	1.93	96.3	2.00	3.07	
Total Xylenes*	3.45	0.150	11/22/2018	ND	5.67	94.4	6.00	2.44	
Total BTEX	3.85	0.300	11/22/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 162 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/21/2018	ND	400	100	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	117	10.0	11/21/2018	ND	193	96.6	200	3.04	
DRO >C10-C28*	2120	10.0	11/21/2018	ND	192	95.9	200	4.07	
EXT DRO >C28-C36	400	10.0	11/21/2018	ND					

Surrogate: 1-Chlorooctane 93.6 % 41-142

Surrogate: 1-Chlorooctadecane 157 % 37.6-147

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

Received: 11/19/2018
Reported: 11/26/2018
Project Name: RIVERBEND B-11 CTB
Project Number: (10/30/18)
Project Location: OXY - EDDY CO NM

Sampling Date: 11/16/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 6 @ 2' (H803381-15)

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	11/22/2018	ND	2.01	101	2.00	1.81	
Toluene*	<0.050	0.050	11/22/2018	ND	1.98	99.0	2.00	3.56	
Ethylbenzene*	<0.050	0.050	11/22/2018	ND	1.93	96.3	2.00	3.07	
Total Xylenes*	<0.150	0.150	11/22/2018	ND	5.67	94.4	6.00	2.44	
Total BTEX	<0.300	0.300	11/22/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	11/21/2018	ND	400	100	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	11/21/2018	ND	193	96.6	200	3.04	
DRO >C10-C28*	27.1	10.0	11/21/2018	ND	192	95.9	200	4.07	
EXT DRO >C28-C36	<10.0	10.0	11/21/2018	ND					

Surrogate: 1-Chlorooctane 94.9 % 41-142

Surrogate: 1-Chlorooctadecane 106 % 37.6-147

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Analytical Results For:

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

Received: 11/19/2018
Reported: 11/26/2018
Project Name: RIVERBEND B-11 CTB
Project Number: (10/30/18)
Project Location: OXY - EDDY CO NM

Sampling Date: 11/16/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: NORTH @ SURFACE (H803381-16)

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	11/22/2018	ND	2.01	101	2.00	1.81	
Toluene*	<0.050	0.050	11/22/2018	ND	1.98	99.0	2.00	3.56	
Ethylbenzene*	<0.050	0.050	11/22/2018	ND	1.93	96.3	2.00	3.07	
Total Xylenes*	<0.150	0.150	11/22/2018	ND	5.67	94.4	6.00	2.44	
Total BTX	<0.300	0.300	11/22/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/21/2018	ND	400	100	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	11/21/2018	ND	193	96.6	200	3.04	
DRO >C10-C28*	<10.0	10.0	11/21/2018	ND	192	95.9	200	4.07	
EXT DRO >C28-C36	<10.0	10.0	11/21/2018	ND					

Surrogate: 1-Chlorooctane 81.9 % 41-142

Surrogate: 1-Chlorooctadecane 88.3 % 37.6-147

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

Received: 11/19/2018
Reported: 11/26/2018
Project Name: RIVERBEND B-11 CTB
Project Number: (10/30/18)
Project Location: OXY - EDDY CO NM

Sampling Date: 11/16/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: EAST @ SURFACE (H803381-17)

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	11/22/2018	ND	2.01	101	2.00	1.81	
Toluene*	<0.050	0.050	11/22/2018	ND	1.98	99.0	2.00	3.56	
Ethylbenzene*	<0.050	0.050	11/22/2018	ND	1.93	96.3	2.00	3.07	
Total Xylenes*	<0.150	0.150	11/22/2018	ND	5.67	94.4	6.00	2.44	
Total BTX	<0.300	0.300	11/22/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.9 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/21/2018	ND	400	100	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	11/21/2018	ND	193	96.6	200	3.04	
DRO >C10-C28*	<10.0	10.0	11/21/2018	ND	192	95.9	200	4.07	
EXT DRO >C28-C36	<10.0	10.0	11/21/2018	ND					

Surrogate: 1-Chlorooctane 78.2 % 41-142

Surrogate: 1-Chlorooctadecane 83.1 % 37.6-147

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Analytical Results For:

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

Received:	11/19/2018	Sampling Date:	11/16/2018
Reported:	11/26/2018	Sampling Type:	Soil
Project Name:	RIVERBEND B-11 CTB	Sampling Condition:	Cool & Intact
Project Number:	(10/30/18)	Sample Received By:	Jodi Henson
Project Location:	OXY - EDDY CO NM		

Sample ID: SOUTH @ SURFACE (H803381-18)

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	11/22/2018	ND	2.20	110	2.00	2.51	
Toluene*	<0.050	0.050	11/22/2018	ND	2.19	110	2.00	3.05	
Ethylbenzene*	<0.050	0.050	11/22/2018	ND	2.11	106	2.00	3.51	
Total Xylenes*	<0.150	0.150	11/22/2018	ND	6.29	105	6.00	3.35	
Total BTX	<0.300	0.300	11/22/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.3 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/21/2018	ND	400	100	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	11/21/2018	ND	193	96.6	200	3.04	
DRO >C10-C28*	<10.0	10.0	11/21/2018	ND	192	95.9	200	4.07	
EXT DRO >C28-C36	<10.0	10.0	11/21/2018	ND					

Surrogate: 1-Chlorooctane 85.3 % 41-142

Surrogate: 1-Chlorooctadecane 90.3 % 37.6-147

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Analytical Results For:

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

Received:	11/19/2018	Sampling Date:	11/16/2018
Reported:	11/26/2018	Sampling Type:	Soil
Project Name:	RIVERBEND B-11 CTB	Sampling Condition:	Cool & Intact
Project Number:	(10/30/18)	Sample Received By:	Jodi Henson
Project Location:	OXY - EDDY CO NM		

Sample ID: WEST @ SURFACE (H803381-19)

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	11/22/2018	ND	2.20	110	2.00	2.51	
Toluene*	<0.050	0.050	11/22/2018	ND	2.19	110	2.00	3.05	
Ethylbenzene*	<0.050	0.050	11/22/2018	ND	2.11	106	2.00	3.51	
Total Xylenes*	<0.150	0.150	11/22/2018	ND	6.29	105	6.00	3.35	
Total BTX	<0.300	0.300	11/22/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.9 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/21/2018	ND	400	100	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	11/21/2018	ND	193	96.6	200	3.04	
DRO >C10-C28*	<10.0	10.0	11/21/2018	ND	192	95.9	200	4.07	
EXT DRO >C28-C36	<10.0	10.0	11/21/2018	ND					

Surrogate: 1-Chlorooctane 94.5 % 41-142

Surrogate: 1-Chlorooctadecane 101 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

1082

Company Name: BBC International, Inc.				BILL TO				ANALYSIS REQUEST																							
Project Manager: Cliff Brunson				P.O. #:																											
Address: P.O. Box 805				Company:																											
City: Hobbs		State: NM		Zip: 88241		Attn: <i>W. D. Strick</i>																									
Phone #: 575-397-6388		Fax #: 575-397-0397		Address:																											
Project #:		Project Owner: Oxy		City:																											
Project Name: Riverbend B-11 CTB (10/30/18)				State: Zip:																											
Project Location: Eddy County, NM				Phone #:																											
Sampler Name: Roger Hernandez				Fax #:				<i>BTEX</i> <i>CI</i> <i>TPH EXT</i>																							
FOR LAB USE ONLY																															
Lab I.D.		Sample I.D.																													
<i>H8033861</i>																															
1		SP1 @ SURFACE																													
2		SP1 @ 1'																													
3		SP2 @ SURFACE																													
4		SP2 @ 1'																													
5		SP3 @ SURFACE																													
6		SP3 @ 1'																													
7		SP4 @ SURFACE																													
8		SP4 @ 1'																													
9		SP4 @ 2'																													
10		SP5 @ SURFACE																													
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Relinquished By: <i>R. Hernandez</i>				Date: <i>11/16/18</i>		Received By:				Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No				Add'l Phone #:																	
				Time: <i>5:30pm</i>						Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No				Add'l Fax #:																	
Relinquished By:				Date: <i>11/19/18</i>		Received By: <i>Joedi Henson</i>				REMARKS:																					
				Time: <i>10:00</i>																											
Delivered By: (Circle One)																															
Sampler - UPS - Bus - Other: <i>1.5c / #97</i>				Sample Condition Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>				CHECKED BY: (Initials) <i>JS</i>																							

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**ARDINAL LABORATORIES**

101 East Marland, Hobbs, NM 88240

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2082

Company Name: BBC International, Inc.				BILL TO				ANALYSIS REQUEST																									
Project Manager: Cliff Brunson				P.O. #:				<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">BTEX</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">CI</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TPH3X4</div> </div>																									
Address: P.O. Box 805				Company: <i>Oxy</i>																													
City: Hobbs State: NM Zip: 88241				Attn: <i>W. D. Henson</i>																													
Phone #: 575-397-6388 Fax #: 575-397-0397				Address:																													
Project #: Project Owner: Oxy				City:																													
Project Name: Riverbend B-11 CTB (10/30/18)				State: Zip:																													
Project Location: Eddy County, NM				Phone #:																													
Sampler Name: Roger Hernandez				Fax #:																													
FOR LAB USE ONLY				MATRIX		PRESERV.		SAMPLING																									
Lab I.D.	Sample I.D.	GRAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME																			
<i>H903381</i>																																	
<i>11</i>	SP5 @ 1'	<i>6</i>	<i>1</i>			<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			11/16/18	12:48 PM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																
<i>12</i>	SP5 @ 2'												11/16/18	1:05 PM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																
<i>13</i>	SP6 @ SURFACE												11/16/18	1:20 PM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																
<i>14</i>	SP6 @ 1'												11/16/18	1:38 PM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																
<i>15</i>	SP6 @ 2'												11/16/18	2:00 PM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																
<i>16</i>	NORTH @ SURFACE												11/16/18	2:10 PM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																
<i>17</i>	EAST @ SURFACE												11/16/18	2:20 PM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																
<i>18</i>	SOUTH @ SURFACE												11/16/18	2:30 PM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																
<i>19</i>	WEST @ SURFACE												11/16/18	2:40 PM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: <i>Roger Hernandez</i>	Date: <i>11/16/18</i>	Received By:	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
	Time: <i>5:30p</i>		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By:	Date: <i>11/19/18</i>	Received By: <i>Godi Henson</i>	REMARKS:	
	Time: <i>16:00</i>			
Delivered By: (Circle One)	Sample Condition		CHECKED BY: (Initials)	
Sampler - UPS - Bus - Other: <i>1.5% #97</i>	Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>		<i>GH</i>	

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