

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/REMEDIATION WORKPLAN

OXY - CEDAR CANYON 28-2 WT PUMP (Leak Date: 1/17/19)

RP # 2RP-5224

This delineation workplan and remediation proposal addresses the releases associated with RP # 2RP-5224.

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 – SP3 (PURPLE shade on diagram) will be excavated to a depth of 1.5 feet. The leak area near SP4 – SP6 (GREEN shade on diagram) will be excavated to a depth of 1 foot.

Bottom confirmation samples will be collected every 75 feet.

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

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

ORI9M-191125-C-1410

Boring or excavation logs

Topographic/Aerial maps

Photographs including date and GIS information

Laboratory data including chain of custody

Form C-141 Page 3

State of New Mexico Oil Conservation Division

Incident ID	
District RP	2RP-5224
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?	52 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ■ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ■ 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)?	☐ Yes ■ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	Yes 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?	☐ Yes ■ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	■ Yes □ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ■ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ■ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ■ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	■ Yes □ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ■ No
Did the release impact areas not on an exploration, development, production, or storage site?	☐ Yes ■ No
Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and ver contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.	tical extents of soil
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 well Field data Data table of soil contaminant concentration data Depth to water determination 	S.

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.

■ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release

Form C-141 Page 4

State of New Mexico Oil Conservation Division

Incident ID		
District RP	2RP-5224	•
Facility ID		
Application ID		

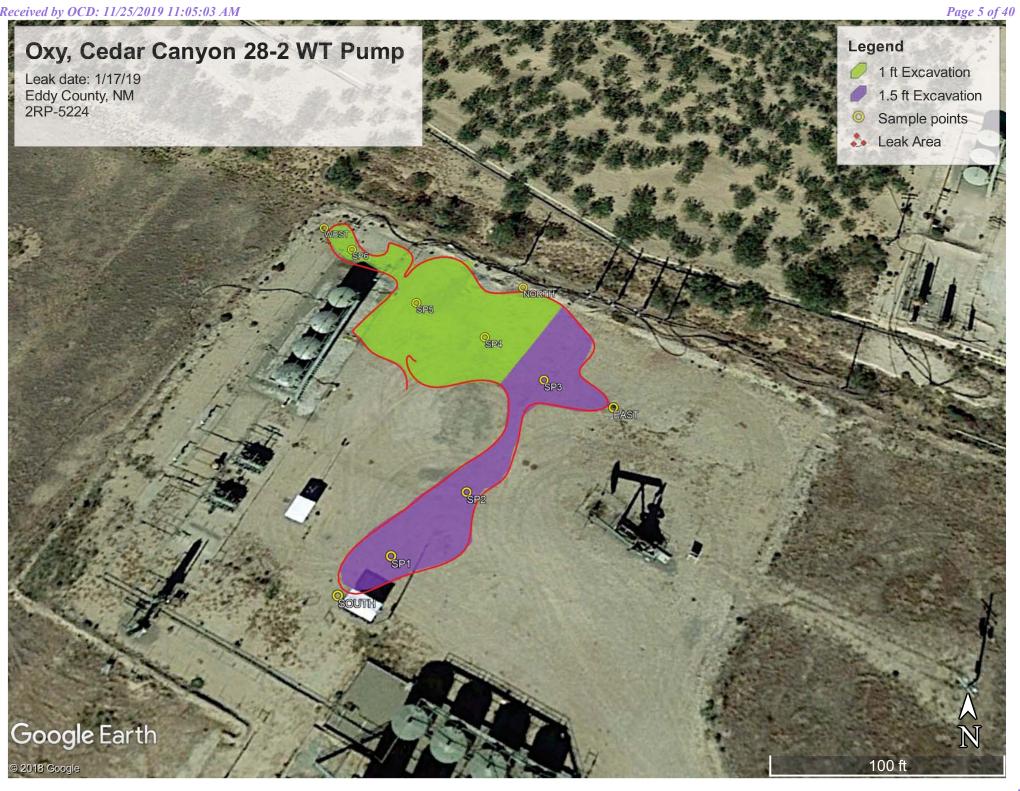
I hereby certify that the information given above is true and complete to the regulations all operators are required to report and/or file certain release not public health or the environment. The acceptance of a C-141 report by the failed to adequately investigate and remediate contamination that pose a thr addition, OCD acceptance of a C-141 report does not relieve the operator of and/or regulations.	ifications and perform corrective actions for releases which may endanger OCD does not relieve the operator of liability should their operations have eat to groundwater, surface water, human health or the environment. In
Printed Name: Wade Dittrich	Title: Environmental Coordinator
Signature: Nale Diversity wade_dittrich@oxy.com	Date: 2-/1-19
email: wade_dittrich@oxy.com	Telephone: (575) 390-2828
OCD Only	
Received by:	Date:

Form C-141 Page 5 State of New Mexico
Oil Conservation Division

Incident ID		
District RP	2RP-5224	
Facility ID		
Application ID		

Remediation Plan

Remediation Plan Checklist: Each of the following items must be	e included in the plan.
Detailed description of proposed remediation technique	
Scaled sitemap with GPS coordinates showing delineation poin	ts
Estimated volume of material to be remediated Closure criteria is to Table 1 specifications subject to 19.15.29.	12(C)(A) NIMA C
Proposed schedule for remediation (note if remediation plan tin	neline is more than 90 days OCD approval is required)
Deferral Requests Only: Each of the following items must be con	nfirmed as part of any request for deferral of remediation.
Contamination must be in areas immediately under or around predeconstruction.	roduction equipment where remediation could cause a major facility
Extents of contamination must be fully delineated.	
Contamination does not cause an imminent risk to human health	a, the environment, or groundwater.
Thoroby costify that the information since allow in the state of	
I hereby certify that the information given above is true and comple rules and regulations all operators are required to report and/or file of	ertain release notifications and perform corrective actions for releases
which may endanger public health or the environment. The accepta	nce of a C-141 report by the OCD does not relieve the operator of
liability should their operations have failed to adequately investigate surface water, human health or the environment. In addition, OCD	and remediate contamination that pose a threat to groundwater,
responsibility for compliance with any other federal, state, or local I	aws and/or regulations.
Printed Name: Wade Dittrich	Title: Environmental Coordinator
Printed Name: Wade Dittrich Signature:	Date: 2-1179 Telephone: (575) 390-2828
_{email:} wade_dittrich@oxy.com	Telephone: (575) 390-2828
	Telephone.
OCD Only	
Received by:	Date:
Approved	Approval Denied Deferral Approved
Signature:	Date:



Oxy, Cedar Canyon 28-2 WT Pump

Sample points

SP1, N 32.19435 W-103.98762

SP2, N 32.19445 W-103.98750

SP3, N 32.19464 W-103.98738

SP4, N 32.19472 W-103.98748

SP5, N 32.19478 W-103.98760

SP6, N 32.19489 W-103.98773

NORTH, N 32.19482 W-103.98741

SOUTH, N 32.19430 W-103.98769

EAST, N 32.19459 W-103.98726

WEST, N 32.19494 W-103.98779

Oxy, Cedar Canyon 28-2 WT Pump U/L B, Section 28, T24S, R29E Groundwater: 75'-100'





USGS Home Contact USGS Search USGS

National Water Information System: Web Interface

USGS Water Resources

Data Category: Geographic Area:

Groundwater ✓ New Mexico ✓ GO

Click to hideNews Bulletins

- Please see news on new formats
- Full News

Table of data

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

Tab-separat	ed data									
Graph of da	<u>ta</u>									
Reselect pe	<u>riod</u>									
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 measureme
1983-02-01	L	D	47.14			2		l	J	
1987-10-16	5	D	51.84			2		l	J	
1988-02-11	L	D	52.19			2		U	J	
1992-10-20)	D	51.78			2		9	5	

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 Unl		Unknown method.			
Measuring agency		Not determined			
Source of measurement	U	Source is unknown.			
Water-level approval status	А	Approved for publication Processing and review completed.			

Questions about sites/data? Feedback on this web site Automated retrievals Help Data Tips **Explanation of terms** Subscribe for system changes <u>News</u>

Plug-Ins Accessibility FOIA Privacy Policies and Notices

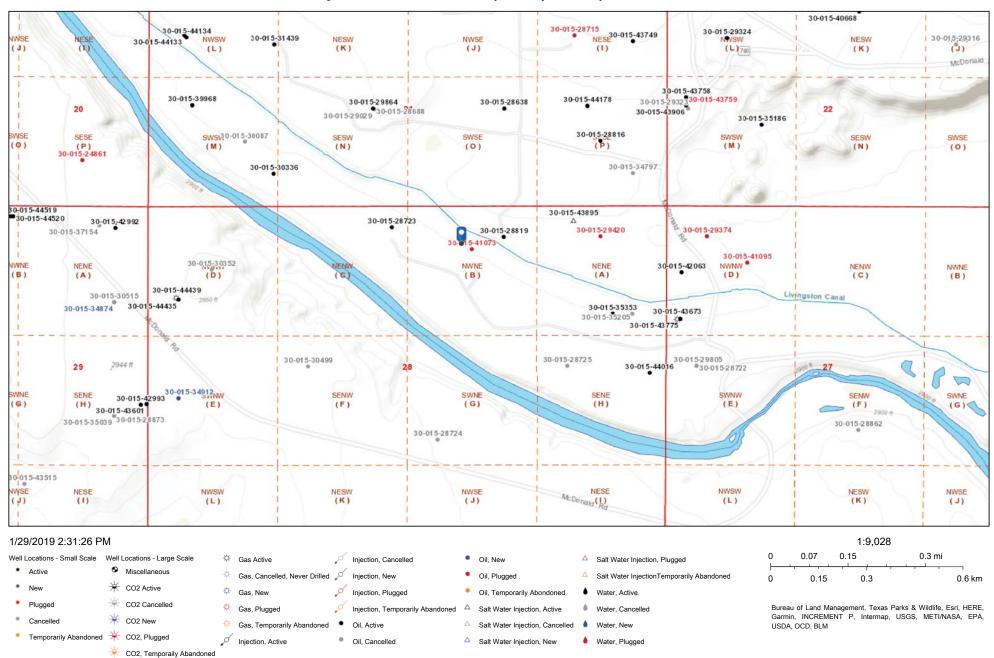
U.S. Department of the Interior | U.S. Geological Survey Title: Groundwater for New Mexico: Water Levels

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

Page Contact Information: <u>New Mexico Water Data Maintainer</u> Page Last Modified: 2019-02-04 13:03:28 EST

USA.gov

Cedar Canyon 28-2 WT Pump, Topo Map with Water Features



Oxy, Cedar Canyon 28-2 WT Pump

Leak date: 1/17/19 Eddy County, NM AP# 30-015-41073

BLM Cave Karst Map

Legend

🚵 Leak Area



Medium potential





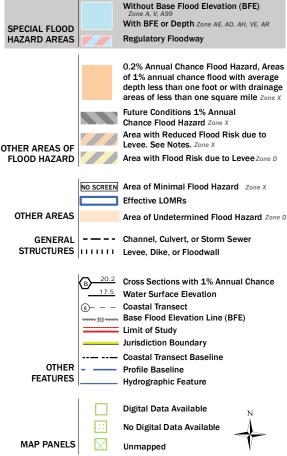
National Flood Hazard Layer FIRMette





Legend

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



9

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 2/4/2019 at 1:12:26 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.

Laboratory Analytical Results Summary Cedar Canyon 28-2 WT Pump (1/17/19)

			SP1 @			
		Sample ID	SURFACE	SP1 @ 1'	SP1 @ 2'	SP1 @ 3'
Analyte	Method	Date	1/30/19	1/30/19	1/30/19	1/30/19
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050	n/a	n/a
Toluene	BTEX 8021B		<0.050	<0.050	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	<0.050	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	<0.150	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	<0.300	n/a	n/a
Chloride	SM4500CI-B		44000	656	304	240
GRO	TPH 8015M		<10.0	<10.0	n/a	n/a
DRO	TPH 8015M		11.2	<10.0	n/a	n/a
EXT DRO	TPH 8015M		<10.0	<10.0	n/a	n/a

			SP2 @	000 @ 41	000 @ 01	000 @ 01
		Sample ID	SURFACE	SP2 @ 1'	SP2 @ 2'	SP2 @ 3'
Analyte	Method	Date	1/30/19	1/30/19	1/30/19	1/30/19
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050	n/a	n/a
Toluene	BTEX 8021B		<0.050	<0.050	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	<0.050	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	<0.150	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	<0.300	n/a	n/a
Chloride	SM4500CI-B		48000	656	240	240
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

		Sample ID	SP3 @ SURFACE	SP3 @ 1'	SP3 @ 2'	SP3 @ 3'
Analyte	Method	Date	1/30/19	1/30/19	1/30/19	1/30/19
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050	n/a	n/a
Toluene	BTEX 8021B		<0.050	<0.050	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	<0.050	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	<0.150	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	<0.300	n/a	n/a
Chloride	SM4500CI-B		69600	736	224	368
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

			SP4 @			
		Sample ID	SURFACE	SP4 @ 1'	SP4 @ 2'	SP4 @ 3'
Analyte	Method	Date	1/30/19	1/30/19	1/30/19	1/30/19
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050	n/a	n/a
Toluene	BTEX 8021B		<0.050	<0.050	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	<0.050	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	<0.150	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	<0.300	n/a	n/a
Chloride	SM4500CI-B		35200	304	480	32
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

		Sample ID	SP5 @ SURFACE	SP5 @ 1'	SP5 @ 2'	SP5 @ 3'
Analyte	Method	Date	1/30/19	1/30/19	1/30/19	1/30/19
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050	n/a	n/a
Toluene	BTEX 8021B		<0.050	<0.050	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	<0.050	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	<0.150	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	<0.300	n/a	n/a
Chloride	SM4500CI-B		80000	320	560	32
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

			SP6 @			
		Sample ID	SURFACE	SP6 @ 1'	SP6 @ 2'	SP6 @ 3'
Analyte	Method	Date	1/30/19	1/30/19	1/30/19	1/30/19
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050	n/a	n/a
Toluene	BTEX 8021B		<0.050	<0.050	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	<0.050	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	<0.150	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	<0.300	n/a	n/a
Chloride	SM4500CI-B		76800	560	528	32
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

			NORTH @	EAST @	WEST @	SOUTH @
		Sample ID	SURFACE	SURFACE	SURFACE	SURFACE
Analyte	Method	Date	1/30/19	1/30/19	1/30/19	1/30/19
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050	n/a	n/a
Toluene	BTEX 8021B		<0.050	<0.050	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	<0.050	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	<0.150	n/a	n/a
Total BTEX	BTEX 8021B		< 0.300	<0.300	n/a	n/a
Chloride	SM4500CI-B		32	32	16	32
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



February 09, 2019

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: CEDAR CANYON 28 -2 WT PUMP

Enclosed are the results of analyses for samples received by the laboratory on 01/31/19 15:50.

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 accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab accredited certif.html.

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

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

Accreditation applies to public drinking water matrices.

Celey D. Keens

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:

01/31/2019

Sampling Date:

01/30/2019

Reported:

02/09/2019

Sampling Type:

Soil

Project Name:

CEDAR CANYON 28 -2 WT PUMP

Sampling Condition:

Cool & Intact

Project Number:

1-17-19

Sample Received By:

Tamara Oldaker

Project Location:

OXY

Sample ID: SP 1 @ SURFACE (H900371-01)

BTEX 8021B	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/04/2019	ND	1.98	98.9	2.00	0.149	
Toluene*	<0.050	0.050	02/04/2019	ND	2.00	100	2.00	0.858	
Ethylbenzene*	<0.050	0.050	02/04/2019	ND	1.95	97.3	2.00	1.61	
Total Xylenes*	<0.150	0.150	02/04/2019	ND	5.62	93.6	6.00	0.885	
Total BTEX	<0.300	0.300	02/04/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	89.8	% 73.3-12	9						
Chloride, SM4500Cl-B	mg/	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	44000	16.0	02/06/2019	ND	432	108	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/08/2019	ND	204	102	200	5.63	
DRO >C10-C28*	11.2	10.0	02/08/2019	ND	202	101	200	4.89	
EXT DRO >C28-C36	<10.0	10.0	02/08/2019	ND					
Surrogate: 1-Chlorooctane	74.3	% 41-142	?						
Surrogate: 1-Chlorooctadecane	78.8	% 37.6-14	7						

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 whistoever 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 claims is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. treene

Celey D. Keene, Lab Director/Quality Manager

Page 2 of 27



Analytical Results For:

BBC International, Inc. Cliff Brunson P.O. Box 805 Hobbs NM, 88241

Fax To: (575) 397-0397

Received:

01/31/2019

Sampling Date:

01/30/2019

Reported:

02/09/2019

Sampling Type:

Soil

Project Name:

CEDAR CANYON 28 -2 WT PUMP

Sampling Condition:

Cool & Intact

Project Number:

1-17-19

Sample Received By:

Tamara Oldaker

Project Location:

OXY

Sample ID: SP 1 @ 1' (H900371-02)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/04/2019	ND	1.98	98.9	2.00	0.149	
Toluene*	<0.050	0.050	02/04/2019	ND	2.00	100	2.00	0.858	
Ethylbenzene*	<0.050	0.050	02/04/2019	ND	1.95	97.3	2.00	1.61	
Total Xylenes*	<0.150	0.150	02/04/2019	ND	5.62	93.6	6.00	0.885	
Total BTEX	<0.300	0.300	02/04/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	87.3	% 73.3-12	9						
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	02/06/2019	ND	432	108	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/04/2019	ND	171	85.7	200	3.36	
DRO >C10-C28*	<10.0	10.0	02/04/2019	ND	175	87.6	200	2.11	
EXT DRO >C28-C36	<10.0	10.0	02/04/2019	ND					
Surrogate: 1-Chlorooctane	87.4	% 41-142	!						
Surrogate: 1-Chlorooctadecane	81.1 9	% 37.6-14	7						

Surrogate: 1-Chlorooctadecane

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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:

01/31/2019

Sampling Date:

01/30/2019

Reported:

02/09/2019

Sampling Type:

Soil

Project Name:

CEDAR CANYON 28 -2 WT PUMP

Sampling Condition:

Cool & Intact

RPD

0.00

0.00

Project Number:

1-17-19

Sample Received By:

Tamara Oldaker

Project Location:

OXY

Sample ID: SP 1 @ 2' (H900371-03)

Reporting Limit

Reporting Limit

16.0

Analyzed By: AC

Chloride, SM4500CI-B Analyte

Result

304

Result

240

mg/kg

16.0 02/06/2019

ND

BS 432 % Recovery 108

True Value QC 400 Qualifier

Chloride

Chloride

Sample ID: SP 1 @ 3' (H900371-04)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

Analyte

Analyzed 02/06/2019

Analyzed

Method Blank
ND

Method Blank

BS 432 % Recovery 108 True Value QC 400 RPD Qu

Qualifier

Cardinal Laboratories

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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:

01/31/2019

Sampling Date:

01/30/2019

Reported:

02/09/2019

Sampling Type:

Soil

Project Name:

CEDAR CANYON 28 -2 WT PUMP

Sampling Condition:

Cool & Intact

Project Number:

1-17-19

Sample Received By:

Project Location:

OXY

Tamara Oldaker

Sample ID: SP 2 @ SURFACE (H900371-05)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/04/2019	ND	1.98	98.9	2.00	0.149	
Toluene*	<0.050	0.050	02/04/2019	ND	2.00	100	2.00	0.858	
Ethylbenzene*	<0.050	0.050	02/04/2019	ND	1.95	97.3	2.00	1.61	
Total Xylenes*	<0.150	0.150	02/04/2019	ND	5.62	93.6	6.00	0.885	
Total BTEX	<0.300	0.300	02/04/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	94.6	% 73.3-12	9						
Chloride, SM4500CI-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48000	16.0	02/06/2019	ND	432	108	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/04/2019	ND	171	85.7	200	3.36	
DRO >C10-C28*	<10.0	10.0	02/04/2019	ND	175	87.6	200	2.11	
EXT DRO >C28-C36	<10.0	10.0	02/04/2019	ND					
Surrogate: 1-Chlorooctane	86.8	% 41-142	?						
Surrogate: 1-Chlorooctadecane	86.7	% 37.6-14	7						

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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:

01/31/2019

Sampling Date:

01/30/2019

Reported:

02/09/2019

Sampling Type:

Soil

Project Name:

CEDAR CANYON 28 -2 WT PUMP

Sampling Condition:

Cool & Intact

Project Number:

1-17-19

Sample Received By:

Tamara Oldaker

Project Location:

OXY

Sample ID: SP 2 @ 1' (H900371-06)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/04/2019	ND	1.98	98.9	2.00	0.149	
Toluene*	<0.050	0.050	02/04/2019	ND	2.00	100	2.00	0.858	
Ethylbenzene*	<0.050	0.050	02/04/2019	ND	1.95	97.3	2.00	1.61	
Total Xylenes*	<0.150	0.150	02/04/2019	ND	5.62	93.6	6.00	0.885	
Total BTEX	<0.300	0.300	02/04/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	90.4	% 73.3-12	9						
Chloride, SM4500CI-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	656	16.0	02/06/2019	ND	432	108	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/04/2019	ND	171	85.7	200	3.36	
DRO >C10-C28*	<10.0	10.0	02/04/2019	ND	175	87.6	200	2.11	
EXT DRO >C28-C36	<10.0	10.0	02/04/2019	ND					
Surrogate: 1-Chlorooctane	89.8	% 41-142	!						
Surrogate: 1-Chlorooctadecane	83.4	% 37.6-14	7						

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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:

01/31/2019

Sampling Date:

01/30/2019

Reported:

02/09/2019

Sampling Type:

Soil

Project Name:

CEDAR CANYON 28 -2 WT PUMP

Sampling Condition:

Cool & Intact

Project Number:

1-17-19

Sample Received By:

Tamara Oldaker

Project Location:

Analyte

OXY

Sample ID: SP 2 @ 2' (H900371-07)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

Analyzed

True Value QC

Qualifier

Chloride

Result 240

16.0

Reporting Limit

02/06/2019

432

BS

Method Blank

ND

% Recovery 108

400

RPD

0.00

Sample ID: SP 2 @ 3' (H900371-08)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

Reporting Limit Analyte Result Analyzed Method Blank BS % Recovery Chloride 240 16.0 02/06/2019 ND 416 104

True Value QC 400

RPD Qualifier 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:

01/31/2019

Sampling Date:

01/30/2019

Reported:

02/09/2019

Sampling Type:

Soil

Project Name:

CEDAR CANYON 28 -2 WT PUMP

Sampling Condition:

Cool & Intact

Project Number:

1-17-19

Sample Received By:

Tamara Oldaker

Project Location:

OXY

Sample ID: SP 3 @ SURFACE (H900371-09)

BTEX 8021B	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/04/2019	ND	1.98	98.9	2.00	0.149	
Toluene*	<0.050	0.050	02/04/2019	ND	2.00	100	2.00	0.858	
Ethylbenzene*	<0.050	0.050	02/04/2019	ND	1.95	97.3	2.00	1.61	
Total Xylenes*	<0.150	0.150	02/04/2019	ND	5.62	93.6	6.00	0.885	
Total BTEX	<0.300	0.300	02/04/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	95.9	% 73.3-12	9						
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	69600	16.0	02/06/2019	ND	416	104	400	3.77	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/05/2019	ND	171	85.7	200	3.36	
DRO >C10-C28*	<10.0	10.0	02/05/2019	ND	175	87.6	200	2.11	
EXT DRO >C28-C36	<10.0	10.0	02/05/2019	ND					
Surrogate: 1-Chlorooctane	87.7	% 41-142	?						
Surrogate: 1-Chlorooctadecane	84.8	% 37.6-14	7						

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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:

01/31/2019

Sampling Date:

01/30/2019

Reported:

02/09/2019

Sampling Type:

Soil

Project Name:

CEDAR CANYON 28 -2 WT PUMP

Sampling Condition:

Cool & Intact

Project Number:

1-17-19

Project Location:

OXY

Sample Received By:

Tamara Oldaker

Sample ID: SP 3 @ 1' (H900371-10)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/04/2019	ND	1.98	98.9	2.00	0.149	
Toluene*	<0.050	0.050	02/04/2019	ND	2.00	100	2.00	0.858	
Ethylbenzene*	<0.050	0.050	02/04/2019	ND	1.95	97.3	2.00	1.61	
Total Xylenes*	<0.150	0.150	02/04/2019	ND	5.62	93.6	6.00	0.885	
Total BTEX	<0.300	0.300	02/04/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	87.7	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	736	16.0	02/06/2019	ND	416	104	400	3.77	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/05/2019	ND	171	85.7	200	3.36	
DRO >C10-C28*	<10.0	10.0	02/05/2019	ND	175	87.6	200	2.11	
EXT DRO >C28-C36	<10.0	10.0	02/05/2019	ND					
Surrogate: 1-Chlorooctane	86.1	% 41-142							
Surrogate: 1-Chlorooctadecane	79.9	% 37.6-14	7						

Surrogate: 1-Chlorooctadecane

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Page 9 of 27



Analytical Results For:

BBC International, Inc. Cliff Brunson P.O. Box 805 Hobbs NM, 88241

Fax To: (575) 397-0397

Received:

01/31/2019

Sampling Date:

01/30/2019

Reported:

02/09/2019

Sampling Type:

Soil

Project Name:

CEDAR CANYON 28 -2 WT PUMP

Sampling Condition:

Cool & Intact

Project Number:

1-17-19

Sample Received By:

Tamara Oldaker

Project Location:

OXY

Sample ID: SP 3 @ 2' (H900371-11)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

Analyte

Result

mg/kg

224

16.0

Reporting Limit

Reporting Limit

16.0

02/06/2019

Analyzed

Method Blank ND

416

% Recovery 104

True Value QC

400

RPD 3.77 Qualifier

Chloride

Sample ID: SP 3 @ 3' (H900371-12)

Chloride, SM4500Cl-B

Analyte

Α

Analyzed By: AC

,____,

BS % Recovery

Chloride

Result

368

Analyzed

02/06/2019

Method Blank
ND

416

104

True Value QC 400 RPD 3.77 Qualifier

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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:

01/31/2019

Sampling Date:

01/30/2019

Reported:

02/09/2019

Sampling Type:

Soil

Project Name:

CEDAR CANYON 28 -2 WT PUMP

Sampling Condition:

Cool & Intact

Project Number:

1-17-19

Sample Received By:

Tamara Oldaker

Project Location:

OXY

Sample ID: SP 4 @ SURFACE (H900371-13)

BTEX 8021B	mg,	/kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/05/2019	ND	2.17	109	2.00	1.97	
Toluene*	<0.050	0.050	02/05/2019	ND	2.06	103	2.00	0.641	
Ethylbenzene*	<0.050	0.050	02/05/2019	ND	2.00	100	2.00	0.904	
Total Xylenes*	<0.150	0.150	02/05/2019	ND	6.23	104	6.00	1.21	
Total BTEX	<0.300	0.300	02/05/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	100	% 73.3-12	9						
Chloride, SM4500CI-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	35200	16.0	02/06/2019	ND	416	104	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/05/2019	ND	171	85.7	200	3.36	
DRO >C10-C28*	<10.0	10.0	02/05/2019	ND	175	87.6	200	2.11	
EXT DRO >C28-C36	<10.0	10.0	02/05/2019	ND					
Surrogate: 1-Chlorooctane	89.1	% 41-142	,						
Surrogate: 1-Chlorooctadecane	83.6	% 37.6-14	7						

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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:

01/31/2019

Sampling Date:

01/30/2019

Reported:

Sampling Type:

Soil

02/09/2019

CEDAR CANYON 28 -2 WT PUMP

Sampling Condition:

Cool & Intact

Project Name: Project Number:

1-17-19

Sample Received By:

Tamara Oldaker

Project Location:

OXY

Sample ID: SP 4 @ 1' (H900371-14)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/06/2019	ND	2.14	107	2.00	2.32	
Toluene*	<0.050	0.050	02/06/2019	ND	2.24	112	2.00	2.75	
Ethylbenzene*	<0.050	0.050	02/06/2019	ND	2.24	112	2.00	1.40	
Total Xylenes*	<0.150	0.150	02/06/2019	ND	6.42	107	6.00	1.61	
Total BTEX	<0.300	0.300	02/06/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	107	% 73.3-12	9						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	02/06/2019	ND	416	104	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/05/2019	ND	171	85.7	200	3.36	
DRO >C10-C28*	<10.0	10.0	02/05/2019	ND	175	87.6	200	2.11	
EXT DRO >C28-C36	<10.0	10.0	02/05/2019	ND					
Surrogate: 1-Chlorooctane	84.5	% 41-142	,						
Surrogate: 1-Chlorooctadecane	78.8	% 37.6-14	7						

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Page 12 of 27



Analytical Results For:

BBC International, Inc. Cliff Brunson P.O. Box 805 Hobbs NM, 88241

Fax To: (575) 397-0397

Received:

01/31/2019

Sampling Date:

01/30/2019

Reported:

02/09/2019

Sampling Type:

Soil

Project Name:

CEDAR CANYON 28 -2 WT PUMP

Sampling Condition:

Cool & Intact

Project Number:

1-17-19

Sample Received By:

416

BS

416

Tamara Oldaker

Project Location:

OXY

Sample ID: SP 4 @ 2' (H900371-15)

mg/kg

480

32.0

Analyzed By: AC

Chloride, SM4500Cl-B Analyte

Result Reporting Limit

16.0

02/06/2019

Analyzed

Analyzed

02/06/2019

Method Blank ND

Method Blank

ND

104

% Recovery

True Value QC 400

RPD

3.77

3.77

Qualifier

Chloride

Chloride

Sample ID: SP 4 @ 3' (H900371-16)

Chloride, SM4500Cl-B

mg/kg

16.0

Analyzed By: AC

Reporting Limit Analyte Result

% Recovery 104

True Value QC 400

RPD

Qualifier

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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:

01/31/2019

Sampling Date:

01/30/2019

Reported:

02/09/2019

Sampling Type:

Soil

Project Name:

CEDAR CANYON 28 -2 WT PUMP

Sampling Condition:

Cool & Intact

Project Number:

1-17-19

Sample Received By:

Tamara Oldaker

Project Location:

OXY

Sample ID: SP 5 @ SURFACE (H900371-17)

BTEX 8021B	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/06/2019	ND	2.14	107	2.00	2.32	
Toluene*	<0.050	0.050	02/06/2019	ND	2.24	112	2.00	2.75	
Ethylbenzene*	<0.050	0.050	02/06/2019	ND	2.24	112	2.00	1.40	
Total Xylenes*	<0.150	0.150	02/06/2019	ND	6.42	107	6.00	1.61	
Total BTEX	<0.300	0.300	02/06/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	105 9	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	'kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80000	16.0	02/06/2019	ND	416	104	400	3.77	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/05/2019	ND	171	85.7	200	3.36	
DRO >C10-C28*	<10.0	10.0	02/05/2019	ND	175	87.6	200	2.11	
EXT DRO >C28-C36	<10.0	10.0	02/05/2019	ND					
Surrogate: 1-Chlorooctane	85.6	% 41-142	?						
Surrogate: 1-Chlorooctadecane	80.9	% 37.6-14	7						

80.9 % 37.6-147 Surrogate: 1-Chlorooctadecane

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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:

01/31/2019

Sampling Date:

01/30/2019

Reported:

02/09/2019

Sampling Type:

Soil

Project Name:

CEDAR CANYON 28 -2 WT PUMP

Sampling Condition:

Cool & Intact

Project Number:

1-17-19

Sample Received By:

Tamara Oldaker

Project Location:

OXY

Sample ID: SP 5 @ 1' (H900371-18)

BTEX 8021B	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/06/2019	ND	2.14	107	2.00	2.32	
Toluene*	<0.050	0.050	02/06/2019	ND	2.24	112	2.00	2.75	
Ethylbenzene*	<0.050	0.050	02/06/2019	ND	2.24	112	2.00	1.40	
Total Xylenes*	<0.150	0.150	02/06/2019	ND	6.42	107	6.00	1.61	
Total BTEX	<0.300	0.300	02/06/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	103 9	% 73.3-12	9						
Chloride, SM4500CI-B			Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	02/06/2019	ND	416	104	400	3.77	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/05/2019	ND	171	85.7	200	3.36	
DRO >C10-C28*	<10.0	10.0	02/05/2019	ND	175	87.6	200	2.11	
EXT DRO >C28-C36	<10.0	10.0	02/05/2019	ND					
Surrogate: 1-Chlorooctane	89.0	% 41-142	?						
Surrogate: 1-Chlorooctadecane	83.1	% 37.6-14	7						

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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:

01/31/2019

Sampling Date:

01/30/2019

Reported:

02/09/2019

Sampling Type:

Soil

Project Name:

CEDAR CANYON 28 -2 WT PUMP

Sampling Condition:

Cool & Intact

Project Number:

1-17-19

Sample Received By:

Tamara Oldaker

Project Location:

Analyte

OXY

Sample ID: SP 5 @ 2' (H900371-19)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

% Recovery

True Value QC

Qualifier

Chloride

Result **560**

Reporting Limit 16.0

02/06/2019

Analyzed

ND

Method Blank

416

104

400

4

RPD

3.77

Sample ID: SP 5 @ 3' (H900371-20)

Chloride, SM4500CI-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	02/06/2019	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:

01/31/2019

Sampling Date:

01/30/2019

Reported:

02/09/2019

Sampling Type:

Soil

Project Name:

CEDAR CANYON 28 -2 WT PUMP

Sampling Condition:

Cool & Intact

Project Number:

1-17-19

Sample Received By:

Tamara Oldaker

Project Location:

OXY

Sample ID: SP 6 @ SURFACE (H900371-21)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/06/2019	ND	2.14	107	2.00	2.32	
Toluene*	<0.050	0.050	02/06/2019	ND	2.24	112	2.00	2.75	
Ethylbenzene*	< 0.050	0.050	02/06/2019	ND	2.24	112	2.00	1.40	
Total Xylenes*	< 0.150	0.150	02/06/2019	ND	6.42	107	6.00	1.61	
Total BTEX	<0.300	0.300	02/06/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	106	% 73.3-12	9						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	76800	16.0	02/06/2019	ND	416	104	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/05/2019	ND	171	85.7	200	3.36	
DRO >C10-C28*	<10.0	10.0	02/05/2019	ND	175	87.6	200	2.11	
EXT DRO >C28-C36	<10.0	10.0	02/05/2019	ND					
Surrogate: 1-Chlorooctane	83.7	% 41-142	?						
Surrogate: 1-Chlorooctadecane	78.1	% 37.6-14	7						

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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:

01/31/2019

Sampling Date:

01/30/2019

Reported:

BTEX 8021B

EXT DRO >C28-C36

Sampling Type:

Soil

Project Name:

02/09/2019

mg/kg

CEDAR CANYON 28 -2 WT PUMP

Sampling Condition:

Cool & Intact

Project Number:

1-17-19

Sample Received By:

Tamara Oldaker

Project Location:

OXY

Sample ID: SP 6 @ 1' (H900371-22)

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/06/2019	ND	2.14	107	2.00	2.32	
Toluene*	<0.050	0.050	02/06/2019	ND	2.24	112	2.00	2.75	
Ethylbenzene*	<0.050	0.050	02/06/2019	ND	2.24	112	2.00	1.40	
Total Xylenes*	<0.150	0.150	02/06/2019	ND	6.42	107	6.00	1.61	
Total BTEX	<0.300	0.300	02/06/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	100 5	% 73.3-12	9						
	· · · · · · · · · · · · · · · · · · ·								
Chloride, SM4500CI-B			Analyze	d By: AC					
Chloride, SM4500Cl-B Analyte	mg/ Result	/kg Reporting Limit	Analyze Analyzed	d By: AC Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
·					BS 416	% Recovery	True Value QC	RPD 3.77	Qualifier
Analyte	Result	Reporting Limit	Analyzed 02/06/2019	Method Blank		·	-		Qualifier
Analyte Chloride	Result 560	Reporting Limit	Analyzed 02/06/2019	Method Blank		·	-		Qualifier Qualifier
Analyte Chloride TPH 8015M	Result 560 mg/	Reporting Limit 16.0	Analyzed 02/06/2019 Analyze	Method Blank ND d By: MS	416	104	400	3.77	

ND

02/05/2019

Analyzed By: MS

Surrogate: 1-Chlorooctane 90.3 % 41-142 84.9 % Surrogate: 1-Chlorooctadecane 37.6-147

<10.0

10.0

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Celey D. Keene, Lab Director/Quality Manager

Page 18 of 27



Analytical Results For:

BBC International, Inc. Cliff Brunson P.O. Box 805 Hobbs NM, 88241

Fax To: (575) 397-0397

Received:

01/31/2019

Sampling Date:

01/30/2019

Reported:

02/09/2019

Sampling Type:

416

Soil

Project Name:

CEDAR CANYON 28 -2 WT PUMP

Sampling Condition:

Cool & Intact

Project Number:

1-17-19

Sample Received By:

Tamara Oldaker

Project Location:

Analyte

OXY

Sample ID: SP 6 @ 2' (H900371-23)

Chloride, SM4500Cl-B

Chloride

Chlo

mg/kg

Analyzed By: AC

Result

528

Reporting Limit 16.0

02/06/2019

Analyzed

Method Blank ND % Recovery

True Value QC 400 Qu

RPD

3.77

Qualifier

Sample ID: SP 6 @ 3' (H900371-24)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
oride	32.0	16.0	02/06/2019	ND	416	104	400	3.77	

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Page 19 of 27



Analytical Results For:

BBC International, Inc. Cliff Brunson P.O. Box 805 Hobbs NM, 88241

Fax To: (575) 397-0397

Received:

01/31/2019

Sampling Date:

01/30/2019

Reported:

BTEX 8021B

02/09/2019

Sampling Type:

Soil

Project Name:

CEDAR CANYON 28 -2 WT PUMP

Sampling Condition:

Cool & Intact

Project Number:

1-17-19

Sample Received By:

Tamara Oldaker

Project Location:

OXY

Sample ID: NORTH @ SURFACE (H900371-25)

DILX 0021D	ilig	, kg	Allalyze	u by. 143					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/06/2019	ND	2.14	107	2.00	2.32	
Toluene*	<0.050	0.050	02/06/2019	ND	2.24	112	2.00	2.75	
Ethylbenzene*	<0.050	0.050	02/06/2019	ND	2.24	112	2.00	1.40	
Total Xylenes*	<0.150	0.150	02/06/2019	ND	6.42	107	6.00	1.61	
Total BTEX	<0.300	0.300	02/06/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	97.7	% 73.3-12	9						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	02/06/2019	ND	416	104	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/08/2019	ND	191	95.7	200	4.30	
DRO >C10-C28*	<10.0	10.0	02/08/2019	ND	214	107	200	0.303	
EXT DRO >C28-C36	<10.0	10.0	02/08/2019	ND					
Surrogate: 1-Chlorooctane	74.1	% 41-142	!						
Surrogate: 1-Chlorooctadecane	77.6	% 37.6-14	7						

Analyzed By: MS

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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:

01/31/2019

Sampling Date:

01/30/2019

Reported:

02/09/2019

Sampling Type:

Soil

Project Name:

CEDAR CANYON 28 -2 WT PUMP

Sampling Condition:

Cool & Intact

Project Number:

1-17-19

Sample Received By:

Tamara Oldaker

Project Location:

OXY

Sample ID: EAST @ SURFACE (H900371-26)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/06/2019	ND	2.14	107	2.00	2.32	
Toluene*	<0.050	0.050	02/06/2019	ND	2.24	112	2.00	2.75	
Ethylbenzene*	<0.050	0.050	02/06/2019	ND	2.24	112	2.00	1.40	
Total Xylenes*	<0.150	0.150	02/06/2019	ND	6.42	107	6.00	1.61	
Total BTEX	<0.300	0.300	02/06/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	105	% 73.3-12	9						
Chloride, SM4500CI-B			Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	02/06/2019	ND	416	104	400	3.77	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/08/2019	ND	191	95.7	200	4.30	
DRO >C10-C28*	<10.0	10.0	02/08/2019	ND	214	107	200	0.303	
EXT DRO >C28-C36	<10.0	10.0	02/08/2019	ND					
Surrogate: 1-Chlorooctane	71.6	% 41-142	?						
Surrogate: 1-Chlorooctadecane	76.4	% 37.6-14	7						

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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:

01/31/2019

Sampling Date:

01/30/2019

Reported:

02/09/2019

Sampling Type:

Soil

Project Name:

CEDAR CANYON 28 -2 WT PUMP

Sampling Condition:

Cool & Intact

Project Number:

1-17-19

Sample Received By:

Tamara Oldaker

Project Location:

OXY

Sample ID: WEST @ SURFACE (H900371-27)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/06/2019	ND	2.14	107	2.00	2.32	
Toluene*	<0.050	0.050	02/06/2019	ND	2.24	112	2.00	2.75	
Ethylbenzene*	<0.050	0.050	02/06/2019	ND	2.24	112	2.00	1.40	
Total Xylenes*	<0.150	0.150	02/06/2019	ND	6.42	107	6.00	1.61	
Total BTEX	<0.300	0.300	02/06/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	101	% 73.3-12	9						
Chloride, SM4500CI-B			Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	02/06/2019	ND	416	104	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/08/2019	ND	191	95.7	200	4.30	
DRO >C10-C28*	<10.0	10.0	02/08/2019	ND	214	107	200	0.303	
EXT DRO >C28-C36	<10.0	10.0	02/08/2019	ND					
Surrogate: 1-Chlorooctane	77.6	% 41-142	,						
Surrogate: 1-Chlorooctadecane	80.9	% 37.6-14	7						

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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:

01/31/2019

Sampling Date:

01/30/2019

Reported:

02/09/2019

Sampling Type:

Soil

Project Name:

CEDAR CANYON 28 -2 WT PUMP

Sampling Condition:

Cool & Intact

Project Number:

1-17-19

Sample Received By:

Tamara Oldaker

Project Location:

OXY

Sample ID: SOUTH @ SURFACE (H900371-28)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/06/2019	ND	2.14	107	2.00	2.32	
Toluene*	<0.050	0.050	02/06/2019	ND	2.24	112	2.00	2.75	
Ethylbenzene*	<0.050	0.050	02/06/2019	ND	2.24	112	2.00	1.40	
Total Xylenes*	<0.150	0.150	02/06/2019	ND	6.42	107	6.00	1.61	
Total BTEX	<0.300	0.300	02/06/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	99.2	% 73.3-12	9						
Chloride, SM4500CI-B			Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	02/06/2019	ND	432	108	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/08/2019	ND	191	95.7	200	4.30	
DRO >C10-C28*	<10.0	10.0	02/08/2019	ND	214	107	200	0.303	
EXT DRO >C28-C36	<10.0	10.0	02/08/2019	ND					
Surrogate: 1-Chlorooctane	67.4	% 41-142	?						
Surrogate: 1-Chlorooctadecane	71.6	% 37.6-14	7						

Cardinal Laboratories *=Accredited Analyte

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Celeg D. treene

Celey D. Keene, Lab Director/Quality Manager

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Notes and Definitions

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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Celeg D. Keene

Celey D. Keene, Lab Director/Quality Manager

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Sampler - UPS - Bus - Other:

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

ARDINAL LABORATORIES 101 Fast Marland, Hobbs, NM, 88240

101 East Marland, Hobbs, NM 88240 (505) 393-2326 FAX (505) 393-2476 Company Name: BBC International, Inc.

Company Name	BBC International, Inc.									B		L TO					3	ANA	LYSIS	S RE	QUE	ST		
Project Manage	r: Cliff Brunson							P.C). #:	0														
Address: P.O.	Box 805							Со	mpa	any:	(DAY												
city: Hobbs	State: NM	Zip	: 8	824	1			Att	n:	le	\$	Ditt	rich											
Phone #: 575-3	397-6388 Fax #: 575	-39	7-0:	397				Ad	dres	ss:				pa										
Project #:	Project Owner	r: O:	ху					Cit	y:					pud					-					
Project Name: (Cedar Canyon 28-2 WT Pump - 1-	-17-	19					Sta	ite:		2	Zip:												
Project Location	1:							Ph	one	#:		74		4 4										
Sampler Name:	Jeff Ornelas							Fax	x #:					U										
FOR LAB USE ONLY			П		MA	TRIX	<		PRE	SER	V.	SAMPLI	NG	-										
Lab I.D.	(G)RAB OR (C)OMP. # CONTAINERS GROUNDWATER WASTEWATER SOIL								ACID/BASE:	ICE / COOL	HEK:			872x	TPH	61								
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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

ARDINAL LABORATORIES 101 East Marland, Hobbs, NM 88240

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

Company Name	BBC International, Inc.									B	ILL TO	7						ANA	_YSI	S RE	QUE	ST	 	
Project Manage	: Cliff Brunson						1	P.0	. #:															
Address: P.O.	Box 805							Con	npa	ny:	OKY		,											
city: Hobbs	State: NM	Zip:	8	824	1		1	Attr	n: {	٧.	Dit	Er	uch					-						
Phone #: 575-3	397-6388 Fax #: 575-	-397	-03	397			/	Ado	ires	s:				8										
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Project Name: (Cedar Canyon 28-2 WT Pump - 1-	17-1	19					Stat	te:		Zip:			Extendo										
Project Location	i:							Pho	ne	#:				X										
Sampler Name:	Jeff Ornelas							Fax	#:					M										
FOR LAB USE ONLY					MA	TRI	X	1	PRE	SERV	. SAMI	PLI	VG											
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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name	BBC International, Inc.										811	LL TO						ANA	LYSIS	3 RE	QUE	ST		
Project Manage	r: Cliff Brunson							P.0	O. #.															
Address: P.O.	Box 805							Со	mpa	any	: (DAU	11											
city: Hobbs	State: NM	Zip	: 8	8824	1			Att	tn:	L	٥.	Dutt	rich											
Phone #: 575-	397-6388 Fax #: 575-	39	7-0	397				Ad	dre	ss:		E 200		00										
Project #:	Project Owner	: 0:	ху					Cit	y:					end										
	Cedar Canyon 28-2 WT Pump - 1-								ate:			Zip:		1 o										
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Sampler Name:	Jeff Ornelas								x #:					W										
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