



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/REMEDATION WORKPLAN

OXY – CEDAR CANYON WTF (Leak Date: 6/29/19)

Incident Reference #: NRM1935051494

This delineation workplan and remediation proposal addresses the releases associated with Incident Reference #: NRM1935051494.

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 leak area near SP1, SP4, and SP5 (WHITE shade on diagram) will require zero remediation. The leak area near SP3 (RED shade on diagram) will be excavated to a depth of 3 feet. The leak area near SP2 (PURPLE shade on diagram) will be excavated to a depth of 1 foot.

Bottom and sidewall confirmation samples will be collected every 50 feet. The estimated amount of soil to be excavated is 206 cubic yards. The remediation will be completed within 90 days of 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.

Form C-141

Page 3

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	NRM1935051494
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?	51 (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 type="checkbox"/> Yes <input checked="" 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 type="checkbox"/> Yes <input checked="" 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input 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.

Form C-141

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	
District RP	NRM1935051494
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 Dittrich Title: Environmental CoordinatorSignature:  Date: 2-10-2020email: wade_dittrich@oxy.com Telephone: (575) 390-2828**OCD Only**

Received by: _____ Date: _____

Form C-141

State of New Mexico
Oil Conservation Division

Page 5

Incident ID	
District RP	NRM1935051494
Facility ID	
Application ID	

Remediation Plan

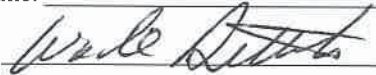
Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- ☒ 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: 2-10-2020
email: wade_dittrich@oxy.com Telephone: (575) 390-2828

OCD Only

Received by: _____ Date: _____

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

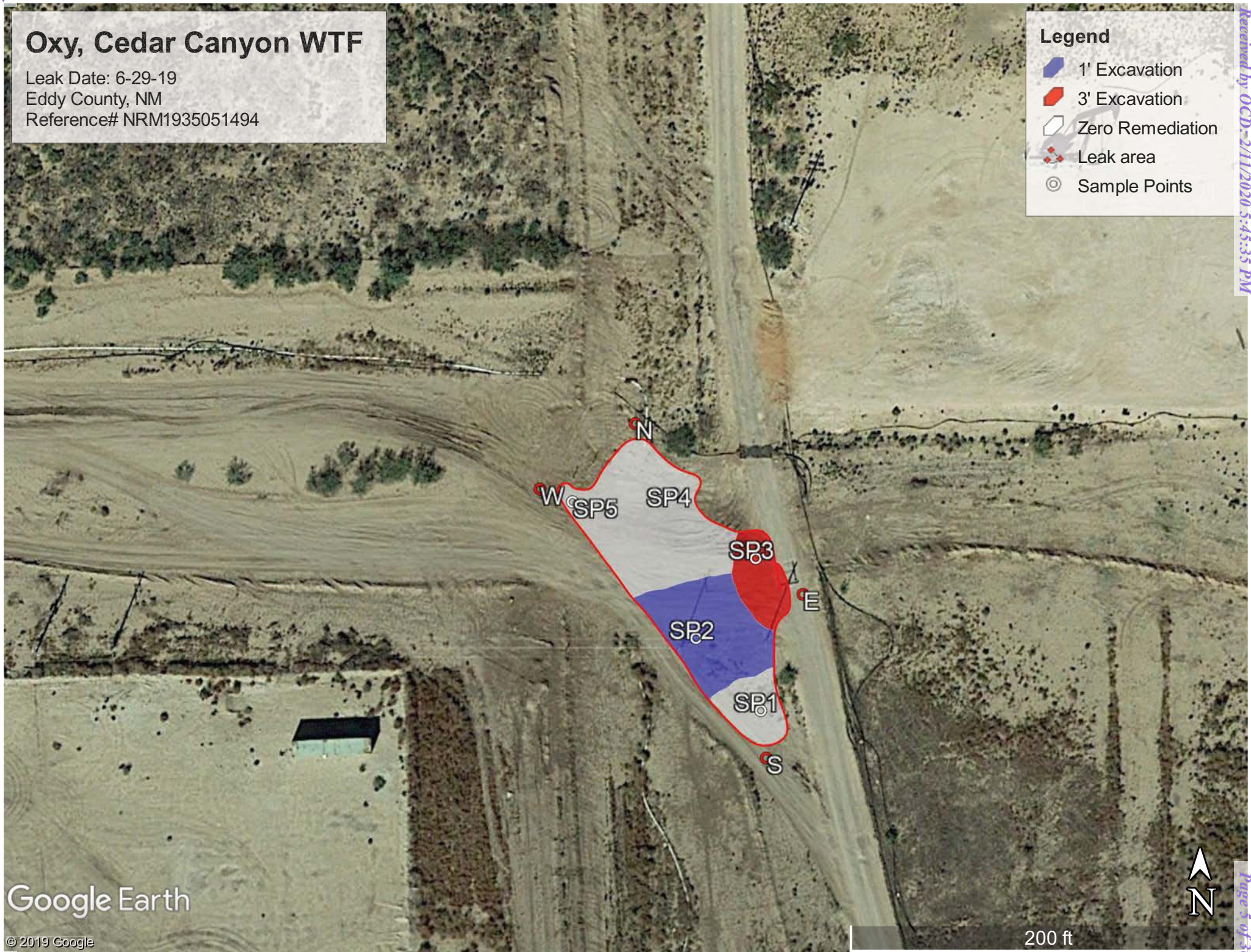
Signature: _____ Date: _____

Oxy, Cedar Canyon WTF

Leak Date: 6-29-19
Eddy County, NM
Reference# NRM1935051494

Legend

- 1' Excavation
- 3' Excavation
- Zero Remediation
- Leak area
- Sample Points



Google Earth

© 2019 Google

200 ft



Oxy, Cedar Canyon WTF 6-29-19

Sample Points

SP1, N 32.22231 W -103.97906

SP2, N 32.22241 W -103.97916

SP3, N 32.22252 W -103.97907

SP4, N 32.22261 W -103.97920

SP5, N 32.22259 W -103.97937

North, N 32.22270 W -103.97926

East, N 32.22247 W -103.97899

West, N 32.22261 W -103.97942

South, N 32.22224 W -103.97905

Oxy, Cedar Canyon WTF
U/L D, Section 15, T24S, R29E
Groundwater: 75'-100'





USGS Home
Contact USGS
Search USGS

National Water Information System: Web Interface

USGS Water Resources

Data Category:

Groundwater

Geographic Area:

New Mexico

GO

Click to hideNews Bulletins

- Introducing The Next Generation of USGS Water Data for the Nation
- Full News

Groundwater levels for New Mexico

Click to hide state-specific text

Search Results -- 1 sites found

Agency code = usgs
site_no list =

- 321355104012001

Minimum number of levels = 1
[Save file of selected sites](#) to local disk for future upload

USGS 321355104012001 24S.29E.07.14444

Eddy County, New Mexico
Latitude 32°13'55", Longitude 104°01'20" NAD27
Land-surface elevation 2,983 feet above NAVD88
The depth of the well is 160 feet below land surface.
This well is completed in the Castile Formation (312CSTL) 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 measurem
1983-02-01		D	47.14			2			U	
1987-10-16		D	51.84			2			U	
1988-02-11		D	52.19			2			U	
1992-10-20		D	51.78			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.
Measuring agency		Not determined
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

Received by OCD: 2/11/2020 5:45:35 PM



1:9,028

The image shows two horizontal number lines. The top number line is labeled with miles (mi) and has major tick marks at 0, 0.07, 0.15, and 0.3. The bottom number line is labeled with kilometers (km) and has major tick marks at 0, 0.15, 0.3, and 0.6. The lines are aligned such that 0.15 miles corresponds to 0.3 kilometers, and 0.3 miles corresponds to 0.6 kilometers.

75: New Mexico Oil Conservation Division



NM OCD Oil and Gas Map. <http://nm-emnrd.maps.arcgis.com/apps/webappviewer/index.html?id=4d017f2306164de29fd2fb9f8f35ca75>; New Mexico Oil Conservation Division

Oxy, Cedar Canyon WTF

Leak date: 6/29/19
Eddy County, NM

BLM CAVE KARST MAP

Legend

-  Leak area
-  Medium potential

anal

Google Earth

© 2018 Google



2000 ft

National Flood Hazard Layer FIRMette



32°13'36.83"N



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

USGS The National Map: Orthoimagery. Data refreshed April, 2019.

32°13'6.39"N

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
		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 X
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
OTHER FEATURES		Levee, Dike, or Floodwall
		Cross Sections with 1% Annual Chance Water Surface Elevation
OTHER FEATURES		Coastal Transect
		Base Flood Elevation Line (BFE)
OTHER FEATURES		Limit of Study
		Jurisdiction Boundary
OTHER FEATURES		Coastal Transect Baseline
		Profile Baseline
OTHER FEATURES		Hydrographic Feature
		Digital Data Available
MAP PANELS		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 9/10/2019 at 6:53:21 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 unmapped areas cannot be used for regulatory purposes.

Received by OCD: 2/15/2020 5:45:35 PM

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Laboratory Analytical Results Summary
Oxy, Cedar Canyon WTF 6-29-19

		Sample ID	North @ Surface	East @ Surface	West @ Surface	South @ Surface
Analyte	Method	Date	12/24/19	12/24/19	12/24/19	12/24/19
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.025	<0.025	<0.025	<0.025
Toluene	BTEX 8021B		<0.025	<0.025	<0.025	<0.025
Ethylbenzene	BTEX 8021B		<0.025	<0.025	<0.025	<0.025
Total Xylenes	BTEX 8021B		<0.075	<0.075	<0.075	<0.075
Total BTEX	BTEX 8021B		<0.150	<0.150	<0.150	<0.150
Chloride	SM4500Cl-B		32.0	32.0	32.0	<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

		Sample ID	SP1 @ Surface	SP1 @ 1'	SP1 @ 2'
Analyte	Method	Date	12/24/19	12/24/19	12/24/19
			mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.025	<0.025	n/a
Toluene	BTEX 8021B		<0.025	<0.025	n/a
Ethylbenzene	BTEX 8021B		<0.025	<0.025	n/a
Total Xylenes	BTEX 8021B		<0.075	<0.075	n/a
Total BTEX	BTEX 8021B		<0.150	<0.150	n/a
Chloride	SM4500Cl-B		368	48.0	32.0
GRO	TPH 8015M		<10.0	<10.0	n/a
DRO	TPH 8015M		<10.0	<10.0	n/a
EXT DRO	TPH 8015M		<10.0	<10.0	n/a

		Sample ID	SP2 @ Surface	SP2 @ 1'	SP2 @ 2'
Analyte	Method	Date	12/24/19	12/24/19	12/24/19
			mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.025	0.035	n/a
Toluene	BTEX 8021B		<0.025	0.078	n/a
Ethylbenzene	BTEX 8021B		<0.025	0.030	n/a
Total Xylenes	BTEX 8021B		<0.075	<0.075	n/a
Total BTEX	BTEX 8021B		<0.150	0.202	n/a
Chloride	SM4500Cl-B		720	80.0	17.0
GRO	TPH 8015M		<10.0	<10.0	n/a
DRO	TPH 8015M		<10.0	<10.0	n/a
EXT DRO	TPH 8015M		<10.0	<10.0	n/a

		Sample ID	SP3 @ Surface	SP3 @ 1'	SP3 @ 2'	SP3 @ 3'	SP3 @ 4'
Analyte	Method	Date	12/24/19	12/24/19	12/24/19	12/27/19	12/27/19
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.025	<0.025	n/a	n/a	n/a
Toluene	BTEX 8021B		<0.025	<0.025	n/a	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.025	<0.025	n/a	n/a	n/a
Total Xylenes	BTEX 8021B		<0.075	<0.075	n/a	n/a	n/a
Total BTEX	BTEX 8021B		<0.150	<0.150	n/a	n/a	n/a
Chloride	SM4500Cl-B		80.0	1020	656	80.0	32.0
GRO	TPH 8015M		<10.0	<10.0	n/a	n/a	n/a
DRO	TPH 8015M		<10.0	<10.0	n/a	n/a	n/a
EXT DRO	TPH 8015M		<10.0	<10.0	n/a	n/a	n/a

		Sample ID	SP4 @ Surface	SP4 @ 1'	SP4 @ 2'
Analyte	Method	Date	12/27/19	12/27/19	12/27/19
			mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.025	<0.025	n/a
Toluene	BTEX 8021B		<0.025	<0.025	n/a
Ethylbenzene	BTEX 8021B		<0.025	<0.025	n/a
Total Xylenes	BTEX 8021B		<0.075	<0.075	n/a
Total BTEX	BTEX 8021B		<0.150	<0.150	n/a
Chloride	SM4500Cl-B		80.0	64.0	32.0
GRO	TPH 8015M		<10.0	<10.0	n/a
DRO	TPH 8015M		<10.0	<10.0	n/a
EXT DRO	TPH 8015M		<10.0	<10.0	n/a

		Sample ID	SP5 @ Surface	SP5 @ 1'	SP5 @ 2'	SP5 @ 3'
Analyte	Method	Date	12/27/19	12/27/19	12/27/19	12/27/19
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.025	<0.025	n/a	n/a
Toluene	BTEX 8021B		<0.025	<0.025	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.025	<0.025	n/a	n/a
Total Xylenes	BTEX 8021B		<0.075	<0.075	n/a	n/a
Total BTEX	BTEX 8021B		<0.150	<0.150	n/a	n/a
Chloride	SM4500Cl-B		96.0	336	80.0	48.0
GRO	TPH 8015M		<10.0	<10.0	n/a	n/a
DRO	TPH 8015M		<10.0	<10.0	n/a	n/a
EXT DRO	TPH 8015M		<10.0	<10.0	n/a	n/a



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

January 09, 2020

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: CEDAR CANYON WTF

Enclosed are the results of analyses for samples received by the laboratory on 01/03/20 13:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. 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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	01/03/2020	Sampling Date:	12/24/2019
Reported:	01/09/2020	Sampling Type:	Soil
Project Name:	CEDAR CANYON WTF	Sampling Condition:	Cool & Intact
Project Number:	06-29-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY COUNTY, NM		

Sample ID: NORTH @ SURFACE (H000019-01)

BTEX 8260B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.025	0.025	01/06/2020	ND	2.10	105	2.00	1.38		
Toluene*	<0.025	0.025	01/06/2020	ND	2.09	104	2.00	3.19		
Ethylbenzene*	<0.025	0.025	01/06/2020	ND	2.15	107	2.00	2.92		
Total Xylenes*	<0.075	0.075	01/06/2020	ND	6.39	107	6.00	3.64		
Total BTEX	<0.150	0.150	01/06/2020	ND						

Surrogate: Dibromofluoromethane 105 % 90.4-111

Surrogate: Toluene-d8 98.0 % 85.3-114

Surrogate: 4-Bromofluorobenzene 90.9 % 80.1-121

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	01/06/2020	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/07/2020	ND	198	99.0	200	5.88	
DRO >C10-C28*	<10.0	10.0	01/07/2020	ND	227	113	200	6.34	
EXT DRO >C28-C36	<10.0	10.0	01/07/2020	ND					

Surrogate: 1-Chlorooctane 64.2 % 41-142

Surrogate: 1-Chlorooctadecane 65.5 % 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



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

Analytical Results For:

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

Received: 01/03/2020
 Reported: 01/09/2020
 Project Name: CEDAR CANYON WTF
 Project Number: 06-29-19
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 12/24/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: EAST @ SURFACE (H000019-02)

BTEx 8260B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.025	0.025	01/06/2020	ND	2.10	105	2.00	1.38		
Toluene*	<0.025	0.025	01/06/2020	ND	2.09	104	2.00	3.19		
Ethylbenzene*	<0.025	0.025	01/06/2020	ND	2.15	107	2.00	2.92		
Total Xylenes*	<0.075	0.075	01/06/2020	ND	6.39	107	6.00	3.64		
Total BTEx	<0.150	0.150	01/06/2020	ND						

Surrogate: Dibromofluoromethane 105 % 90.4-111

Surrogate: Toluene-d8 98.2 % 85.3-114

Surrogate: 4-Bromofluorobenzene 90.8 % 80.1-121

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	01/06/2020	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/07/2020	ND	198	99.0	200	5.88	
DRO >C10-C28*	<10.0	10.0	01/07/2020	ND	227	113	200	6.34	
EXT DRO >C28-C36	<10.0	10.0	01/07/2020	ND					

Surrogate: 1-Chlorooctane 66.2 % 41-142

Surrogate: 1-Chlorooctadecane 65.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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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:	01/03/2020	Sampling Date:	12/24/2019
Reported:	01/09/2020	Sampling Type:	Soil
Project Name:	CEDAR CANYON WTF	Sampling Condition:	Cool & Intact
Project Number:	06-29-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY COUNTY, NM		

Sample ID: WEST @ SURFACE (H000019-03)

BTX 8260B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	01/06/2020	ND	2.10	105	2.00	1.38	
Toluene*	<0.025	0.025	01/06/2020	ND	2.09	104	2.00	3.19	
Ethylbenzene*	<0.025	0.025	01/06/2020	ND	2.15	107	2.00	2.92	
Total Xylenes*	<0.075	0.075	01/06/2020	ND	6.39	107	6.00	3.64	
Total BTX	<0.150	0.150	01/06/2020	ND					

Surrogate: Dibromofluoromethane 105 % 90.4-111

Surrogate: Toluene-d8 98.2 % 85.3-114

Surrogate: 4-Bromofluorobenzene 92.8 % 80.1-121

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	01/06/2020	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/07/2020	ND	210	105	200	14.4	
DRO >C10-C28*	<10.0	10.0	01/07/2020	ND	226	113	200	6.53	
EXT DRO >C28-C36	<10.0	10.0	01/07/2020	ND					

Surrogate: 1-Chlorooctane 83.1 % 41-142

Surrogate: 1-Chlorooctadecane 87.2 % 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:	01/03/2020	Sampling Date:	12/24/2019
Reported:	01/09/2020	Sampling Type:	Soil
Project Name:	CEDAR CANYON WTF	Sampling Condition:	Cool & Intact
Project Number:	06-29-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY COUNTY, NM		

Sample ID: SOUTH @ SURFACE (H000019-04)

BTX 8260B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	01/06/2020	ND	2.10	105	2.00	1.38	
Toluene*	<0.025	0.025	01/06/2020	ND	2.09	104	2.00	3.19	
Ethylbenzene*	<0.025	0.025	01/06/2020	ND	2.15	107	2.00	2.92	
Total Xylenes*	<0.075	0.075	01/06/2020	ND	6.39	107	6.00	3.64	
Total BTX	<0.150	0.150	01/06/2020	ND					

Surrogate: Dibromofluoromethane 105 % 90.4-111

Surrogate: Toluene-d8 97.3 % 85.3-114

Surrogate: 4-Bromofluorobenzene 91.7 % 80.1-121

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	01/06/2020	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/07/2020	ND	210	105	200	14.4	
DRO >C10-C28*	<10.0	10.0	01/07/2020	ND	226	113	200	6.53	
EXT DRO >C28-C36	<10.0	10.0	01/07/2020	ND					

Surrogate: 1-Chlorooctane 84.0 % 41-142

Surrogate: 1-Chlorooctadecane 89.8 % 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:	01/03/2020	Sampling Date:	12/24/2019
Reported:	01/09/2020	Sampling Type:	Soil
Project Name:	CEDAR CANYON WTF	Sampling Condition:	Cool & Intact
Project Number:	06-29-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY COUNTY, NM		

Sample ID: SP 1 @ SURFACE (H000019-05)

BTEx 8260B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.025	0.025	01/06/2020	ND	2.10	105	2.00	1.38		
Toluene*	<0.025	0.025	01/06/2020	ND	2.09	104	2.00	3.19		
Ethylbenzene*	<0.025	0.025	01/06/2020	ND	2.15	107	2.00	2.92		
Total Xylenes*	<0.075	0.075	01/06/2020	ND	6.39	107	6.00	3.64		
Total BTEx	<0.150	0.150	01/06/2020	ND						

Surrogate: Dibromofluoromethane 105 % 90.4-111

Surrogate: Toluene-d8 97.3 % 85.3-114

Surrogate: 4-Bromofluorobenzene 90.9 % 80.1-121

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	01/06/2020	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/07/2020	ND	210	105	200	14.4	
DRO >C10-C28*	<10.0	10.0	01/07/2020	ND	226	113	200	6.53	
EXT DRO >C28-C36	<10.0	10.0	01/07/2020	ND					

Surrogate: 1-Chlorooctane 79.0 % 41-142

Surrogate: 1-Chlorooctadecane 82.9 % 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:	01/03/2020	Sampling Date:	12/24/2019
Reported:	01/09/2020	Sampling Type:	Soil
Project Name:	CEDAR CANYON WTF	Sampling Condition:	Cool & Intact
Project Number:	06-29-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY COUNTY, NM		

Sample ID: SP 1 @ 1' (H000019-06)

BTX 8260B		mg/kg		Analyzed By: ms				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	01/06/2020	ND	2.10	105	2.00	1.38	
Toluene*	<0.025	0.025	01/06/2020	ND	2.09	104	2.00	3.19	
Ethylbenzene*	<0.025	0.025	01/06/2020	ND	2.15	107	2.00	2.92	
Total Xylenes*	<0.075	0.075	01/06/2020	ND	6.39	107	6.00	3.64	
Total BTX	<0.150	0.150	01/06/2020	ND					

Surrogate: Dibromofluoromethane 105 % 90.4-111

Surrogate: Toluene-d8 119 % 85.3-114

Surrogate: 4-Bromofluorobenzene 92.8 % 80.1-121

Chloride, SM4500Cl-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	01/06/2020	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/07/2020	ND	210	105	200	14.4	
DRO >C10-C28*	<10.0	10.0	01/07/2020	ND	226	113	200	6.53	
EXT DRO >C28-C36	<10.0	10.0	01/07/2020	ND					

Surrogate: 1-Chlorooctane 85.2 % 41-142

Surrogate: 1-Chlorooctadecane 90.8 % 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:	01/03/2020	Sampling Date:	12/24/2019
Reported:	01/09/2020	Sampling Type:	Soil
Project Name:	CEDAR CANYON WTF	Sampling Condition:	Cool & Intact
Project Number:	06-29-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY COUNTY, NM		

Sample ID: SP 1 @ 2' (H000019-07)

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	01/06/2020	ND	416	104	400	3.77		

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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:	01/03/2020	Sampling Date:	12/24/2019
Reported:	01/09/2020	Sampling Type:	Soil
Project Name:	CEDAR CANYON WTF	Sampling Condition:	Cool & Intact
Project Number:	06-29-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY COUNTY, NM		

Sample ID: SP 2 @ SURFACE (H000019-08)

BTX 8260B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	01/06/2020	ND	2.10	105	2.00	1.38	
Toluene*	<0.025	0.025	01/06/2020	ND	2.09	104	2.00	3.19	
Ethylbenzene*	<0.025	0.025	01/06/2020	ND	2.15	107	2.00	2.92	
Total Xylenes*	<0.075	0.075	01/06/2020	ND	6.39	107	6.00	3.64	
Total BTX	<0.150	0.150	01/06/2020	ND					

Surrogate: Dibromofluoromethane 107 % 90.4-111

Surrogate: Toluene-d8 97.1 % 85.3-114

Surrogate: 4-Bromofluorobenzene 92.0 % 80.1-121

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	720	16.0	01/06/2020	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/07/2020	ND	210	105	200	14.4	
DRO >C10-C28*	<10.0	10.0	01/07/2020	ND	226	113	200	6.53	
EXT DRO >C28-C36	<10.0	10.0	01/07/2020	ND					

Surrogate: 1-Chlorooctane 82.9 % 41-142

Surrogate: 1-Chlorooctadecane 87.4 % 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:	01/03/2020	Sampling Date:	12/24/2019
Reported:	01/09/2020	Sampling Type:	Soil
Project Name:	CEDAR CANYON WTF	Sampling Condition:	Cool & Intact
Project Number:	06-29-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY COUNTY, NM		

Sample ID: SP 2 @ 1' (H000019-09)

BTX 8260B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.035	0.025	01/06/2020	ND	2.10	105	2.00	1.38	
Toluene*	0.078	0.025	01/06/2020	ND	2.09	104	2.00	3.19	
Ethylbenzene*	0.030	0.025	01/06/2020	ND	2.15	107	2.00	2.92	
Total Xylenes*	<0.075	0.075	01/06/2020	ND	6.39	107	6.00	3.64	
Total BTX	0.202	0.150	01/06/2020	ND					

Surrogate: Dibromofluoromethane 105 % 90.4-111

Surrogate: Toluene-d8 96.8 % 85.3-114

Surrogate: 4-Bromofluorobenzene 90.0 % 80.1-121

Chloride, SM4500Cl-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	01/06/2020	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/07/2020	ND	210	105	200	14.4	
DRO >C10-C28*	<10.0	10.0	01/07/2020	ND	226	113	200	6.53	
EXT DRO >C28-C36	<10.0	10.0	01/07/2020	ND					

Surrogate: 1-Chlorooctane 82.6 % 41-142

Surrogate: 1-Chlorooctadecane 89.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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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:	01/03/2020	Sampling Date:	12/24/2019
Reported:	01/09/2020	Sampling Type:	Soil
Project Name:	CEDAR CANYON WTF	Sampling Condition:	Cool & Intact
Project Number:	06-29-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY COUNTY, NM		

Sample ID: SP 2 @ 2' (H000019-10)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	01/06/2020	ND	416	104	400	3.77		

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Analytical Results For:

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Received:	01/03/2020	Sampling Date:	12/24/2019
Reported:	01/09/2020	Sampling Type:	Soil
Project Name:	CEDAR CANYON WTF	Sampling Condition:	Cool & Intact
Project Number:	06-29-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY COUNTY, NM		

Sample ID: SP 3 @ SURFACE (H000019-11)

BTX 8260B		mg/ kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.025	0.025	01/06/2020	ND	2.10	105	2.00	1.38		
Toluene*	<0.025	0.025	01/06/2020	ND	2.09	104	2.00	3.19		
Ethylbenzene*	<0.025	0.025	01/06/2020	ND	2.15	107	2.00	2.92		
Total Xylenes*	<0.075	0.075	01/06/2020	ND	6.39	107	6.00	3.64		
Total BTX	<0.150	0.150	01/06/2020	ND						

Surrogate: Dibromofluoromethane 104 % 90.4-111

Surrogate: Toluene-d8 98.7 % 85.3-114

Surrogate: 4-Bromofluorobenzene 90.5 % 80.1-121

Chloride, SM4500Cl-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	01/06/2020	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/07/2020	ND	210	105	200	14.4	
DRO >C10-C28*	<10.0	10.0	01/07/2020	ND	226	113	200	6.53	
EXT DRO >C28-C36	<10.0	10.0	01/07/2020	ND					

Surrogate: 1-Chlorooctane 81.8 % 41-142

Surrogate: 1-Chlorooctadecane 89.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	01/03/2020	Sampling Date:	12/24/2019
Reported:	01/09/2020	Sampling Type:	Soil
Project Name:	CEDAR CANYON WTF	Sampling Condition:	Cool & Intact
Project Number:	06-29-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY COUNTY, NM		

Sample ID: SP 3 @ 1' (H000019-12)

BTX 8260B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	01/06/2020	ND	2.10	105	2.00	1.38	
Toluene*	<0.025	0.025	01/06/2020	ND	2.09	104	2.00	3.19	
Ethylbenzene*	<0.025	0.025	01/06/2020	ND	2.15	107	2.00	2.92	
Total Xylenes*	<0.075	0.075	01/06/2020	ND	6.39	107	6.00	3.64	
Total BTX	<0.150	0.150	01/06/2020	ND					

Surrogate: Dibromofluoromethane 108 % 90.4-111

Surrogate: Toluene-d8 96.8 % 85.3-114

Surrogate: 4-Bromofluorobenzene 89.6 % 80.1-121

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1020	16.0	01/06/2020	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/07/2020	ND	210	105	200	14.4	
DRO >C10-C28*	<10.0	10.0	01/07/2020	ND	226	113	200	6.53	
EXT DRO >C28-C36	<10.0	10.0	01/07/2020	ND					

Surrogate: 1-Chlorooctane 83.1 % 41-142

Surrogate: 1-Chlorooctadecane 89.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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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:	01/03/2020	Sampling Date:	12/24/2019
Reported:	01/09/2020	Sampling Type:	Soil
Project Name:	CEDAR CANYON WTF	Sampling Condition:	Cool & Intact
Project Number:	06-29-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY COUNTY, NM		

Sample ID: SP 3 @ 2' (H000019-13)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	656	16.0	01/06/2020	ND	416	104	400	3.77		

Sample ID: SP 3 @ 3' (H000019-14)

Chloride, SM4500Cl-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	01/06/2020	ND	416	104	400	3.77	

Sample ID: SP 3 @ 4' (H000019-15)

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	01/06/2020	ND	416	104	400	3.77	

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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:	01/03/2020	Sampling Date:	12/27/2019
Reported:	01/09/2020	Sampling Type:	Soil
Project Name:	CEDAR CANYON WTF	Sampling Condition:	Cool & Intact
Project Number:	06-29-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY COUNTY, NM		

Sample ID: SP 4 @ SURFACE (H000019-16)

BTX 8260B		mg/kg		Analyzed By: ms				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	01/06/2020	ND	2.10	105	2.00	1.38	
Toluene*	<0.025	0.025	01/06/2020	ND	2.09	104	2.00	3.19	
Ethylbenzene*	<0.025	0.025	01/06/2020	ND	2.15	107	2.00	2.92	
Total Xylenes*	<0.075	0.075	01/06/2020	ND	6.39	107	6.00	3.64	
Total BTX	<0.150	0.150	01/06/2020	ND					

Surrogate: Dibromofluoromethane 105 % 90.4-111

Surrogate: Toluene-d8 118 % 85.3-114

Surrogate: 4-Bromofluorobenzene 90.0 % 80.1-121

Chloride, SM4500Cl-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	01/06/2020	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/08/2020	ND	191	95.4	200	6.89	
DRO >C10-C28*	<10.0	10.0	01/08/2020	ND	220	110	200	2.66	
EXT DRO >C28-C36	<10.0	10.0	01/08/2020	ND					

Surrogate: 1-Chlorooctane 67.6 % 41-142

Surrogate: 1-Chlorooctadecane 68.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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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:	01/03/2020	Sampling Date:	12/27/2019
Reported:	01/09/2020	Sampling Type:	Soil
Project Name:	CEDAR CANYON WTF	Sampling Condition:	Cool & Intact
Project Number:	06-29-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY COUNTY, NM		

Sample ID: SP 4 @ 1' (H000019-17)

BTX 8260B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	01/06/2020	ND	2.10	105	2.00	1.38	
Toluene*	<0.025	0.025	01/06/2020	ND	2.09	104	2.00	3.19	
Ethylbenzene*	<0.025	0.025	01/06/2020	ND	2.15	107	2.00	2.92	
Total Xylenes*	<0.075	0.075	01/06/2020	ND	6.39	107	6.00	3.64	
Total BTX	<0.150	0.150	01/06/2020	ND					

Surrogate: Dibromofluoromethane 107 % 90.4-111

Surrogate: Toluene-d8 96.1 % 85.3-114

Surrogate: 4-Bromofluorobenzene 89.1 % 80.1-121

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	01/06/2020	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/08/2020	ND	191	95.4	200	6.89	
DRO >C10-C28*	<10.0	10.0	01/08/2020	ND	220	110	200	2.66	
EXT DRO >C28-C36	<10.0	10.0	01/08/2020	ND					

Surrogate: 1-Chlorooctane 74.3 % 41-142

Surrogate: 1-Chlorooctadecane 75.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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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:	01/03/2020	Sampling Date:	12/27/2019
Reported:	01/09/2020	Sampling Type:	Soil
Project Name:	CEDAR CANYON WTF	Sampling Condition:	Cool & Intact
Project Number:	06-29-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY COUNTY, NM		

Sample ID: SP 4 @ 2' (H000019-18)

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	01/06/2020	ND	416	104	400	3.77		

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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:	01/03/2020	Sampling Date:	12/27/2019
Reported:	01/09/2020	Sampling Type:	Soil
Project Name:	CEDAR CANYON WTF	Sampling Condition:	Cool & Intact
Project Number:	06-29-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY COUNTY, NM		

Sample ID: SP 5 @ SURFACE (H000019-19)

BTX 8260B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	01/07/2020	ND	2.10	105	2.00	1.38	
Toluene*	<0.025	0.025	01/07/2020	ND	2.09	104	2.00	3.19	
Ethylbenzene*	<0.025	0.025	01/07/2020	ND	2.15	107	2.00	2.92	
Total Xylenes*	<0.075	0.075	01/07/2020	ND	6.39	107	6.00	3.64	
Total BTX	<0.150	0.150	01/07/2020	ND					

Surrogate: Dibromofluoromethane 109 % 90.4-111
 Surrogate: Toluene-d8 96.6 % 85.3-114
 Surrogate: 4-Bromofluorobenzene 90.7 % 80.1-121

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	01/06/2020	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/08/2020	ND	191	95.4	200	6.89	
DRO >C10-C28*	<10.0	10.0	01/08/2020	ND	220	110	200	2.66	
EXT DRO >C28-C36	<10.0	10.0	01/08/2020	ND					

Surrogate: 1-Chlorooctane 64.3 % 41-142
 Surrogate: 1-Chlorooctadecane 64.9 % 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:	01/03/2020	Sampling Date:	12/27/2019
Reported:	01/09/2020	Sampling Type:	Soil
Project Name:	CEDAR CANYON WTF	Sampling Condition:	Cool & Intact
Project Number:	06-29-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY COUNTY, NM		

Sample ID: SP 5 @ 1' (H000019-20)

BTX 8260B		mg/kg		Analyzed By: ms				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	01/07/2020	ND	2.10	105	2.00	1.38	
Toluene*	<0.025	0.025	01/07/2020	ND	2.09	104	2.00	3.19	
Ethylbenzene*	<0.025	0.025	01/07/2020	ND	2.15	107	2.00	2.92	
Total Xylenes*	<0.075	0.075	01/07/2020	ND	6.39	107	6.00	3.64	
Total BTX	<0.150	0.150	01/07/2020	ND					

Surrogate: Dibromofluoromethane 106 % 90.4-111

Surrogate: Toluene-d8 98.9 % 85.3-114

Surrogate: 4-Bromofluorobenzene 73.8 % 80.1-121

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	01/06/2020	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/08/2020	ND	212	106	200	0.228	
DRO >C10-C28*	<10.0	10.0	01/08/2020	ND	236	118	200	0.0984	
EXT DRO >C28-C36	<10.0	10.0	01/08/2020	ND					

Surrogate: 1-Chlorooctane 68.4 % 41-142

Surrogate: 1-Chlorooctadecane 70.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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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:	01/03/2020	Sampling Date:	12/27/2019
Reported:	01/09/2020	Sampling Type:	Soil
Project Name:	CEDAR CANYON WTF	Sampling Condition:	Cool & Intact
Project Number:	06-29-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY COUNTY, NM		

Sample ID: SP 5 @ 2' (H000019-21)

Chloride, SM4500Cl-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	01/06/2020	ND	416	104	400	0.00		

Sample ID: SP 5 @ 3' (H000019-22)

Chloride, SM4500Cl-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	01/06/2020	ND	416	104	400	0.00	

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Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
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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A handwritten signature in cursive script, appearing to read "Celey D. Keene", is written in black ink.

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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



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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]

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Relinquished By:		Date: 12-11-19	Received By:	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
		Time: 1:00pm		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By:		Date: 1-3-20	Received By:	REMARKS:	
		Time: 13:50			
Delivered By: (Circle One)			Sample Condition	CHECKED BY:	
Sampler - UPS - Bus - Other: #113 0.3c			Cool <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Intact <input type="checkbox"/> Yes <input type="checkbox"/> No	(Initials) T.O.	

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

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

3 of 3

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);">CI</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">BTEX</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TPH EXT</div> </div>																			
Address: P.O. Box 805				Company: <i>Oxy</i>																					
City: Hobbs		State: NM		Zip: 88241																					
Phone #: 575-397-6388		Fax #: 575-397-0397		Attn: <i>Wade</i>																					
Project #:		Project Owner: Oxy		Address:																					
Project Name: Cedar Canyon WTF 6-29-19				City:																					
Project Location: Eddy County, NM				State: Zip:																					
Sampler Name: Jeff Ornelas				Phone #:																					
Fax #:																									
FOR LAB USE ONLY																									
Lab I.D.		Sample I.D.		(GRAB OR (C)OMP. # CONTAINERS)		MATRIX				PRESERV.		SAMPLING													
						GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER:				ACID/BASE: ICE / COOL OTHER:		DATE TIME													
<i>HDDDD19</i>																									
<i>21</i>		SP5 @ 2'		<i>5</i>								12-27-19 11:45 AM		✓											
<i>22</i>		SP5 @ 3'		<i>5</i>								12-27-19 12:10 PM		✓											

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:	Date: <i>12-27-19</i> Time: <i>5:00 pm</i>	Received By:	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
Relinquished By: <i>[Signature]</i>	Date: <i>1-3-20</i> Time: <i>13:50</i>	Received By: <i>[Signature]</i>	Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Delivered By: (Circle One)		Sample Condition	CHECKED BY:	
Sampler - UPS - Bus - Other: <i>#113 0.3c</i>		Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No	(Initials) <i>T.O.</i>	
REMARKS:				

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