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DELINEATION/REMEDATION WORKPLAN

OXY – WHOMPING WILLOW CC 15-16 STATE COM 44H (Leak Date: 4/12/19)

RP # 2RP-5522

This delineation workplan and remediation proposal addresses the releases associated with RP # 2RP-5522.

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 near SP1 – SP3 and SP9 – SP12 (BLUE shade on diagram) will be excavated to a depth of 1 foot. The leak area near SP4 – SP8 (GREEN shade on diagram) will be excavated to a depth of 2 feet.

Bottom confirmation samples will be collected every 100 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.

YSG71-191114-C-1410

Form C-141

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State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5522
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?	<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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

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

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

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

Form C-141

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State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5522
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: 11-5-19email: wade_dittrich@oxy.com Telephone: (575) 390-2828**OCD Only**

Received by: _____ Date: _____

Form C-141

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State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5522
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: 11-5-19
email: wade_dittrich@oxy.com Telephone: (575) 390-2828

OCD Only

Received by: _____ Date: _____

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

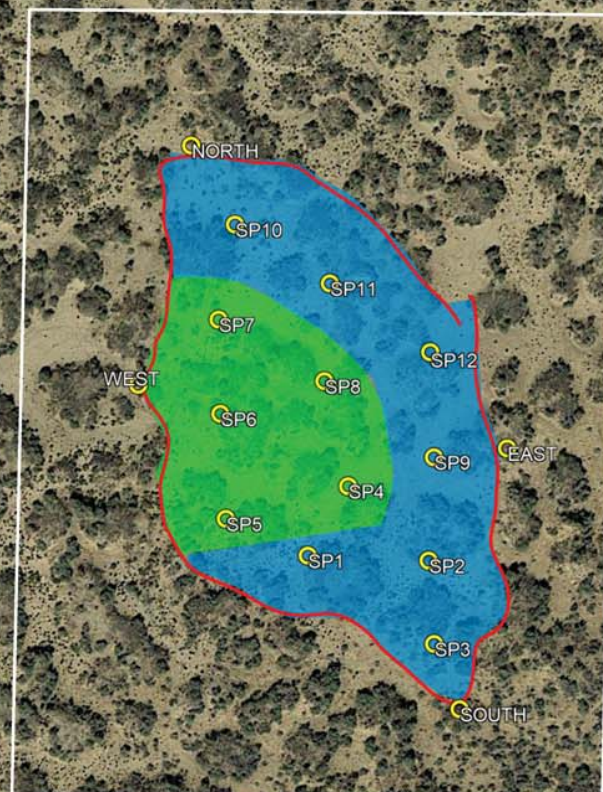
Signature: _____ Date: _____

Oxy, Whomping Willow CC 15-16 State Com 44H

Leak date: 4/2/19
Eddy County, NM
2RP-5522

Legend

- 1 ft Excavation
- 2 ft Excavation
- Leak area
- Location Pad
- Sample points



Google Earth

© 2018 Google

400 ft

Oxy Whomping Willow CC 15-16 State Com 44H

Sample points

SP1, N 32.21361 W-103.96513

SP2, N 32.21360 W-103.96486

SP3, N 32.21344 W-103.96485

SP4, N 32.21374 W-103.96504

SP5, N 32.21367 W-103.96531

SP6, N 32.21387 W-103.96532

SP7, N 32.21405 W-103.96532

SP8, N 32.21393 W-103.96509

SP9, N 32.21379 W-103.96485

SP10, N 32.21423 W-103.96529

SP11, N 32.21412 W-103.96508

SP12, N 32.21399 W-103.96486

NORTH, N 32.21437 W-103.96538

SOUTH, N 32.21332 W-103.96479

EAST, N 32.21381 W-103.96469

WEST, N 32.21393 W-103.96550

Oxy, Whomping Willow CC 15-16 St Com 44H
U/L P, 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.

[Questions about sites/data?](#)
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[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: [New Mexico Water Data Maintainer](#)

Page Last Modified: 2019-07-02 14:37:49 EDT

0.45 0.43 nadww01






Oxy, Whomping Willow CC 15-16 St Com 44H

Leak date: 4/2/19
Eddy County, NM

BLM CAVE KARST MAP

Legend

-  Leak area
-  Low potential
-  Medium potential

Harroun Canal

Google Earth

© 2018 Google

746



1 mi

National Flood Hazard Layer FIRMette



Legend

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

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



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

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/2/2019 at 2:48:57 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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

32°13'5.15"N

103°58'13.20"W



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

103°57'35.74"W

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

1:6,000

32°12'34.71"N

Laboratory Analytical Results Summary
Whomping Willow CC 15-16 State Com 44H (4/2/19)

		Sample ID	NORTH @ SURFACE	EAST @ SURFACE	WEST @ SURFACE	SOUTH @ SURFACE
Analyte	Method	Date	10/16/19	10/16/19	10/16/19	10/16/19
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Toluene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300	<0.300	<0.300
Chloride	SM4500CI-B		176	192	208	160
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'	SP1 @ 3'
Analyte	Method	Date	10/16/19	10/16/19	10/16/19	10/16/19
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Toluene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300	<0.300	<0.300
Chloride	SM4500CI-B		2480	304	256	224
GRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0
DRO	TPH 8015M		1420	<10.0	<10.0	<10.0
EXT DRO	TPH 8015M		387	<10.0	<10.0	<10.0

		Sample ID	SP2 @ SURFACE	SP2 @ 1'	SP2 @ 2'	SP2 @ 3'
Analyte	Method	Date	10/16/19	10/16/19	10/16/19	10/16/19
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Toluene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300	<0.300	<0.300
Chloride	SM4500CI-B		2200	240	176	224
GRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0
DRO	TPH 8015M		1690	<10.0	<10.0	<10.0
EXT DRO	TPH 8015M		459	<10.0	<10.0	<10.0

		Sample ID	SP3 @ SURFACE	SP3 @ 1'	SP3 @ 2'
Analyte	Method	Date	10/16/19	10/17/19	10/17/19
			mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050
Toluene	BTEX 8021B		<0.050	<0.050	<0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300	<0.300
Chloride	SM4500CI-B		2080	80	80
GRO	TPH 8015M		<10.0	<10.0	<10.0
DRO	TPH 8015M		1580	<10.0	<10.0
EXT DRO	TPH 8015M		432	<10.0	<10.0

		Sample ID	SP4 @ SURFACE	SP4 @ 1'	SP4 @ 2'	SP4 @ 3'	SP4 @ 4'
Analyte	Method	Date	10/17/19	10/17/19	10/17/19	10/17/19	10/17/19
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050	<0.050
Toluene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050	<0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300	<0.300	<0.300	<0.300
Chloride	SM4500CI-B		9330	896	144	48	32
GRO	TPH 8015M		<10.0	44.6	<10.0	<10.0	<10.0
DRO	TPH 8015M		4550	3580	20.8	13.2	<10.0
EXT DRO	TPH 8015M		165	29.8	<10.0	<10.0	<10.0

		Sample ID	SP5 @ SURFACE	SP5 @ 1'	SP5 @ 2'	SP5 @ 3'	SP5 @ 4'
Analyte	Method	Date	10/17/19	10/17/19	10/17/19	10/17/19	10/17/19
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050	<0.050
Toluene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050	<0.050
Ethylbenzene	BTEX 8021B		0.057	<0.050	<0.050	<0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300	<0.300	<0.300	<0.300
Chloride	SM4500CI-B		8000	896	96	<16.0	<16.0
GRO	TPH 8015M		<10.0	43.1	<10.0	<10.0	<10.0
DRO	TPH 8015M		5060	3300	18.2	<10.0	<10.0
EXT DRO	TPH 8015M		163	19.2	<10.0	<10.0	<10.0

		Sample ID	SP6 @ SURFACE	SP6 @ 1'	SP6 @ 2'	SP6 @ 3'
Analyte	Method	Date	10/17/19	10/17/19	10/17/19	10/17/19
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Toluene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300	<0.300	<0.300
Chloride	SM4500CI-B		736	2120	1120	320
GRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0
DRO	TPH 8015M		1980	695	<10.0	<10.0
EXT DRO	TPH 8015M		167	<10.0	<10.0	<10.0

		Sample ID	SP7 @ SURFACE	SP7 @ 1'	SP7 @ 2'	SP7 @ 3'
Analyte	Method	Date	10/17/19	10/17/19	10/17/19	10/17/19
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Toluene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300	<0.300	<0.300
Chloride	SM4500CI-B		736	2120	592	528
GRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0
DRO	TPH 8015M		2250	637	<10.0	182
EXT DRO	TPH 8015M		170	<10.0	<10.0	<10.0

Laboratory Analytical Results Summary
Whomping Willow CC 15-16 State Com 44H (4/2/19)

		Sample ID	SP8 @ SURFACE	SP8 @ 1'	SP8 @ 2'	SP8 @ 3'
Analyte	Method	Date	10/18/19	10/18/19	10/18/19	10/18/19
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Toluene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300	<0.300	<0.300
Chloride	SM4500Cl-B		1200	544	352	176
GRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0
DRO	TPH 8015M		4400	54.3	142	15.9
EXT DRO	TPH 8015M		521	<10.0	<10.0	<10.0

		Sample ID	SP12 @ SURFACE	SP12 @ 1'	SP12 @ 2'	SP12 @ 3'
Analyte	Method	Date	10/18/19	10/18/19	10/18/19	10/18/19
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Toluene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300	<0.300	<0.300
Chloride	SM4500Cl-B		8530	496	80	352
GRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0
DRO	TPH 8015M		1050	<10.0	<10.0	<10.0
EXT DRO	TPH 8015M		279	<10.0	<10.0	<10.0

		Sample ID	SP9 @ SURFACE	SP9 @ 1'	SP9 @ 2'	SP9 @ 3'
Analyte	Method	Date	10/18/19	10/18/19	10/18/19	10/18/19
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Toluene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300	<0.300	<0.300
Chloride	SM4500Cl-B		1310	368	400	272
GRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0
DRO	TPH 8015M		3150	51.7	24.9	20
EXT DRO	TPH 8015M		479	12.6	<10.0	<10.0

		Sample ID	SP10 @ SURFACE	SP10 @ 1'	SP10 @ 2'	SP10 @ 3'
Analyte	Method	Date	10/18/19	10/18/19	10/18/19	10/18/19
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Toluene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300	<0.300	<0.300
Chloride	SM4500Cl-B		9000	112	48	32
GRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0
DRO	TPH 8015M		4220	<10.0	<10.0	<10.0
EXT DRO	TPH 8015M		150	<10.0	<10.0	<10.0

		Sample ID	SP11 @ SURFACE	SP11 @ 1'	SP11 @ 2'	SP11 @ 3'
Analyte	Method	Date	10/18/19	10/18/19	10/18/19	10/18/19
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Toluene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300	<0.300	<0.300
Chloride	SM4500Cl-B		6000	48	48	32
GRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0
DRO	TPH 8015M		1230	<10.0	<10.0	<10.0
EXT DRO	TPH 8015M		348	<10.0	<10.0	<10.0



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

October 28, 2019

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: WHOMPING WILLOW CC 15-16 44H

Enclosed are the results of analyses for samples received by the laboratory on 10/21/19 16:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Coley D. Keene". The signature is written in a cursive style with a large, stylized 'C' at the beginning.

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:	10/21/2019	Sampling Date:	10/16/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: NORTH @ SURFACE (H903596-01)

BTEX 8021B			mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/24/2019	ND	1.68	83.8	2.00	4.69		
Toluene*	<0.050	0.050	10/24/2019	ND	1.65	82.5	2.00	4.07		
Ethylbenzene*	<0.050	0.050	10/24/2019	ND	1.66	83.0	2.00	3.66		
Total Xylenes*	<0.150	0.150	10/24/2019	ND	4.98	83.0	6.00	3.42		
Total BTEX	<0.300	0.300	10/24/2019	ND						

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

Chloride, SM4500Cl-B			mg/kg							
			Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	10/24/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/24/2019	ND	208	104	200	2.64	
DRO >C10-C28*	<10.0	10.0	10/24/2019	ND	211	106	200	2.41	
EXT DRO >C28-C36	<10.0	10.0	10/24/2019	ND					

Surrogate: 1-Chlorooctane 107 % 41-142

Surrogate: 1-Chlorooctadecane 110 % 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:	10/21/2019	Sampling Date:	10/16/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: EAST @ SURFACE (H903596-02)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/25/2019	ND	1.68	83.8	2.00	4.69		
Toluene*	<0.050	0.050	10/25/2019	ND	1.65	82.5	2.00	4.07		
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.66	83.0	2.00	3.66		
Total Xylenes*	<0.150	0.150	10/25/2019	ND	4.98	83.0	6.00	3.42		
Total BTEX	<0.300	0.300	10/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.1 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	192	16.0	10/24/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/24/2019	ND	208	104	200	2.64	
DRO >C10-C28*	<10.0	10.0	10/24/2019	ND	211	106	200	2.41	
EXT DRO >C28-C36	<10.0	10.0	10/24/2019	ND					

Surrogate: 1-Chlorooctane 105 % 41-142

Surrogate: 1-Chlorooctadecane 108 % 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:	10/21/2019	Sampling Date:	10/16/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: WEST @ SURFACE (H903596-03)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/25/2019	ND	1.68	83.8	2.00	4.69		
Toluene*	<0.050	0.050	10/25/2019	ND	1.65	82.5	2.00	4.07		
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.66	83.0	2.00	3.66		
Total Xylenes*	<0.150	0.150	10/25/2019	ND	4.98	83.0	6.00	3.42		
Total BTEX	<0.300	0.300	10/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	10/24/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/24/2019	ND	208	104	200	2.64	
DRO >C10-C28*	<10.0	10.0	10/24/2019	ND	211	106	200	2.41	
EXT DRO >C28-C36	<10.0	10.0	10/24/2019	ND					

Surrogate: 1-Chlorooctane 105 % 41-142

Surrogate: 1-Chlorooctadecane 107 % 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:	10/21/2019	Sampling Date:	10/16/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SOUTH @ SURFACE (H903596-04)

BTEX 8021B			mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/25/2019	ND	1.68	83.8	2.00	4.69		
Toluene*	<0.050	0.050	10/25/2019	ND	1.65	82.5	2.00	4.07		
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.66	83.0	2.00	3.66		
Total Xylenes*	<0.150	0.150	10/25/2019	ND	4.98	83.0	6.00	3.42		
Total BTEX	<0.300	0.300	10/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	10/24/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/24/2019	ND	208	104	200	2.64	
DRO >C10-C28*	<10.0	10.0	10/24/2019	ND	211	106	200	2.41	
EXT DRO >C28-C36	<10.0	10.0	10/24/2019	ND					

Surrogate: 1-Chlorooctane 106 % 41-142

Surrogate: 1-Chlorooctadecane 108 % 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:	10/21/2019	Sampling Date:	10/16/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 1 @ SURFACE (H903596-05)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/25/2019	ND	1.68	83.8	2.00	4.69		
Toluene*	<0.050	0.050	10/25/2019	ND	1.65	82.5	2.00	4.07		
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.66	83.0	2.00	3.66		
Total Xylenes*	<0.150	0.150	10/25/2019	ND	4.98	83.0	6.00	3.42		
Total BTEX	<0.300	0.300	10/25/2019	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2480	16.0	10/24/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/24/2019	ND	208	104	200	2.64	
DRO >C10-C28*	1420	10.0	10/24/2019	ND	211	106	200	2.41	
EXT DRO >C28-C36	387	10.0	10/24/2019	ND					

Surrogate: 1-Chlorooctane 93.7 % 41-142

Surrogate: 1-Chlorooctadecane 140 % 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:	10/21/2019	Sampling Date:	10/16/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 1 @ 1' (H903596-06)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2019	ND	1.68	83.8	2.00	4.69	
Toluene*	<0.050	0.050	10/25/2019	ND	1.65	82.5	2.00	4.07	
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.66	83.0	2.00	3.66	
Total Xylenes*	<0.150	0.150	10/25/2019	ND	4.98	83.0	6.00	3.42	
Total BTEX	<0.300	0.300	10/25/2019	ND					

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

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	10/24/2019	ND	432	108	400	3.77	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/24/2019	ND	208	104	200	2.64	
DRO >C10-C28*	<10.0	10.0	10/24/2019	ND	211	106	200	2.41	
EXT DRO >C28-C36	<10.0	10.0	10/24/2019	ND					

Surrogate: 1-Chlorooctane 101 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 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:	10/21/2019	Sampling Date:	10/16/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 1 @ 2' (H903596-07)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2019	ND	1.68	83.8	2.00	4.69	
Toluene*	<0.050	0.050	10/25/2019	ND	1.65	82.5	2.00	4.07	
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.66	83.0	2.00	3.66	
Total Xylenes*	<0.150	0.150	10/25/2019	ND	4.98	83.0	6.00	3.42	
Total BTEX	<0.300	0.300	10/25/2019	ND					

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

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	10/24/2019	ND	432	108	400	3.77	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/24/2019	ND	208	104	200	2.64	
DRO >C10-C28*	<10.0	10.0	10/24/2019	ND	211	106	200	2.41	
EXT DRO >C28-C36	<10.0	10.0	10/24/2019	ND					

Surrogate: 1-Chlorooctane 98.7 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 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:	10/21/2019	Sampling Date:	10/16/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 1 @ 3' (H903596-08)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2019	ND	1.68	83.8	2.00	4.69	
Toluene*	<0.050	0.050	10/25/2019	ND	1.65	82.5	2.00	4.07	
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.66	83.0	2.00	3.66	
Total Xylenes*	<0.150	0.150	10/25/2019	ND	4.98	83.0	6.00	3.42	
Total BTEX	<0.300	0.300	10/25/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.1 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	10/24/2019	ND	432	108	400	3.77	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/24/2019	ND	208	104	200	2.64	
DRO >C10-C28*	<10.0	10.0	10/24/2019	ND	211	106	200	2.41	
EXT DRO >C28-C36	<10.0	10.0	10/24/2019	ND					

Surrogate: 1-Chlorooctane 102 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 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:	10/21/2019	Sampling Date:	10/16/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 2 @ SURFACE (H903596-09)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/25/2019	ND	1.68	83.8	2.00	4.69		
Toluene*	<0.050	0.050	10/25/2019	ND	1.65	82.5	2.00	4.07		
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.66	83.0	2.00	3.66		
Total Xylenes*	<0.150	0.150	10/25/2019	ND	4.98	83.0	6.00	3.42		
Total BTEX	<0.300	0.300	10/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2200	16.0	10/24/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/24/2019	ND	208	104	200	2.64	
DRO >C10-C28*	1690	10.0	10/24/2019	ND	211	106	200	2.41	
EXT DRO >C28-C36	459	10.0	10/24/2019	ND					

Surrogate: 1-Chlorooctane 102 % 41-142

Surrogate: 1-Chlorooctadecane 160 % 37.6-147

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Analytical Results For:

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 Fax To: (575) 397-0397

Received:	10/21/2019	Sampling Date:	10/16/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 2 @ 1' (H903596-10)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/25/2019	ND	1.68	83.8	2.00	4.69		
Toluene*	<0.050	0.050	10/25/2019	ND	1.65	82.5	2.00	4.07		
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.66	83.0	2.00	3.66		
Total Xylenes*	<0.150	0.150	10/25/2019	ND	4.98	83.0	6.00	3.42		
Total BTEX	<0.300	0.300	10/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	10/24/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/24/2019	ND	208	104	200	2.64	
DRO >C10-C28*	<10.0	10.0	10/24/2019	ND	211	106	200	2.41	
EXT DRO >C28-C36	<10.0	10.0	10/24/2019	ND					

Surrogate: 1-Chlorooctane 103 % 41-142

Surrogate: 1-Chlorooctadecane 105 % 37.6-147

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Analytical Results For:

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 Fax To: (575) 397-0397

Received:	10/21/2019	Sampling Date:	10/16/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 2 @ 2' (H903596-11)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2019	ND	1.68	83.8	2.00	4.69	
Toluene*	<0.050	0.050	10/25/2019	ND	1.65	82.5	2.00	4.07	
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.66	83.0	2.00	3.66	
Total Xylenes*	<0.150	0.150	10/25/2019	ND	4.98	83.0	6.00	3.42	
Total BTEX	<0.300	0.300	10/25/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.1 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	10/24/2019	ND	432	108	400	3.77	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/24/2019	ND	208	104	200	2.64	
DRO >C10-C28*	<10.0	10.0	10/24/2019	ND	211	106	200	2.41	
EXT DRO >C28-C36	<10.0	10.0	10/24/2019	ND					

Surrogate: 1-Chlorooctane 102 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 37.6-147

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Received:	10/21/2019	Sampling Date:	10/16/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 2 @ 3' (H903596-12)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/25/2019	ND	1.68	83.8	2.00	4.69		
Toluene*	<0.050	0.050	10/25/2019	ND	1.65	82.5	2.00	4.07		
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.66	83.0	2.00	3.66		
Total Xylenes*	<0.150	0.150	10/25/2019	ND	4.98	83.0	6.00	3.42		
Total BTEX	<0.300	0.300	10/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	10/24/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/25/2019	ND	208	104	200	2.64	
DRO >C10-C28*	<10.0	10.0	10/25/2019	ND	211	106	200	2.41	
EXT DRO >C28-C36	<10.0	10.0	10/25/2019	ND					

Surrogate: 1-Chlorooctane 97.6 % 41-142

Surrogate: 1-Chlorooctadecane 100 % 37.6-147

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Received:	10/21/2019	Sampling Date:	10/16/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 3 @ SURFACE (H903596-13)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/25/2019	ND	1.68	83.8	2.00	4.69		
Toluene*	<0.050	0.050	10/25/2019	ND	1.65	82.5	2.00	4.07		
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.66	83.0	2.00	3.66		
Total Xylenes*	<0.150	0.150	10/25/2019	ND	4.98	83.0	6.00	3.42		
Total BTEX	<0.300	0.300	10/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2080	16.0	10/24/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/25/2019	ND	208	104	200	2.64	
DRO >C10-C28*	1580	10.0	10/25/2019	ND	211	106	200	2.41	
EXT DRO >C28-C36	432	10.0	10/25/2019	ND					

Surrogate: 1-Chlorooctane 97.7 % 41-142

Surrogate: 1-Chlorooctadecane 149 % 37.6-147

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Analytical Results For:

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

Received:	10/21/2019	Sampling Date:	10/17/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 3 @ 1' (H903596-14)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/25/2019	ND	1.68	83.8	2.00	4.69		
Toluene*	<0.050	0.050	10/25/2019	ND	1.65	82.5	2.00	4.07		
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.66	83.0	2.00	3.66		
Total Xylenes*	<0.150	0.150	10/25/2019	ND	4.98	83.0	6.00	3.42		
Total BTEX	<0.300	0.300	10/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	10/24/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/25/2019	ND	208	104	200	2.64	
DRO >C10-C28*	<10.0	10.0	10/25/2019	ND	211	106	200	2.41	
EXT DRO >C28-C36	<10.0	10.0	10/25/2019	ND					

Surrogate: 1-Chlorooctane 100 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 37.6-147

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Analytical Results For:

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 Fax To: (575) 397-0397

Received:	10/21/2019	Sampling Date:	10/17/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 3 @ 2' (H903596-15)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/25/2019	ND	1.68	83.8	2.00	4.69		
Toluene*	<0.050	0.050	10/25/2019	ND	1.65	82.5	2.00	4.07		
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.66	83.0	2.00	3.66		
Total Xylenes*	<0.150	0.150	10/25/2019	ND	4.98	83.0	6.00	3.42		
Total BTEX	<0.300	0.300	10/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	10/24/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/25/2019	ND	211	105	200	0.599	
DRO >C10-C28*	<10.0	10.0	10/25/2019	ND	219	110	200	2.01	
EXT DRO >C28-C36	<10.0	10.0	10/25/2019	ND					

Surrogate: 1-Chlorooctane 88.5 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 37.6-147

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Analytical Results For:

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Received:	10/21/2019	Sampling Date:	10/17/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 4 @ SURFACE (H903596-16)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/25/2019	ND	1.68	83.8	2.00	4.69		
Toluene*	<0.050	0.050	10/25/2019	ND	1.65	82.5	2.00	4.07		
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.66	83.0	2.00	3.66		
Total Xylenes*	<0.150	0.150	10/25/2019	ND	4.98	83.0	6.00	3.42		
Total BTEX	<0.300	0.300	10/25/2019	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	9330	16.0	10/24/2019	ND	416	104	400	0.00	QM-07	

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/25/2019	ND	211	105	200	0.599	
DRO >C10-C28*	4550	10.0	10/25/2019	ND	219	110	200	2.01	
EXT DRO >C28-C36	165	10.0	10/25/2019	ND					

Surrogate: 1-Chlorooctane 86.6 % 41-142

Surrogate: 1-Chlorooctadecane 343 % 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:	10/21/2019	Sampling Date:	10/17/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 4 @ 1' (H903596-17)

BTEX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2019	ND	1.68	83.8	2.00	4.69	
Toluene*	<0.050	0.050	10/25/2019	ND	1.65	82.5	2.00	4.07	
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.66	83.0	2.00	3.66	
Total Xylenes*	<0.150	0.150	10/25/2019	ND	4.98	83.0	6.00	3.42	
Total BTEX	<0.300	0.300	10/25/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 132 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	896	16.0	10/24/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	44.6	10.0	10/25/2019	ND	211	105	200	0.599	
DRO >C10-C28*	3580	10.0	10/25/2019	ND	219	110	200	2.01	
EXT DRO >C28-C36	29.8	10.0	10/25/2019	ND					

Surrogate: 1-Chlorooctane 129 % 41-142

Surrogate: 1-Chlorooctadecane 218 % 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:	10/21/2019	Sampling Date:	10/17/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 4 @ 2' (H903596-18)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2019	ND	1.68	83.8	2.00	4.69	
Toluene*	<0.050	0.050	10/25/2019	ND	1.65	82.5	2.00	4.07	
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.66	83.0	2.00	3.66	
Total Xylenes*	<0.150	0.150	10/25/2019	ND	4.98	83.0	6.00	3.42	
Total BTEX	<0.300	0.300	10/25/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.2 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	10/24/2019	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	10/25/2019	ND	211	105	200	0.599	
DRO >C10-C28*	20.8	10.0	10/25/2019	ND	219	110	200	2.01	
EXT DRO >C28-C36	<10.0	10.0	10/25/2019	ND					

Surrogate: 1-Chlorooctane 88.3 % 41-142

Surrogate: 1-Chlorooctadecane 100 % 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:	10/21/2019	Sampling Date:	10/17/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 4 @ 3' (H903596-19)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/25/2019	ND	1.68	83.8	2.00	4.69		
Toluene*	<0.050	0.050	10/25/2019	ND	1.65	82.5	2.00	4.07		
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.66	83.0	2.00	3.66		
Total Xylenes*	<0.150	0.150	10/25/2019	ND	4.98	83.0	6.00	3.42		
Total BTEX	<0.300	0.300	10/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	10/24/2019	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	10/25/2019	ND	211	105	200	0.599	
DRO >C10-C28*	13.2	10.0	10/25/2019	ND	219	110	200	2.01	
EXT DRO >C28-C36	<10.0	10.0	10/25/2019	ND					

Surrogate: 1-Chlorooctane 89.2 % 41-142

Surrogate: 1-Chlorooctadecane 98.1 % 37.6-147

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Analytical Results For:

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 Cliff Brunson
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 Fax To: (575) 397-0397

Received:	10/21/2019	Sampling Date:	10/17/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 4 @ 4' (H903596-20)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2019	ND	1.92	96.1	2.00	2.01	
Toluene*	<0.050	0.050	10/25/2019	ND	1.91	95.5	2.00	2.32	
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.93	96.7	2.00	1.65	
Total Xylenes*	<0.150	0.150	10/25/2019	ND	5.83	97.1	6.00	1.77	
Total BTEX	<0.300	0.300	10/25/2019	ND					

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

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	10/24/2019	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	10/25/2019	ND	211	105	200	0.599	
DRO >C10-C28*	<10.0	10.0	10/25/2019	ND	219	110	200	2.01	
EXT DRO >C28-C36	<10.0	10.0	10/25/2019	ND					

Surrogate: 1-Chlorooctane 87.7 % 41-142

Surrogate: 1-Chlorooctadecane 94.4 % 37.6-147

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Analytical Results For:

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 Fax To: (575) 397-0397

Received:	10/21/2019	Sampling Date:	10/17/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 5 @ SURFACE (H903596-21)

BTEX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2019	ND	1.92	96.1	2.00	2.01	
Toluene*	<0.050	0.050	10/25/2019	ND	1.91	95.5	2.00	2.32	
Ethylbenzene*	0.057	0.050	10/25/2019	ND	1.93	96.7	2.00	1.65	
Total Xylenes*	<0.150	0.150	10/25/2019	ND	5.83	97.1	6.00	1.77	
Total BTEX	<0.300	0.300	10/25/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 139 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8000	16.0	10/24/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/25/2019	ND	211	105	200	0.599	
DRO >C10-C28*	5060	10.0	10/25/2019	ND	219	110	200	2.01	
EXT DRO >C28-C36	163	10.0	10/25/2019	ND					

Surrogate: 1-Chlorooctane 85.6 % 41-142

Surrogate: 1-Chlorooctadecane 368 % 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
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 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	10/21/2019	Sampling Date:	10/17/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 5 @ 1' (H903596-22)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/25/2019	ND	1.92	96.1	2.00	2.01		
Toluene*	<0.050	0.050	10/25/2019	ND	1.91	95.5	2.00	2.32		
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.93	96.7	2.00	1.65		
Total Xylenes*	<0.150	0.150	10/25/2019	ND	5.83	97.1	6.00	1.77		
Total BTEX	<0.300	0.300	10/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	896	16.0	10/24/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	43.1	10.0	10/25/2019	ND	211	105	200	0.599		
DRO >C10-C28*	3300	10.0	10/25/2019	ND	219	110	200	2.01		
EXT DRO >C28-C36	19.2	10.0	10/25/2019	ND						

Surrogate: 1-Chlorooctane 126 % 41-142

Surrogate: 1-Chlorooctadecane 211 % 37.6-147

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Analytical Results For:

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

Received:	10/21/2019	Sampling Date:	10/17/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 5 @ 2' (H903596-23)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2019	ND	1.92	96.1	2.00	2.01	
Toluene*	<0.050	0.050	10/25/2019	ND	1.91	95.5	2.00	2.32	
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.93	96.7	2.00	1.65	
Total Xylenes*	<0.150	0.150	10/25/2019	ND	5.83	97.1	6.00	1.77	
Total BTEX	<0.300	0.300	10/25/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 118 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	10/24/2019	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	10/25/2019	ND	211	105	200	0.599	
DRO >C10-C28*	18.2	10.0	10/25/2019	ND	219	110	200	2.01	
EXT DRO >C28-C36	<10.0	10.0	10/25/2019	ND					

Surrogate: 1-Chlorooctane 89.9 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 37.6-147

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Analytical Results For:

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 Fax To: (575) 397-0397

Received:	10/21/2019	Sampling Date:	10/17/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 5 @ 3' (H903596-24)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/25/2019	ND	1.92	96.1	2.00	2.01		
Toluene*	<0.050	0.050	10/25/2019	ND	1.91	95.5	2.00	2.32		
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.93	96.7	2.00	1.65		
Total Xylenes*	<0.150	0.150	10/25/2019	ND	5.83	97.1	6.00	1.77		
Total BTEX	<0.300	0.300	10/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	10/24/2019	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	10/25/2019	ND	211	105	200	0.599	
DRO >C10-C28*	<10.0	10.0	10/25/2019	ND	219	110	200	2.01	
EXT DRO >C28-C36	<10.0	10.0	10/25/2019	ND					

Surrogate: 1-Chlorooctane 85.1 % 41-142

Surrogate: 1-Chlorooctadecane 93.1 % 37.6-147

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Analytical Results For:

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 Cliff Brunson
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 Fax To: (575) 397-0397

Received:	10/21/2019	Sampling Date:	10/17/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 5 @ 4' (H903596-25)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/25/2019	ND	1.92	96.1	2.00	2.01		
Toluene*	<0.050	0.050	10/25/2019	ND	1.91	95.5	2.00	2.32		
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.93	96.7	2.00	1.65		
Total Xylenes*	<0.150	0.150	10/25/2019	ND	5.83	97.1	6.00	1.77		
Total BTEX	<0.300	0.300	10/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	10/24/2019	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	10/25/2019	ND	211	105	200	0.599	
DRO >C10-C28*	<10.0	10.0	10/25/2019	ND	219	110	200	2.01	
EXT DRO >C28-C36	<10.0	10.0	10/25/2019	ND					

Surrogate: 1-Chlorooctane 84.1 % 41-142

Surrogate: 1-Chlorooctadecane 90.9 % 37.6-147

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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:	10/21/2019	Sampling Date:	10/17/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 6 @ SURFACE (H903596-26)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/25/2019	ND	1.92	96.1	2.00	2.01		
Toluene*	<0.050	0.050	10/25/2019	ND	1.91	95.5	2.00	2.32		
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.93	96.7	2.00	1.65		
Total Xylenes*	<0.150	0.150	10/25/2019	ND	5.83	97.1	6.00	1.77		
Total BTEX	<0.300	0.300	10/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.7 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	736	16.0	10/24/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/25/2019	ND	211	105	200	0.599	
DRO >C10-C28*	1980	10.0	10/25/2019	ND	219	110	200	2.01	
EXT DRO >C28-C36	167	10.0	10/25/2019	ND					

Surrogate: 1-Chlorooctane 85.6 % 41-142

Surrogate: 1-Chlorooctadecane 217 % 37.6-147

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Analytical Results For:

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

Received:	10/21/2019	Sampling Date:	10/17/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 6 @ 1' (H903596-27)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/25/2019	ND	1.92	96.1	2.00	2.01		
Toluene*	<0.050	0.050	10/25/2019	ND	1.91	95.5	2.00	2.32		
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.93	96.7	2.00	1.65		
Total Xylenes*	<0.150	0.150	10/25/2019	ND	5.83	97.1	6.00	1.77		
Total BTEX	<0.300	0.300	10/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2120	16.0	10/24/2019	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	10/25/2019	ND	211	105	200	0.599	
DRO >C10-C28*	695	10.0	10/25/2019	ND	219	110	200	2.01	
EXT DRO >C28-C36	<10.0	10.0	10/25/2019	ND					

Surrogate: 1-Chlorooctane 89.9 % 41-142

Surrogate: 1-Chlorooctadecane 122 % 37.6-147

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Analytical Results For:

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

Received:	10/21/2019	Sampling Date:	10/17/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 6 @ 2' (H903596-28)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2019	ND	1.92	96.1	2.00	2.01	
Toluene*	<0.050	0.050	10/25/2019	ND	1.91	95.5	2.00	2.32	
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.93	96.7	2.00	1.65	
Total Xylenes*	<0.150	0.150	10/25/2019	ND	5.83	97.1	6.00	1.77	
Total BTEX	<0.300	0.300	10/25/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.2 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1120	16.0	10/24/2019	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	10/25/2019	ND	211	105	200	0.599	
DRO >C10-C28*	<10.0	10.0	10/25/2019	ND	219	110	200	2.01	
EXT DRO >C28-C36	<10.0	10.0	10/25/2019	ND					

Surrogate: 1-Chlorooctane 87.6 % 41-142

Surrogate: 1-Chlorooctadecane 97.7 % 37.6-147

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Analytical Results For:

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 Fax To: (575) 397-0397

Received:	10/21/2019	Sampling Date:	10/17/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 6 @ 3' (H903596-29)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2019	ND	1.92	96.1	2.00	2.01	
Toluene*	<0.050	0.050	10/25/2019	ND	1.91	95.5	2.00	2.32	
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.93	96.7	2.00	1.65	
Total Xylenes*	<0.150	0.150	10/25/2019	ND	5.83	97.1	6.00	1.77	
Total BTEX	<0.300	0.300	10/25/2019	ND					

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

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	10/24/2019	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	10/25/2019	ND	211	105	200	0.599	
DRO >C10-C28*	<10.0	10.0	10/25/2019	ND	219	110	200	2.01	
EXT DRO >C28-C36	<10.0	10.0	10/25/2019	ND					

Surrogate: 1-Chlorooctane 85.7 % 41-142

Surrogate: 1-Chlorooctadecane 96.5 % 37.6-147

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 Fax To: (575) 397-0397

Received:	10/21/2019	Sampling Date:	10/17/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 7 @ SURFACE (H903596-30)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2019	ND	1.92	96.1	2.00	2.01	
Toluene*	<0.050	0.050	10/25/2019	ND	1.91	95.5	2.00	2.32	
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.93	96.7	2.00	1.65	
Total Xylenes*	<0.150	0.150	10/25/2019	ND	5.83	97.1	6.00	1.77	
Total BTEX	<0.300	0.300	10/25/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.6 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	736	16.0	10/24/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/25/2019	ND	211	105	200	0.599	
DRO >C10-C28*	2250	10.0	10/25/2019	ND	219	110	200	2.01	
EXT DRO >C28-C36	170	10.0	10/25/2019	ND					

Surrogate: 1-Chlorooctane 92.3 % 41-142

Surrogate: 1-Chlorooctadecane 188 % 37.6-147

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Analytical Results For:

BBC International, Inc.
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 Fax To: (575) 397-0397

Received:	10/21/2019	Sampling Date:	10/17/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 7 @ 1' (H903596-31)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/25/2019	ND	1.92	96.1	2.00	2.01		
Toluene*	<0.050	0.050	10/25/2019	ND	1.91	95.5	2.00	2.32		
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.93	96.7	2.00	1.65		
Total Xylenes*	<0.150	0.150	10/25/2019	ND	5.83	97.1	6.00	1.77		
Total BTEX	<0.300	0.300	10/25/2019	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2120	16.0	10/24/2019	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	10/25/2019	ND	211	105	200	0.599	
DRO >C10-C28*	637	10.0	10/25/2019	ND	219	110	200	2.01	
EXT DRO >C28-C36	<10.0	10.0	10/25/2019	ND					

Surrogate: 1-Chlorooctane 87.5 % 41-142

Surrogate: 1-Chlorooctadecane 122 % 37.6-147

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Analytical Results For:

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 Fax To: (575) 397-0397

Received:	10/21/2019	Sampling Date:	10/17/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 7 @ 2' (H903596-32)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2019	ND	1.92	96.1	2.00	2.01	
Toluene*	<0.050	0.050	10/25/2019	ND	1.91	95.5	2.00	2.32	
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.93	96.7	2.00	1.65	
Total Xylenes*	<0.150	0.150	10/25/2019	ND	5.83	97.1	6.00	1.77	
Total BTEX	<0.300	0.300	10/25/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	592	16.0	10/24/2019	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	10/25/2019	ND	211	105	200	0.599	
DRO >C10-C28*	<10.0	10.0	10/25/2019	ND	219	110	200	2.01	
EXT DRO >C28-C36	<10.0	10.0	10/25/2019	ND					

Surrogate: 1-Chlorooctane 87.2 % 41-142

Surrogate: 1-Chlorooctadecane 100 % 37.6-147

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Analytical Results For:

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 Fax To: (575) 397-0397

Received:	10/21/2019	Sampling Date:	10/17/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 7 @ 3' (H903596-33)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/25/2019	ND	1.92	96.1	2.00	2.01		
Toluene*	<0.050	0.050	10/25/2019	ND	1.91	95.5	2.00	2.32		
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.93	96.7	2.00	1.65		
Total Xylenes*	<0.150	0.150	10/25/2019	ND	5.83	97.1	6.00	1.77		
Total BTEX	<0.300	0.300	10/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 115 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	528	16.0	10/24/2019	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	10/25/2019	ND	211	105	200	0.599	
DRO >C10-C28*	182	10.0	10/25/2019	ND	219	110	200	2.01	
EXT DRO >C28-C36	<10.0	10.0	10/25/2019	ND					

Surrogate: 1-Chlorooctane 88.2 % 41-142

Surrogate: 1-Chlorooctadecane 116 % 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:	10/21/2019	Sampling Date:	10/18/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 8 @ SURFACE (H903596-34)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2019	ND	1.92	96.1	2.00	2.01	
Toluene*	<0.050	0.050	10/25/2019	ND	1.91	95.5	2.00	2.32	
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.93	96.7	2.00	1.65	
Total Xylenes*	<0.150	0.150	10/25/2019	ND	5.83	97.1	6.00	1.77	
Total BTEX	<0.300	0.300	10/25/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1200	16.0	10/24/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/25/2019	ND	211	105	200	0.599	
DRO >C10-C28*	4400	10.0	10/25/2019	ND	219	110	200	2.01	
EXT DRO >C28-C36	521	10.0	10/25/2019	ND					

Surrogate: 1-Chlorooctane 87.8 % 41-142

Surrogate: 1-Chlorooctadecane 314 % 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:	10/21/2019	Sampling Date:	10/18/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 8 @ 1' (H903596-35)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/25/2019	ND	1.92	96.1	2.00	2.01		
Toluene*	<0.050	0.050	10/25/2019	ND	1.91	95.5	2.00	2.32		
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.93	96.7	2.00	1.65		
Total Xylenes*	<0.150	0.150	10/25/2019	ND	5.83	97.1	6.00	1.77		
Total BTEX	<0.300	0.300	10/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	544	16.0	10/24/2019	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	10/24/2019	ND	220	110	200	0.281	
DRO >C10-C28*	54.3	10.0	10/24/2019	ND	228	114	200	3.81	
EXT DRO >C28-C36	<10.0	10.0	10/24/2019	ND					

Surrogate: 1-Chlorooctane 106 % 41-142

Surrogate: 1-Chlorooctadecane 117 % 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:	10/21/2019	Sampling Date:	10/18/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 8 @ 2' (H903596-36)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/25/2019	ND	1.92	96.1	2.00	2.01		
Toluene*	<0.050	0.050	10/25/2019	ND	1.91	95.5	2.00	2.32		
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.93	96.7	2.00	1.65		
Total Xylenes*	<0.150	0.150	10/25/2019	ND	5.83	97.1	6.00	1.77		
Total BTEX	<0.300	0.300	10/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	352	16.0	10/25/2019	ND	448	112	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	10/24/2019	ND	208	104	200	1.78	
DRO >C10-C28*	142	10.0	10/24/2019	ND	217	109	200	2.92	
EXT DRO >C28-C36	<10.0	10.0	10/24/2019	ND					

Surrogate: 1-Chlorooctane 87.9 % 41-142

Surrogate: 1-Chlorooctadecane 111 % 37.6-147

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Analytical Results For:

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

Received:	10/21/2019	Sampling Date:	10/18/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 8 @ 3' (H903596-37)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2019	ND	1.92	96.1	2.00	2.01	
Toluene*	<0.050	0.050	10/25/2019	ND	1.91	95.5	2.00	2.32	
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.93	96.7	2.00	1.65	
Total Xylenes*	<0.150	0.150	10/25/2019	ND	5.83	97.1	6.00	1.77	
Total BTEX	<0.300	0.300	10/25/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.4 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	10/25/2019	ND	448	112	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	10/24/2019	ND	208	104	200	1.78	
DRO >C10-C28*	15.9	10.0	10/24/2019	ND	217	109	200	2.92	
EXT DRO >C28-C36	<10.0	10.0	10/24/2019	ND					

Surrogate: 1-Chlorooctane 92.2 % 41-142

Surrogate: 1-Chlorooctadecane 109 % 37.6-147

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Analytical Results For:

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

Received:	10/21/2019	Sampling Date:	10/18/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 9 @ SURFACE (H903596-38)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/25/2019	ND	1.92	96.1	2.00	2.01		
Toluene*	<0.050	0.050	10/25/2019	ND	1.91	95.5	2.00	2.32		
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.93	96.7	2.00	1.65		
Total Xylenes*	<0.150	0.150	10/25/2019	ND	5.83	97.1	6.00	1.77		
Total BTEX	<0.300	0.300	10/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.1 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1310	16.0	10/25/2019	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	10/24/2019	ND	208	104	200	1.78		
DRO >C10-C28*	3150	10.0	10/24/2019	ND	217	109	200	2.92		
EXT DRO >C28-C36	479	10.0	10/24/2019	ND						

Surrogate: 1-Chlorooctane 85.2 % 41-142

Surrogate: 1-Chlorooctadecane 251 % 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:	10/21/2019	Sampling Date:	10/18/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 9 @ 1' (H903596-39)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/25/2019	ND	1.92	96.1	2.00	2.01		
Toluene*	<0.050	0.050	10/25/2019	ND	1.91	95.5	2.00	2.32		
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.93	96.7	2.00	1.65		
Total Xylenes*	<0.150	0.150	10/25/2019	ND	5.83	97.1	6.00	1.77		
Total BTEX	<0.300	0.300	10/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	368	16.0	10/25/2019	ND	448	112	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	10/24/2019	ND	208	104	200	1.78	
DRO >C10-C28*	51.7	10.0	10/24/2019	ND	217	109	200	2.92	
EXT DRO >C28-C36	12.6	10.0	10/24/2019	ND					

Surrogate: 1-Chlorooctane 91.0 % 41-142

Surrogate: 1-Chlorooctadecane 110 % 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:	10/21/2019	Sampling Date:	10/18/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 9 @ 2' (H903596-40)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2019	ND	1.81	90.4	2.00	0.948	
Toluene*	<0.050	0.050	10/25/2019	ND	1.92	95.8	2.00	0.181	
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.90	95.0	2.00	0.181	
Total Xylenes*	<0.150	0.150	10/25/2019	ND	5.90	98.4	6.00	0.540	
Total BTEX	<0.300	0.300	10/25/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	10/25/2019	ND	448	112	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	10/24/2019	ND	208	104	200	1.78	
DRO >C10-C28*	24.9	10.0	10/24/2019	ND	217	109	200	2.92	
EXT DRO >C28-C36	<10.0	10.0	10/24/2019	ND					

Surrogate: 1-Chlorooctane 96.5 % 41-142

Surrogate: 1-Chlorooctadecane 111 % 37.6-147

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Analytical Results For:

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Received:	10/21/2019	Sampling Date:	10/18/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 9 @ 3' (H903596-41)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2019	ND	1.81	90.4	2.00	0.948	
Toluene*	<0.050	0.050	10/25/2019	ND	1.92	95.8	2.00	0.181	
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.90	95.0	2.00	0.181	
Total Xylenes*	<0.150	0.150	10/25/2019	ND	5.90	98.4	6.00	0.540	
Total BTEX	<0.300	0.300	10/25/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	10/25/2019	ND	448	112	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	10/24/2019	ND	208	104	200	1.78	
DRO >C10-C28*	20.0	10.0	10/24/2019	ND	217	109	200	2.92	
EXT DRO >C28-C36	<10.0	10.0	10/24/2019	ND					

Surrogate: 1-Chlorooctane 91.9 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 37.6-147

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Analytical Results For:

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 Cliff Brunson
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 Hobbs NM, 88241
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Received:	10/21/2019	Sampling Date:	10/18/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 10 @ SURFACE (H903596-42)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2019	ND	1.81	90.4	2.00	0.948	
Toluene*	<0.050	0.050	10/25/2019	ND	1.92	95.8	2.00	0.181	
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.90	95.0	2.00	0.181	
Total Xylenes*	<0.150	0.150	10/25/2019	ND	5.90	98.4	6.00	0.540	
Total BTEX	<0.300	0.300	10/25/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9000	16.0	10/25/2019	ND	448	112	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	10/24/2019	ND	208	104	200	1.78		
DRO >C10-C28*	4220	10.0	10/24/2019	ND	217	109	200	2.92		
EXT DRO >C28-C36	150	10.0	10/24/2019	ND						

Surrogate: 1-Chlorooctane 91.9 % 41-142

Surrogate: 1-Chlorooctadecane 338 % 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:	10/21/2019	Sampling Date:	10/18/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 10 @ 1' (H903596-43)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2019	ND	1.81	90.4	2.00	0.948	
Toluene*	<0.050	0.050	10/25/2019	ND	1.92	95.8	2.00	0.181	
Ethylbenzene*	<0.050	0.050	10/25/2019	ND	1.90	95.0	2.00	0.181	
Total Xylenes*	<0.150	0.150	10/25/2019	ND	5.90	98.4	6.00	0.540	
Total BTEX	<0.300	0.300	10/25/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	10/25/2019	ND	448	112	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	10/24/2019	ND	208	104	200	1.78	
DRO >C10-C28*	<10.0	10.0	10/24/2019	ND	217	109	200	2.92	
EXT DRO >C28-C36	<10.0	10.0	10/24/2019	ND					

Surrogate: 1-Chlorooctane 88.5 % 41-142

Surrogate: 1-Chlorooctadecane 98.1 % 37.6-147

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Analytical Results For:

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

Received:	10/21/2019	Sampling Date:	10/18/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 10 @ 2' (H903596-44)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/26/2019	ND	1.81	90.4	2.00	0.948		
Toluene*	<0.050	0.050	10/26/2019	ND	1.92	95.8	2.00	0.181		
Ethylbenzene*	<0.050	0.050	10/26/2019	ND	1.90	95.0	2.00	0.181		
Total Xylenes*	<0.150	0.150	10/26/2019	ND	5.90	98.4	6.00	0.540		
Total BTEX	<0.300	0.300	10/26/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	10/25/2019	ND	448	112	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	10/24/2019	ND	208	104	200	1.78	
DRO >C10-C28*	<10.0	10.0	10/24/2019	ND	217	109	200	2.92	
EXT DRO >C28-C36	<10.0	10.0	10/24/2019	ND					

Surrogate: 1-Chlorooctane 89.3 % 41-142

Surrogate: 1-Chlorooctadecane 100 % 37.6-147

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Analytical Results For:

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 Fax To: (575) 397-0397

Received:	10/21/2019	Sampling Date:	10/18/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 10 @ 3' (H903596-45)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/26/2019	ND	1.81	90.4	2.00	0.948		
Toluene*	<0.050	0.050	10/26/2019	ND	1.92	95.8	2.00	0.181		
Ethylbenzene*	<0.050	0.050	10/26/2019	ND	1.90	95.0	2.00	0.181		
Total Xylenes*	<0.150	0.150	10/26/2019	ND	5.90	98.4	6.00	0.540		
Total BTEX	<0.300	0.300	10/26/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	10/25/2019	ND	448	112	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	10/24/2019	ND	208	104	200	1.78	
DRO >C10-C28*	<10.0	10.0	10/24/2019	ND	217	109	200	2.92	
EXT DRO >C28-C36	<10.0	10.0	10/24/2019	ND					

Surrogate: 1-Chlorooctane 96.2 % 41-142

Surrogate: 1-Chlorooctadecane 107 % 37.6-147

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Analytical Results For:

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 Fax To: (575) 397-0397

Received:	10/21/2019	Sampling Date:	10/18/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 11 @ SURFACE (H903596-46)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/26/2019	ND	1.81	90.4	2.00	0.948		
Toluene*	<0.050	0.050	10/26/2019	ND	1.92	95.8	2.00	0.181		
Ethylbenzene*	<0.050	0.050	10/26/2019	ND	1.90	95.0	2.00	0.181		
Total Xylenes*	<0.150	0.150	10/26/2019	ND	5.90	98.4	6.00	0.540		
Total BTEX	<0.300	0.300	10/26/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6000	16.0	10/25/2019	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	10/24/2019	ND	208	104	200	1.78		
DRO >C10-C28*	1230	10.0	10/24/2019	ND	217	109	200	2.92		
EXT DRO >C28-C36	348	10.0	10/24/2019	ND						

Surrogate: 1-Chlorooctane 91.7 % 41-142

Surrogate: 1-Chlorooctadecane 150 % 37.6-147

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 Fax To: (575) 397-0397

Received:	10/21/2019	Sampling Date:	10/18/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 11 @ 1' (H903596-47)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/26/2019	ND	1.81	90.4	2.00	0.948		
Toluene*	<0.050	0.050	10/26/2019	ND	1.92	95.8	2.00	0.181		
Ethylbenzene*	<0.050	0.050	10/26/2019	ND	1.90	95.0	2.00	0.181		
Total Xylenes*	<0.150	0.150	10/26/2019	ND	5.90	98.4	6.00	0.540		
Total BTEX	<0.300	0.300	10/26/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	10/25/2019	ND	448	112	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	10/24/2019	ND	208	104	200	1.78	
DRO >C10-C28*	<10.0	10.0	10/24/2019	ND	217	109	200	2.92	
EXT DRO >C28-C36	<10.0	10.0	10/24/2019	ND					

Surrogate: 1-Chlorooctane 92.2 % 41-142

Surrogate: 1-Chlorooctadecane 106 % 37.6-147

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Analytical Results For:

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 Fax To: (575) 397-0397

Received:	10/21/2019	Sampling Date:	10/18/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 11 @ 2' (H903596-48)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/26/2019	ND	1.81	90.4	2.00	0.948		
Toluene*	<0.050	0.050	10/26/2019	ND	1.92	95.8	2.00	0.181		
Ethylbenzene*	<0.050	0.050	10/26/2019	ND	1.90	95.0	2.00	0.181		
Total Xylenes*	<0.150	0.150	10/26/2019	ND	5.90	98.4	6.00	0.540		
Total BTEX	<0.300	0.300	10/26/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	10/25/2019	ND	448	112	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	10/24/2019	ND	208	104	200	1.78	
DRO >C10-C28*	<10.0	10.0	10/24/2019	ND	217	109	200	2.92	
EXT DRO >C28-C36	<10.0	10.0	10/24/2019	ND					

Surrogate: 1-Chlorooctane 89.3 % 41-142

Surrogate: 1-Chlorooctadecane 101 % 37.6-147

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Analytical Results For:

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Received:	10/21/2019	Sampling Date:	10/18/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 11 @ 3' (H903596-49)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/26/2019	ND	1.81	90.4	2.00	0.948		
Toluene*	<0.050	0.050	10/26/2019	ND	1.92	95.8	2.00	0.181		
Ethylbenzene*	<0.050	0.050	10/26/2019	ND	1.90	95.0	2.00	0.181		
Total Xylenes*	<0.150	0.150	10/26/2019	ND	5.90	98.4	6.00	0.540		
Total BTEX	<0.300	0.300	10/26/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	10/25/2019	ND	448	112	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	10/24/2019	ND	208	104	200	1.78	
DRO >C10-C28*	<10.0	10.0	10/24/2019	ND	217	109	200	2.92	
EXT DRO >C28-C36	<10.0	10.0	10/24/2019	ND					

Surrogate: 1-Chlorooctane 92.0 % 41-142

Surrogate: 1-Chlorooctadecane 105 % 37.6-147

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Analytical Results For:

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Received:	10/21/2019	Sampling Date:	10/18/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 12 @ SURFACE (H903596-50)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/26/2019	ND	1.81	90.4	2.00	0.948		
Toluene*	<0.050	0.050	10/26/2019	ND	1.92	95.8	2.00	0.181		
Ethylbenzene*	<0.050	0.050	10/26/2019	ND	1.90	95.0	2.00	0.181		
Total Xylenes*	<0.150	0.150	10/26/2019	ND	5.90	98.4	6.00	0.540		
Total BTEX	<0.300	0.300	10/26/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	8530	16.0	10/25/2019	ND	448	112	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	10/24/2019	ND	208	104	200	1.78	
DRO >C10-C28*	1050	10.0	10/24/2019	ND	217	109	200	2.92	
EXT DRO >C28-C36	279	10.0	10/24/2019	ND					

Surrogate: 1-Chlorooctane 86.3 % 41-142

Surrogate: 1-Chlorooctadecane 140 % 37.6-147

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

Received:	10/21/2019	Sampling Date:	10/18/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 12 @ 1' (H903596-51)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/26/2019	ND	1.81	90.4	2.00	0.948	
Toluene*	<0.050	0.050	10/26/2019	ND	1.92	95.8	2.00	0.181	
Ethylbenzene*	<0.050	0.050	10/26/2019	ND	1.90	95.0	2.00	0.181	
Total Xylenes*	<0.150	0.150	10/26/2019	ND	5.90	98.4	6.00	0.540	
Total BTEX	<0.300	0.300	10/26/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	496	16.0	10/25/2019	ND	448	112	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	10/24/2019	ND	208	104	200	1.78	
DRO >C10-C28*	<10.0	10.0	10/24/2019	ND	217	109	200	2.92	
EXT DRO >C28-C36	<10.0	10.0	10/24/2019	ND					

Surrogate: 1-Chlorooctane 91.9 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 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:	10/21/2019	Sampling Date:	10/18/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 12 @ 2' (H903596-52)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/26/2019	ND	1.81	90.4	2.00	0.948		
Toluene*	<0.050	0.050	10/26/2019	ND	1.92	95.8	2.00	0.181		
Ethylbenzene*	<0.050	0.050	10/26/2019	ND	1.90	95.0	2.00	0.181		
Total Xylenes*	<0.150	0.150	10/26/2019	ND	5.90	98.4	6.00	0.540		
Total BTEX	<0.300	0.300	10/26/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	10/25/2019	ND	448	112	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	10/25/2019	ND	200	100	200	1.80	
DRO >C10-C28*	<10.0	10.0	10/25/2019	ND	194	97.2	200	2.28	
EXT DRO >C28-C36	<10.0	10.0	10/25/2019	ND					

Surrogate: 1-Chlorooctane 84.2 % 41-142

Surrogate: 1-Chlorooctadecane 87.0 % 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:	10/21/2019	Sampling Date:	10/18/2019
Reported:	10/28/2019	Sampling Type:	Soil
Project Name:	WHOMPING WILLOW CC 15-16 44H	Sampling Condition:	Cool & Intact
Project Number:	4-2-19	Sample Received By:	Tamara Oldaker
Project Location:	OXY		

Sample ID: SP 12 @ 3' (H903596-53)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/26/2019	ND	1.81	90.4	2.00	0.948		
Toluene*	<0.050	0.050	10/26/2019	ND	1.92	95.8	2.00	0.181		
Ethylbenzene*	<0.050	0.050	10/26/2019	ND	1.90	95.0	2.00	0.181		
Total Xylenes*	<0.150	0.150	10/26/2019	ND	5.90	98.4	6.00	0.540		
Total BTEX	<0.300	0.300	10/26/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	352	16.0	10/25/2019	ND	448	112	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	10/25/2019	ND	200	100	200	1.80	
DRO >C10-C28*	<10.0	10.0	10/25/2019	ND	194	97.2	200	2.28	
EXT DRO >C28-C36	<10.0	10.0	10/25/2019	ND					

Surrogate: 1-Chlorooctane 86.5 % 41-142

Surrogate: 1-Chlorooctadecane 87.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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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.
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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A handwritten signature in black ink that reads "Caley D. Keene".

Caley D. Keene, Lab Director/Quality Manager



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Relinquished By: <i>Veibel</i>		Date: <i>10-21-19</i>	Received By: <i>Guadalupe</i>	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
Time: <i>9:00 AM</i>				Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By: <i>Guadalupe</i>		Date: <i>10-21-19</i>	Received By: <i>Camara Eldridge</i>	REMARKS:	
Time: <i>4:30 PM</i>					
Delivered By: (Circle One) <i>- 3.42</i>		<i>#97</i>	Sample Condition Cool <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Intact <input type="checkbox"/> Yes <input type="checkbox"/> No	CHECKED BY: (Initials) <i>TO</i>	
Sampler - UPS - Bus - Other: <i>Corrected - 3.05</i>					

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BILL TO

ANALYSIS REQUEST

[illegible]

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Relinquished By: <i>[Signature]</i> Date: <i>10-21-14</i> Time: <i>8:00 AM</i>		Received By: <i>[Signature]</i> Date: <i>10-21-14</i> Time: <i>4:30 PM</i>		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #: Add'l Fax #: REMARKS:	
Relinquished By: <i>[Signature]</i> Date: <i>10-21-14</i> Time: <i>4:30 PM</i>		Received By: <i>[Signature]</i> Date: <i>10-21-14</i> Time: <i>4:30 PM</i>		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #: Add'l Fax #: REMARKS:	
Delivered By: (Circle One) <i>-3.4i</i> <i>#97</i> Sampler - UPS - Bus - Other: <i>Corrosion -3.0i</i>		Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No		CHECKED BY: (Initials) <i>TO-</i>	

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Page 58 of 61

**ARDINAL LABORATORIES**

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

3 of 6

Company Name: BBC International, Inc.				BILL TO				ANALYSIS REQUEST												
Project Manager: Cliff Brunson				P.O. #:				<div style="display: flex; flex-direction: column; align-items: center;"> <div>Chloride</div> <div>BTEx</div> <div>TPH Ext</div> </div>												
Address: P.O. Box 805				Company:																
City: Hobbs State: NM Zip: 88241				Attn:																
Phone #: 575-397-6388 Fax #: 575-397-0397				Address:																
Project #: Project Owner: Oxy				City:																
Project Name: WHOMPING WILLOW CC 15-16 44H - 4-2-19				State: Zip:																
Project Location:				Phone #:																
Sampler Name:				Fax #:																
FOR LAB USE ONLY																				
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME						
H903596																				
21	SP5 @ SURFACE	G	1			✓					✓		10-17-19	1:20	✓	✓	✓			
22	SP5 @ 1'												10-17-19	1:36						
23	SP5 @ 2'												10-17-19	1:40						
24	SP5 @ 3'												10-17-19	1:50						
25	SP5 @ 4'												10-17-19	2:01						
26	SP6 @ SURFACE												10-17-19	2:11						
27	SP6 @ 1'												10-17-19	2:20						
28	SP6 @ 2'												10-17-19	2:32						
29	SP6 @ 3'												10-17-19	2:45						
30	SP7 @ SURFACE												10-17-19	2:50	✓	✓	✓			

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Relinquished By:	Date: 10-21-19	Received By:	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
Time: 8:00 AM			Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By:	Date: 10-21-19	Received By:	REMARKS:	
Time: 4:30 PM				
Delivered By: (Circle One) -3.4c	Sample Condition	CHECKED BY: (Initials)		
Sampler - UPS - Bus - Other: Corrected -3.0c	Cool <input type="checkbox"/> Yes <input type="checkbox"/> No	Intact <input type="checkbox"/> Yes <input type="checkbox"/> No		
		T.O.		

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: BBC International, Inc.				BILL TO				ANALYSIS REQUEST															
Project Manager: Cliff Brunson				P.O. #:																			
Address: P.O. Box 805				Company:																			
City: Hobbs State: NM Zip: 88241				Attn:																			
Phone #: 575-397-6388 Fax #: 575-397-0397				Address:																			
Project #: Project Owner: Oxy				City:																			
Project Name: WHOMPING WILLOW CC 15-16 44H - 4-2-19				State: Zip:																			
Project Location:				Phone #:																			
Sampler Name:				Fax #:																			
FOR LAB USE ONLY						MATRIX		PRESERV.		SAMPLING		Chloride BTEx TPN Ex+											
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL												
14035916																							
31	SP7 @ 1'	G	1			✓				✓			10-17-19	3:01									
32	SP7 @ 2'												10-17-19	3:22									
33	SP7 @ 3'												10-17-19	3:33									
34	SP8 @ SURFACE												10-18-19	9:19									
35	SP8 @ 1'												10-18-19	9:30									
36	SP8 @ 2'												10-18-19	9:45									
37	SP8 @ 3'												10-18-19	9:59									
38	SP9 @ SURFACE												10-18-19	10:02									
39	SP9 @ 1'												10-18-19	10:09									
40	SP9 @ 2'												10-18-19	10:19									
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Relinquished By: [Signature]				Date: 10-21-19		Received By: [Signature]				Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No				Add'l Phone #:									
Relinquished By: [Signature]				Date: 10-21-19		Received By: [Signature]				Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No				Add'l Fax #:									
Delivered By: (Circle One) - 3.42				Time: 4:30 PM		Sample Condition				CHECKED BY: (Initials)				REMARKS:									
Sampler - UPS - Bus - Other: Corrected - 3.02						Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No				TO													

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: BBC International, Inc.				BILL TO				ANALYSIS REQUEST															
Project Manager: Cliff Brunson				P.O. #:				<div style="display: flex; justify-content: space-between;"> <div style="width: 15%;">Chloride</div> <div style="width: 15%;">BTEX</div> <div style="width: 15%;">TPH</div> <div style="width: 15%;">Ext</div> <div style="width: 15%;"></div> <div style="width: 15%;"></div> <div style="width: 15%;"></div> <div style="width: 15%;"></div> <div style="width: 15%;"></div> <div style="width: 15%;"></div> <div style="width: 15%;"></div> <div style="width: 15%;"></div> <div style="width: 15%;"></div> <div style="width: 15%;"></div> <div style="width: 15%;"></div> <div style="width: 15%;"></div> <div style="width: 15%;"></div> <div style="width: 15%;"></div> </div>															
Address: P.O. Box 805				Company:																			
City: Hobbs State: NM Zip: 88241				Attn:																			
Phone #: 575-397-6388 Fax #: 575-397-0397				Address:																			
Project #: Project Owner: Oxy				City:																			
Project Name: WHOMPING WILLOW CC 15-16 44H - 4-2-19				State: Zip:																			
Project Location:				Phone #:																			
Sampler Name:				Fax #:																			
FOR LAB USE ONLY																							
Lab I.D.		Sample I.D.		GRAB OR (COMP. # CONTAINERS		MATRIX		PRESERV.		SAMPLING													
H903596																							
41		SP9 @ 3'		G		✓		↓		10-18-19 10:30													
42		SP10 @ SURFACE								10-18-19 10:40													
43		SP10 @ 1'								10-18-19 10:50													
44		SP10 @ 2'								10-18-19 11:11													
45		SP10 @ 3'								10-18-19 11:22													
46		SP11 @ SURFACE								10-18-19 11:33													
47		SP11 @ 1'								10-18-19 11:44													
48		SP11 @ 2								10-18-19 11:55													
49		SP11 @ 3'								10-18-19 12:12													
50		SP12 @ SURFACE								10-18-19 12:40													

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Relinquished By: <i>[Signature]</i> Date: <i>10-21-14</i> Time: <i>8:00 AM</i>		Received By: <i>[Signature]</i>		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #: Add'l Fax #: REMARKS:	
Relinquished By: <i>[Signature]</i> Date: <i>10-21-14</i> Time: <i>4:30 PM</i>		Received By: <i>[Signature]</i>			
Delivered By: (Circle One) <i>-3.4°C</i> <i>#97</i>		Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No		CHECKED BY: (Initials) <i>T.</i>	
Sampler - UPS - Bus - Other: <i>Compart - 3.0°C</i>					

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Page 61 of 61

**CARDINAL LABORATORIES**

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

6 of 6

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);">Chloride</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:																							
City: Hobbs State: NM Zip: 88241				Attn:																							
Phone #: 575-397-6388 Fax #: 575-397-0397				Address:																							
Project #: Project Owner: Oxy				City:																							
Project Name: WHOMPING WILLOW CC 15-16 44H - 4-2-19				State: Zip:																							
Project Location:				Phone #:																							
Sampler Name:				Fax #:																							
FOR LAB USE ONLY																											
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX					PRESERV.			SAMPLING															
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME													
H903596	SP12 @ 1'	B	1			✓					✓		10-18-19	12:50													
51	SP12 @ 2'	↓	↓			↓					↓		10-18-19	1:01													
52	SP12 @ 3'	↓	↓			↓					↓		10-18-19	1:15													
53																											

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

Relinquished By: <i>[Signature]</i>	Date: 10-21-19	Received By: <i>[Signature]</i>	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
	Time: 8:00 AM		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By: <i>[Signature]</i>	Date: 10-24-19	Received By: <i>[Signature]</i>	REMARKS:	
	Time: 4:30 PM			
Delivered By: (Circle One) -3.4°C	#97	Sample Condition	CHECKED BY: (Initials)	
Sampler - UPS - Bus - Other: Corrected -3.0°C		Cool Intact	TO-	
		<input type="checkbox"/> Yes <input type="checkbox"/> No		

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