



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

DELINEATION WORKPLAN

OXY – MESA VERDE WTF (Leak Date: 6/6/18)

RP # 1RP-5100

This delineation workplan and remediation proposal addresses the releases associated with RP # 2RP-5100.

The following information includes:

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

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

OXY will excavate the spill area as depicted on the following site diagram. The leak area near SP1 and SP2 (GREEN shade on diagram) will be excavated to a depth of 4 feet. The leak area near SP3 (PINK shade on diagram) will require zero remediation.

Bottom confirmation samples will be collected at no greater than 75 ft. intervals. Estimated volume of material to be removed is 700 cubic yards. The remediation will be completed within 90 days of plan approval.

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

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

Form C-141

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State of New Mexico
Oil Conservation Division

Incident ID	
District RP	1RP-5100
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?	325' (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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

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

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

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

Form C-141

State of New Mexico
Oil Conservation Division

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Incident ID	
District RP	1RP-5100
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 Coordinator
Signature:  Date: 6-25-19
email: wade_dittrich@oxy.com Telephone: (575) 390-2828

OCD Only

Received by: _____ Date: _____

Form C-141

State of New Mexico
Oil Conservation Division

Page 5

Incident ID	
District RP	1RP-5100
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 CoordinatorSignature: Date: 6-25-19email: wade_dittrich@oxy.comTelephone: (575) 390-2828**OCD Only**


Received by: _____ Date: _____


☐ Approved ☒ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral ApprovedSignature: Date: 4/5/2023


Oxy, Mesa Verde WTF


Leak date: 6/6/18
Lea County, NM
1RP-5100

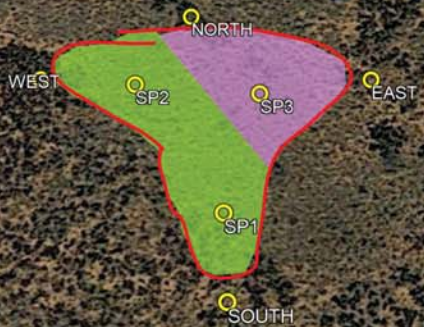
Legend

 4 ft Excavation

 Leak area

 No remediation activities

 Sample points



Oxy, Mesa Verde WTF

Sample points

SP1, N 32.21338 W-103.71510

SP2, N 32.21356 W-103.71522

SP3, N 32.21355 W-103.71506

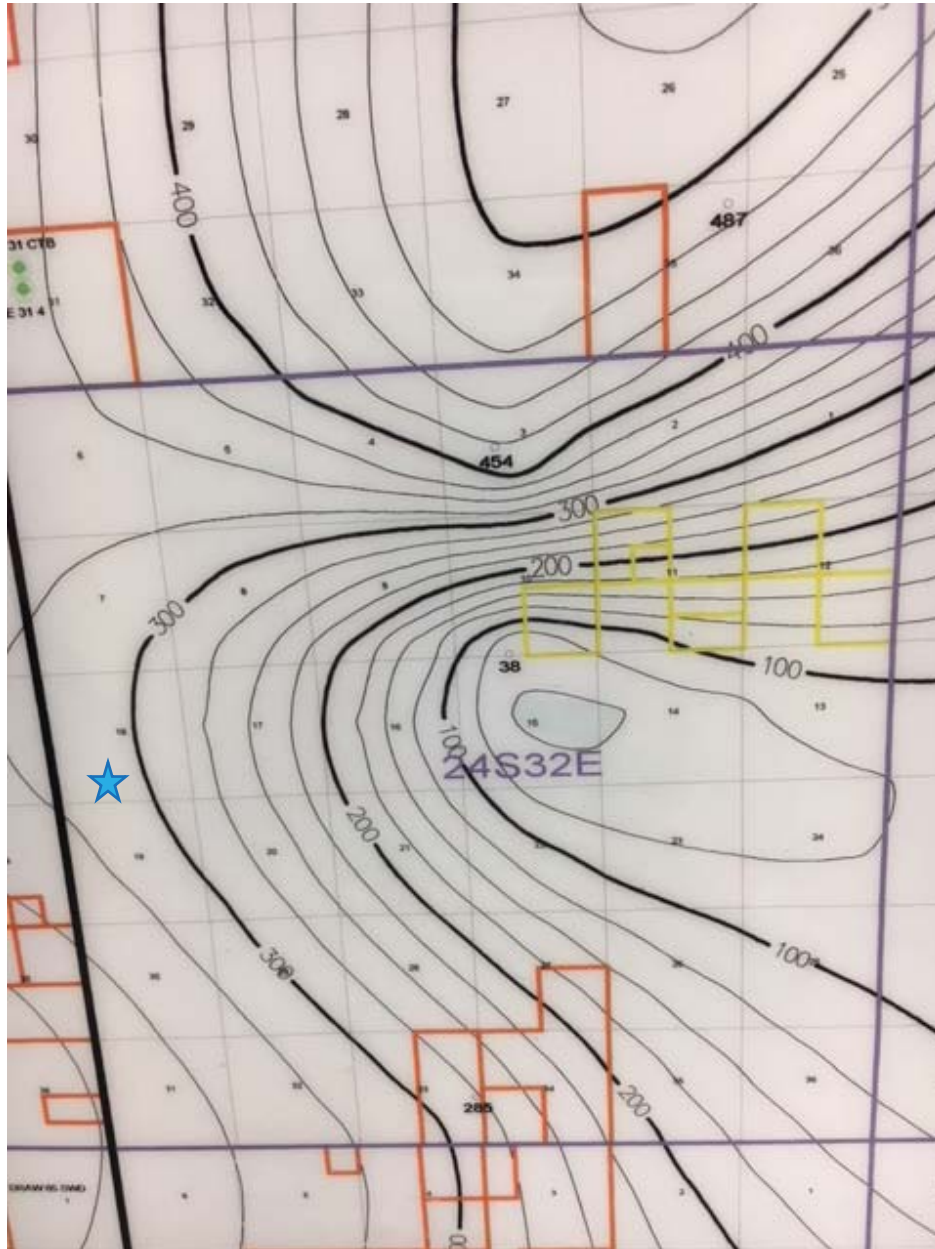
NORTH, N 32.21366 W-103.71516

EAST, N 32.21357 W-103.71492

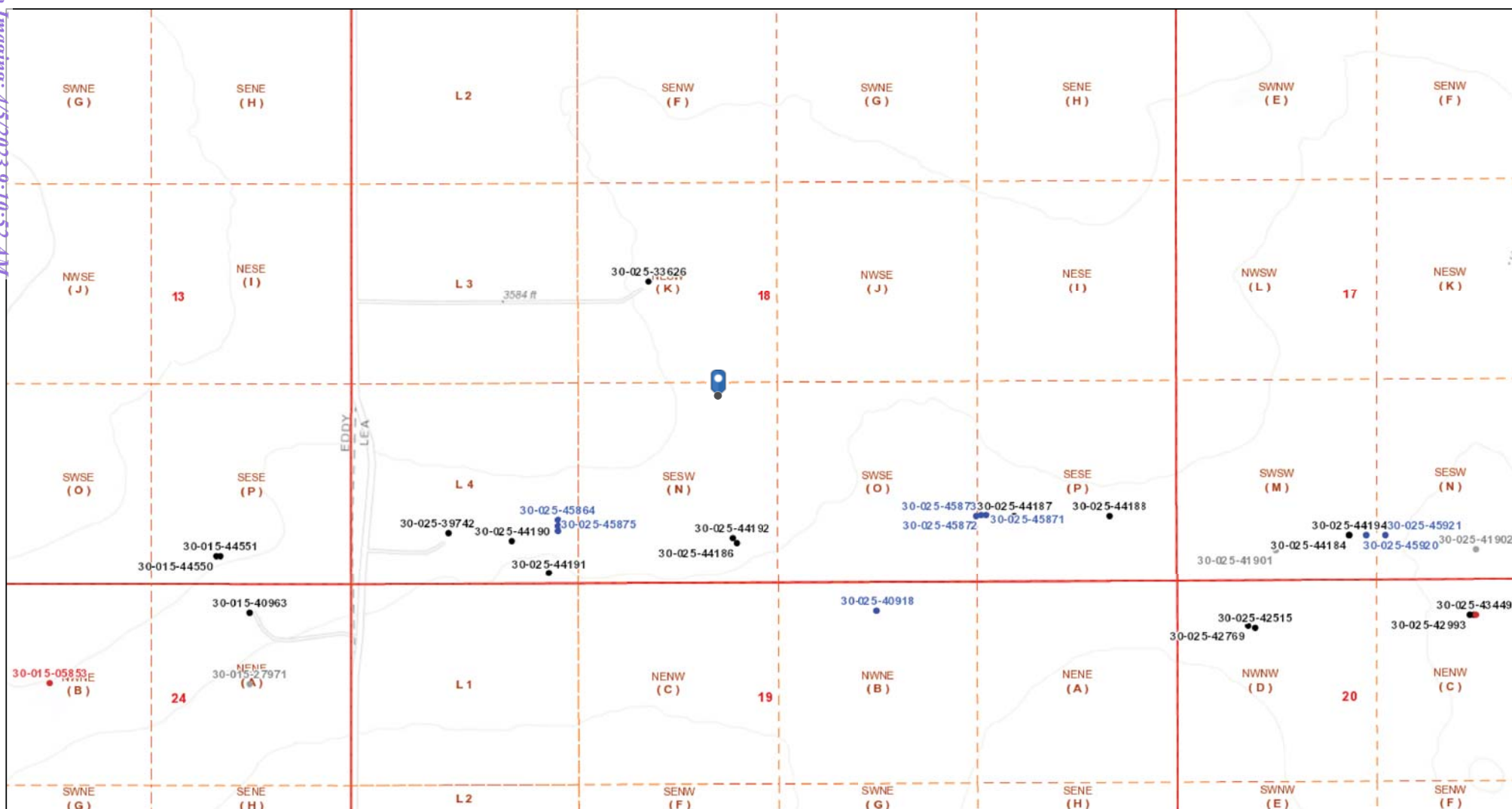
WEST, N 32.21356 W-103.71534

SOUTH, N 32.21326 W-103.71509

Oxy, Mesa Verde WTF
U/L N, Section 18, T24S, R32E
Groundwater: 325'



Oxy, Mesa Verde WTF



6/13/2019 11:02:01 AM

Well Locations - Small Scale

- Active
- New
- Plugged
- Cancelled
- Temporarily Abandoned

Well Locations - Large Scale

- Miscellaneous
- CO2 Active
- CO2 Cancelled
- CO2 New
- CO2 Plugged
- CO2 Temporarily Abandoned

Gas Active

- Gas, Cancelled, Never Drilled
- Gas, New
- Gas, Plugged
- Gas, Temporarily Abandoned
- Injection, Active

Injection, Cancelled

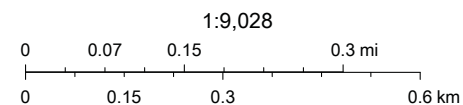
- Injection, New
- Injection, Plugged
- Injection, Temporarily Abandoned
- Oil, Active
- Oil, Cancelled

Oil, New

- Oil, Plugged
- Oil, Temporarily Abandoned
- Salt Water Injection, Active
- Salt Water Injection, Cancelled
- Salt Water Injection, New

Salt Water Injection, Plugged

- Salt Water Injection Temporarily Abandoned
- Water, Active
- Water, Cancelled
- Water, New
- Water, Plugged





Bureau of Land Management, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA, OCD, BLM

Oxy, Mesa Verde WTF

Leak date: 6/6/18
Lea County, NM

BLM CAVE KARST MAP

Legend

-  Leak area
-  Low potential





Navigation

Search

Languages

MSC Home (/portal/)

MSC Search by Address
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MSC Search All Products
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Hazus
(/portal/resources/hazus)

LOMC Batch Files
(/portal/resources/lomc)

Product Availability
(/portal/productAvailability)

MSC Frequently Asked
Questions (FAQs)
(/portal/resources/faq)

MSC Email Subscriptions
(/portal/subscriptionHome)

Contact MSC Help
(/portal/resources/contact)

FEMA Flood Map Service Center: Search By Address

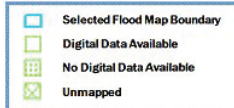
Enter an address, place, or coordinates: ?

-103.71510, 32.21349

Search

Whether you are in a high risk zone or not, you may need [flood insurance \(https://www.fema.gov/national-flood-insurance-program\)](https://www.fema.gov/national-flood-insurance-program) because most homeowners insurance doesn't cover flood damage. If you live in an area with low or moderate flood risk, you are 5 times more likely to experience flood than a fire in your home over the next 30 years. For many, a National Flood Insurance Program's flood insurance policy could cost less than \$400 per year. Call your insurance agent today and protect what you've built.

Learn more about [steps you can take \(https://www.fema.gov/what-mitigation\)](https://www.fema.gov/what-mitigation) to reduce flood risk damage.



Esri, US

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<https://www.oig.dhs.gov/hotline>

Official website of the Department of Homeland Security

Laboratory Analytical Results Summary
Mesa Verde WTF (6/6/18)

		Sample ID	SP1 @ SURFACE	SP1 @ 1'	SP1 @ 2'	SP1 @ 3'	SP1 @ 4'	SP1 @ 5'	SP1 @ 6'
Analyte	Method	Date	6/11/19	6/11/19	6/11/19	6/11/19	6/11/19	6/11/19	6/11/19
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050	n/a	n/a	n/a	n/a	n/a
Toluene	BTEX 8021B		<0.050	<0.050	n/a	n/a	n/a	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	<0.050	n/a	n/a	n/a	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	<0.150	n/a	n/a	n/a	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	<0.300	n/a	n/a	n/a	n/a	n/a
Chloride	SM4500Cl-B		1340	496	864	1100	848	176	160
GRO	TPH 8015M		<10.0	<10.0	n/a	n/a	n/a	n/a	n/a
DRO	TPH 8015M		<10.0	<10.0	n/a	n/a	n/a	n/a	n/a
EXT DRO	TPH 8015M		<10.0	<10.0	n/a	n/a	n/a	n/a	n/a

		Sample ID	SP2 @ SURFACE	SP2 @ 1'	SP2 @ 2'	SP2 @ 3'	SP2 @ 4'	SP2 @ 5'
Analyte	Method	Date	6/11/19	6/11/19	6/11/19	6/11/19	6/11/19	6/11/19
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050	n/a	n/a	n/a	n/a
Toluene	BTEX 8021B		<0.050	<0.050	n/a	n/a	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	<0.050	n/a	n/a	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	<0.150	n/a	n/a	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	<0.300	n/a	n/a	n/a	n/a
Chloride	SM4500Cl-B		48	1140	1570	1300	64	48
GRO	TPH 8015M		<10.0	<10.0	n/a	n/a	n/a	n/a
DRO	TPH 8015M		<10.0	<10.0	n/a	n/a	n/a	n/a
EXT DRO	TPH 8015M		<10.0	<10.0	n/a	n/a	n/a	n/a

		Sample ID	SP3 @ SURFACE	SP3 @ 1'
Analyte	Method	Date	6/11/19	6/12/19
			mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050
Toluene	BTEX 8021B		<0.050	<0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300
Chloride	SM4500Cl-B		64	32
GRO	TPH 8015M		<10.0	<10.0
DRO	TPH 8015M		<10.0	<10.0
EXT DRO	TPH 8015M		<10.0	<10.0

		Sample ID	NORTH @ SURFACE	EAST @ SURFACE	WEST @ SURFACE	SOUTH @ SURFACE
Analyte	Method	Date	6/12/19	6/12/19	6/12/19	6/12/19
			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		80	<16.0	32	48
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



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

June 20, 2019

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: MESA VERDE WTF

Enclosed are the results of analyses for samples received by the laboratory on 06/13/19 13:30.

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 "Celey D. Keene". The signature is written in a cursive, flowing style.

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:	06/13/2019	Sampling Date:	06/11/2019
Reported:	06/20/2019	Sampling Type:	Soil
Project Name:	MESA VERDE WTF	Sampling Condition:	** (See Notes)
Project Number:	(6/6/18)	Sample Received By:	Tamara Oldaker
Project Location:	OXY - LEA COUNTY, NM		

Sample ID: SP 1 @ SURFACE (H902060-01)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/19/2019	ND	2.21	111	2.00	1.65	
Toluene*	<0.050	0.050	06/19/2019	ND	2.24	112	2.00	0.599	
Ethylbenzene*	<0.050	0.050	06/19/2019	ND	2.08	104	2.00	1.59	
Total Xylenes*	<0.150	0.150	06/19/2019	ND	6.26	104	6.00	1.43	
Total BTX	<0.300	0.300	06/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.8 % 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	1340	16.0	06/17/2019	ND	384	96.0	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	06/14/2019	ND	185	92.3	200	3.85	
DRO >C10-C28*	<10.0	10.0	06/14/2019	ND	183	91.4	200	6.10	
EXT DRO >C28-C36	<10.0	10.0	06/14/2019	ND					

Surrogate: 1-Chlorooctane 91.6 % 41-142

Surrogate: 1-Chlorooctadecane 93.6 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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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:	06/13/2019	Sampling Date:	06/11/2019
Reported:	06/20/2019	Sampling Type:	Soil
Project Name:	MESA VERDE WTF	Sampling Condition:	** (See Notes)
Project Number:	(6/6/18)	Sample Received By:	Tamara Oldaker
Project Location:	OXY - LEA COUNTY, NM		

Sample ID: SP 1 @ 1' (H902060-02)

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	06/19/2019	ND	2.21	111	2.00	1.65		
Toluene*	<0.050	0.050	06/19/2019	ND	2.24	112	2.00	0.599		
Ethylbenzene*	<0.050	0.050	06/19/2019	ND	2.08	104	2.00	1.59		
Total Xylenes*	<0.150	0.150	06/19/2019	ND	6.26	104	6.00	1.43		
Total BTEx	<0.300	0.300	06/19/2019	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	496	16.0	06/17/2019	ND	384	96.0	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	06/14/2019	ND	185	92.3	200	3.85	
DRO >C10-C28*	<10.0	10.0	06/14/2019	ND	183	91.4	200	6.10	
EXT DRO >C28-C36	<10.0	10.0	06/14/2019	ND					

Surrogate: 1-Chlorooctane 94.1 % 41-142

Surrogate: 1-Chlorooctadecane 96.7 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	06/13/2019	Sampling Date:	06/11/2019
Reported:	06/20/2019	Sampling Type:	Soil
Project Name:	MESA VERDE WTF	Sampling Condition:	** (See Notes)
Project Number:	(6/6/18)	Sample Received By:	Tamara Oldaker
Project Location:	OXY - LEA COUNTY, NM		

Sample ID: SP 1 @ 2' (H902060-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	864	16.0	06/17/2019	ND	384	96.0	400	0.00		

Sample ID: SP 1 @ 3' (H902060-04)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1100	16.0	06/17/2019	ND	384	96.0	400	0.00		

Sample ID: SP 1 @ 4' (H902060-05)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	848	16.0	06/17/2019	ND	384	96.0	400	0.00		

Sample ID: SP 1 @ 5' (H902060-06)

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	06/17/2019	ND	384	96.0	400	0.00		

Sample ID: SP 1 @ 6' (H902060-07)

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	06/17/2019	ND	384	96.0	400	0.00		

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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:	06/13/2019	Sampling Date:	06/11/2019
Reported:	06/20/2019	Sampling Type:	Soil
Project Name:	MESA VERDE WTF	Sampling Condition:	** (See Notes)
Project Number:	(6/6/18)	Sample Received By:	Tamara Oldaker
Project Location:	OXY - LEA COUNTY, NM		

Sample ID: SP 2 @ SURFACE (H902060-08)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/19/2019	ND	2.21	111	2.00	1.65	
Toluene*	<0.050	0.050	06/19/2019	ND	2.24	112	2.00	0.599	
Ethylbenzene*	<0.050	0.050	06/19/2019	ND	2.08	104	2.00	1.59	
Total Xylenes*	<0.150	0.150	06/19/2019	ND	6.26	104	6.00	1.43	
Total BTX	<0.300	0.300	06/19/2019	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	06/17/2019	ND	384	96.0	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	06/14/2019	ND	185	92.3	200	3.85	
DRO >C10-C28*	<10.0	10.0	06/14/2019	ND	183	91.4	200	6.10	
EXT DRO >C28-C36	<10.0	10.0	06/14/2019	ND					

Surrogate: 1-Chlorooctane 89.9 % 41-142

Surrogate: 1-Chlorooctadecane 90.7 % 37.6-147

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 Fax To: (575) 397-0397

Received:	06/13/2019	Sampling Date:	06/11/2019
Reported:	06/20/2019	Sampling Type:	Soil
Project Name:	MESA VERDE WTF	Sampling Condition:	** (See Notes)
Project Number:	(6/6/18)	Sample Received By:	Tamara Oldaker
Project Location:	OXY - LEA COUNTY, NM		

Sample ID: SP 2 @ 1' (H902060-09)

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/19/2019	ND	2.21	111	2.00	1.65		
Toluene*	<0.050	0.050	06/19/2019	ND	2.24	112	2.00	0.599		
Ethylbenzene*	<0.050	0.050	06/19/2019	ND	2.08	104	2.00	1.59		
Total Xylenes*	<0.150	0.150	06/19/2019	ND	6.26	104	6.00	1.43		
Total BTX	<0.300	0.300	06/19/2019	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	1140	16.0	06/17/2019	ND	384	96.0	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	06/14/2019	ND	185	92.3	200	3.85	
DRO >C10-C28*	<10.0	10.0	06/14/2019	ND	183	91.4	200	6.10	
EXT DRO >C28-C36	<10.0	10.0	06/14/2019	ND					

Surrogate: 1-Chlorooctane 96.2 % 41-142

Surrogate: 1-Chlorooctadecane 99.1 % 37.6-147

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Analytical Results For:

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Received:	06/13/2019	Sampling Date:	06/11/2019
Reported:	06/20/2019	Sampling Type:	Soil
Project Name:	MESA VERDE WTF	Sampling Condition:	** (See Notes)
Project Number:	(6/6/18)	Sample Received By:	Tamara Oldaker
Project Location:	OXY - LEA COUNTY, NM		

Sample ID: SP 2 @ 2' (H902060-10)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1570	16.0	06/17/2019	ND	384	96.0	400	0.00		

Sample ID: SP 2 @ 3' (H902060-11)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1300	16.0	06/17/2019	ND	384	96.0	400	0.00	

Sample ID: SP 2 @ 4' (H902060-12)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	06/17/2019	ND	384	96.0	400	0.00	

Sample ID: SP 2 @ 5' (H902060-13)

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	06/17/2019	ND	384	96.0	400	0.00	

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Received:	06/13/2019	Sampling Date:	06/11/2019
Reported:	06/20/2019	Sampling Type:	Soil
Project Name:	MESA VERDE WTF	Sampling Condition:	** (See Notes)
Project Number:	(6/6/18)	Sample Received By:	Tamara Oldaker
Project Location:	OXY - LEA COUNTY, NM		

Sample ID: SP 3 @ SURFACE (H902060-14)

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	06/17/2019	ND	2.28	114	2.00	3.01		
Toluene*	<0.050	0.050	06/17/2019	ND	2.31	116	2.00	3.49		
Ethylbenzene*	<0.050	0.050	06/17/2019	ND	2.16	108	2.00	2.78		
Total Xylenes*	<0.150	0.150	06/17/2019	ND	6.59	110	6.00	3.15		
Total BTEx	<0.300	0.300	06/17/2019	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	06/17/2019	ND	384	96.0	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	06/15/2019	ND	191	95.6	200	0.255	
DRO >C10-C28*	<10.0	10.0	06/15/2019	ND	180	90.1	200	0.565	
EXT DRO >C28-C36	<10.0	10.0	06/15/2019	ND					

Surrogate: 1-Chlorooctane 91.4 % 41-142

Surrogate: 1-Chlorooctadecane 93.8 % 37.6-147

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Received:	06/13/2019	Sampling Date:	06/12/2019
Reported:	06/20/2019	Sampling Type:	Soil
Project Name:	MESA VERDE WTF	Sampling Condition:	** (See Notes)
Project Number:	(6/6/18)	Sample Received By:	Tamara Oldaker
Project Location:	OXY - LEA COUNTY, NM		

Sample ID: SP 3 @ 1' (H902060-15)

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	06/17/2019	ND	2.28	114	2.00	3.01	
Toluene*	<0.050	0.050	06/17/2019	ND	2.31	116	2.00	3.49	
Ethylbenzene*	<0.050	0.050	06/17/2019	ND	2.16	108	2.00	2.78	
Total Xylenes*	<0.150	0.150	06/17/2019	ND	6.59	110	6.00	3.15	
Total BTEx	<0.300	0.300	06/17/2019	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/17/2019	ND	384	96.0	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	06/15/2019	ND	191	95.6	200	0.255	
DRO >C10-C28*	<10.0	10.0	06/15/2019	ND	180	90.1	200	0.565	
EXT DRO >C28-C36	<10.0	10.0	06/15/2019	ND					

Surrogate: 1-Chlorooctane 94.4 % 41-142

Surrogate: 1-Chlorooctadecane 97.9 % 37.6-147

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Analytical Results For:

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Received:	06/13/2019	Sampling Date:	06/12/2019
Reported:	06/20/2019	Sampling Type:	Soil
Project Name:	MESA VERDE WTF	Sampling Condition:	** (See Notes)
Project Number:	(6/6/18)	Sample Received By:	Tamara Oldaker
Project Location:	OXY - LEA COUNTY, NM		

Sample ID: NORTH @ SURFACE (H902060-16)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/17/2019	ND	2.28	114	2.00	3.01	
Toluene*	<0.050	0.050	06/17/2019	ND	2.31	116	2.00	3.49	
Ethylbenzene*	<0.050	0.050	06/17/2019	ND	2.16	108	2.00	2.78	
Total Xylenes*	<0.150	0.150	06/17/2019	ND	6.59	110	6.00	3.15	
Total BTX	<0.300	0.300	06/17/2019	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	06/17/2019	ND	384	96.0	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	06/15/2019	ND	191	95.6	200	0.255	
DRO >C10-C28*	<10.0	10.0	06/15/2019	ND	180	90.1	200	0.565	
EXT DRO >C28-C36	<10.0	10.0	06/15/2019	ND					

Surrogate: 1-Chlorooctane 99.3 % 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:	06/13/2019	Sampling Date:	06/12/2019
Reported:	06/20/2019	Sampling Type:	Soil
Project Name:	MESA VERDE WTF	Sampling Condition:	** (See Notes)
Project Number:	(6/6/18)	Sample Received By:	Tamara Oldaker
Project Location:	OXY - LEA COUNTY, NM		

Sample ID: EAST @ SURFACE (H902060-17)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/17/2019	ND	2.28	114	2.00	3.01	
Toluene*	<0.050	0.050	06/17/2019	ND	2.31	116	2.00	3.49	
Ethylbenzene*	<0.050	0.050	06/17/2019	ND	2.16	108	2.00	2.78	
Total Xylenes*	<0.150	0.150	06/17/2019	ND	6.59	110	6.00	3.15	
Total BTX	<0.300	0.300	06/17/2019	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/17/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/15/2019	ND	191	95.6	200	0.255	
DRO >C10-C28*	<10.0	10.0	06/15/2019	ND	180	90.1	200	0.565	
EXT DRO >C28-C36	<10.0	10.0	06/15/2019	ND					

Surrogate: 1-Chlorooctane 96.3 % 41-142

Surrogate: 1-Chlorooctadecane 99.4 % 37.6-147

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Analytical Results For:

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Received:	06/13/2019	Sampling Date:	06/12/2019
Reported:	06/20/2019	Sampling Type:	Soil
Project Name:	MESA VERDE WTF	Sampling Condition:	** (See Notes)
Project Number:	(6/6/18)	Sample Received By:	Tamara Oldaker
Project Location:	OXY - LEA COUNTY, NM		

Sample ID: WEST @ SURFACE (H902060-18)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/17/2019	ND	2.28	114	2.00	3.01	
Toluene*	<0.050	0.050	06/17/2019	ND	2.31	116	2.00	3.49	
Ethylbenzene*	<0.050	0.050	06/17/2019	ND	2.16	108	2.00	2.78	
Total Xylenes*	<0.150	0.150	06/17/2019	ND	6.59	110	6.00	3.15	
Total BTX	<0.300	0.300	06/17/2019	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/17/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/15/2019	ND	191	95.6	200	0.255	
DRO >C10-C28*	<10.0	10.0	06/15/2019	ND	180	90.1	200	0.565	
EXT DRO >C28-C36	<10.0	10.0	06/15/2019	ND					

Surrogate: 1-Chlorooctane 98.1 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 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:	06/13/2019	Sampling Date:	06/12/2019
Reported:	06/20/2019	Sampling Type:	Soil
Project Name:	MESA VERDE WTF	Sampling Condition:	** (See Notes)
Project Number:	(6/6/18)	Sample Received By:	Tamara Oldaker
Project Location:	OXY - LEA COUNTY, NM		

Sample ID: SOUTH @ SURFACE (H902060-19)

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	06/17/2019	ND	2.28	114	2.00	3.01	
Toluene*	<0.050	0.050	06/17/2019	ND	2.31	116	2.00	3.49	
Ethylbenzene*	<0.050	0.050	06/17/2019	ND	2.16	108	2.00	2.78	
Total Xylenes*	<0.150	0.150	06/17/2019	ND	6.59	110	6.00	3.15	
Total BTEx	<0.300	0.300	06/17/2019	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	06/17/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/15/2019	ND	191	95.6	200	0.255	
DRO >C10-C28*	<10.0	10.0	06/15/2019	ND	180	90.1	200	0.565	
EXT DRO >C28-C36	<10.0	10.0	06/15/2019	ND					

Surrogate: 1-Chlorooctane 99.2 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 37.6-147

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Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
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, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



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1 of 2

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2082

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Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 202937

CONDITIONS

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 202937
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
bhall	Confirmation side wall and base samples must be collected. All confirmation samples must be representative of no more than 200 square feet.	4/5/2023
bhall	1RP-5100 closed. Refer to incident #NOY1816947247 in all future correspondence.	4/5/2023
bhall	Submit a complete report through the OCD Permitting website by 7/5/2023.	4/5/2023