



DELINEATION WORKPLAN

OXY – IRIDIUM MDP1 28 21 FED COM #2H (Leak Date: 3/9/19)

RP # 2RP-5498

This delineation workplan and remediation proposal addresses the releases associated with RP # 2RP-5498.

The following information includes:

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

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

OXY will excavate the spill area as depicted on the following site diagram. The entire leak area (BLUE shade on diagram) will be excavated to a depth of 1 foot. The leak area is on a new pad location, not in the pasture.

Bottom confirmation samples will be collected at no greater than 75 ft. intervals. Estimated volume of material to be removed is 526 cubic yards. The remediation will be completed within 90 days of plan approval.

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

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

Incident ID	
District RP	2RP-5498
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?	140 (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 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 1/2-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

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

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5498
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: 6-27-19

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

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	2RP-5498
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: 6.27.19
 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, Iridium MDP1 28 21 Fed Com #2H

Leak date: 3/9/19
Eddy County, NM
2RP-5498

Legend

-  1 ft excavation
-  Sample points
-  Leak area
-  Location Pad



Oxy, Iridium MDP1 28 21 Fed Com #2H

Sample points

SP1, N 32.26750 W-103.78780

SP2, N 32.26738 W-103.78779

SP3, N 32.26750 W-103.78795

SP4, N 32.26737 W-103.78794

SP5, N 32.26750 W-103.78811

SP6, N 32.26737 W-103.78810

NORTH, N 32.26760 W-103.78794

SOUTH, N 32.26727 W-103.78795

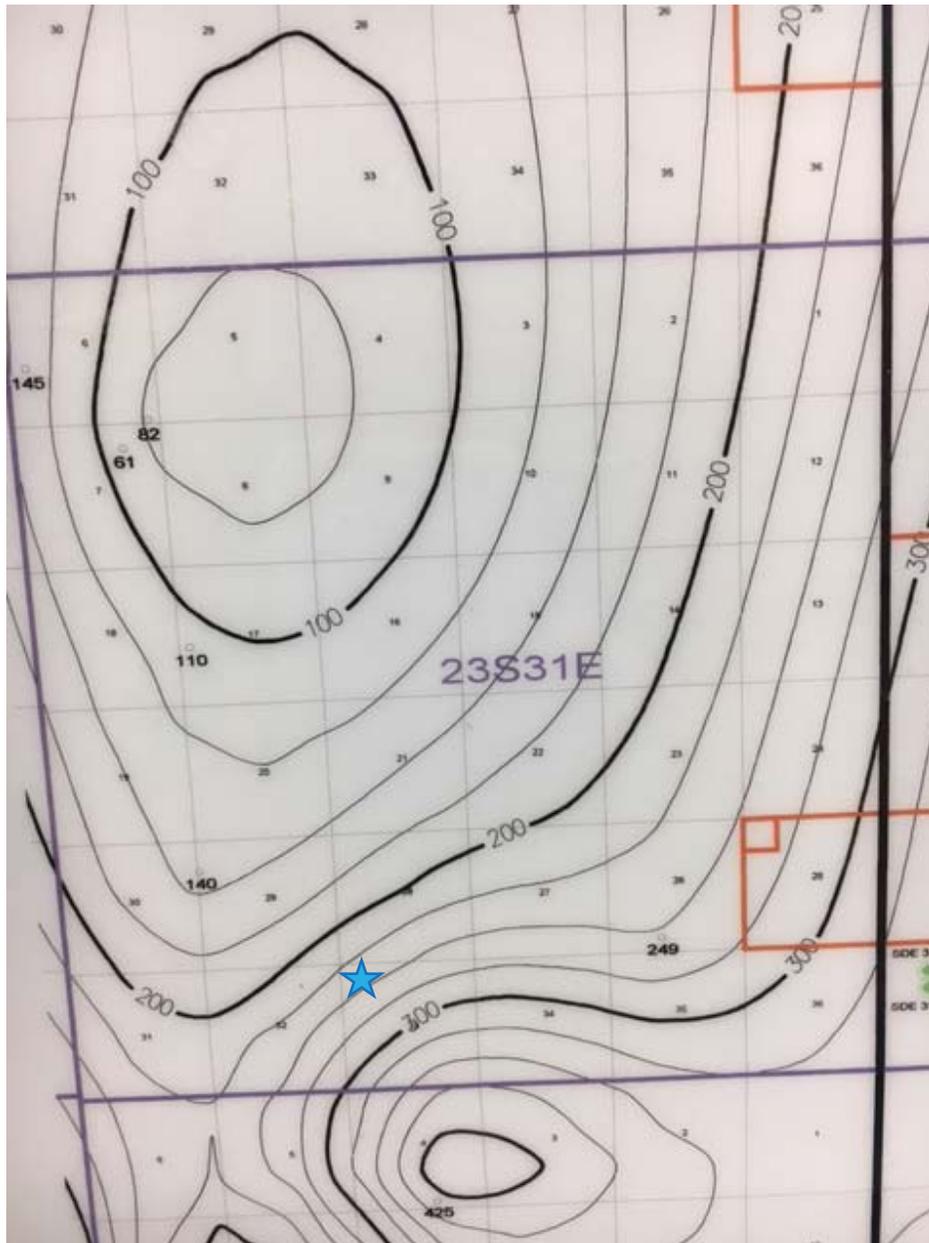
EAST, N 32.26744 W-103.78767

WEST, N 32.26738 W-103.78825

Oxy, Iridium MDP1 28 21 Fed Com #2H

U/L D, Section 33, T23S, R31E

Groundwater: 250'





USGS Home
 Contact USGS
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National Water Information System: Web Interface

[USGS Water Resources](#)

Data Category: Geographic Area:

Click to hide News 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 =

- 321648103482101

Minimum number of levels = 1

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

USGS 321648103482101 23S.31E.29.11333

Eddy County, New Mexico
 Latitude 32°16'48", Longitude 103°48'21" NAD27
 Land-surface elevation 3,336 feet above NAVD88
 The depth of the well is 220 feet below land surface.
 This well is completed in the Dewey Lake Redbeds (312DYLK) local aquifer.

Output formats

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

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement
1959-03-26		D	138.43			2			U	
1972-09-20		D	139.90			2	R		U	

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
Status	R	Site had been pumped recently.
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.

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Title: Groundwater for New Mexico: Water Levels

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

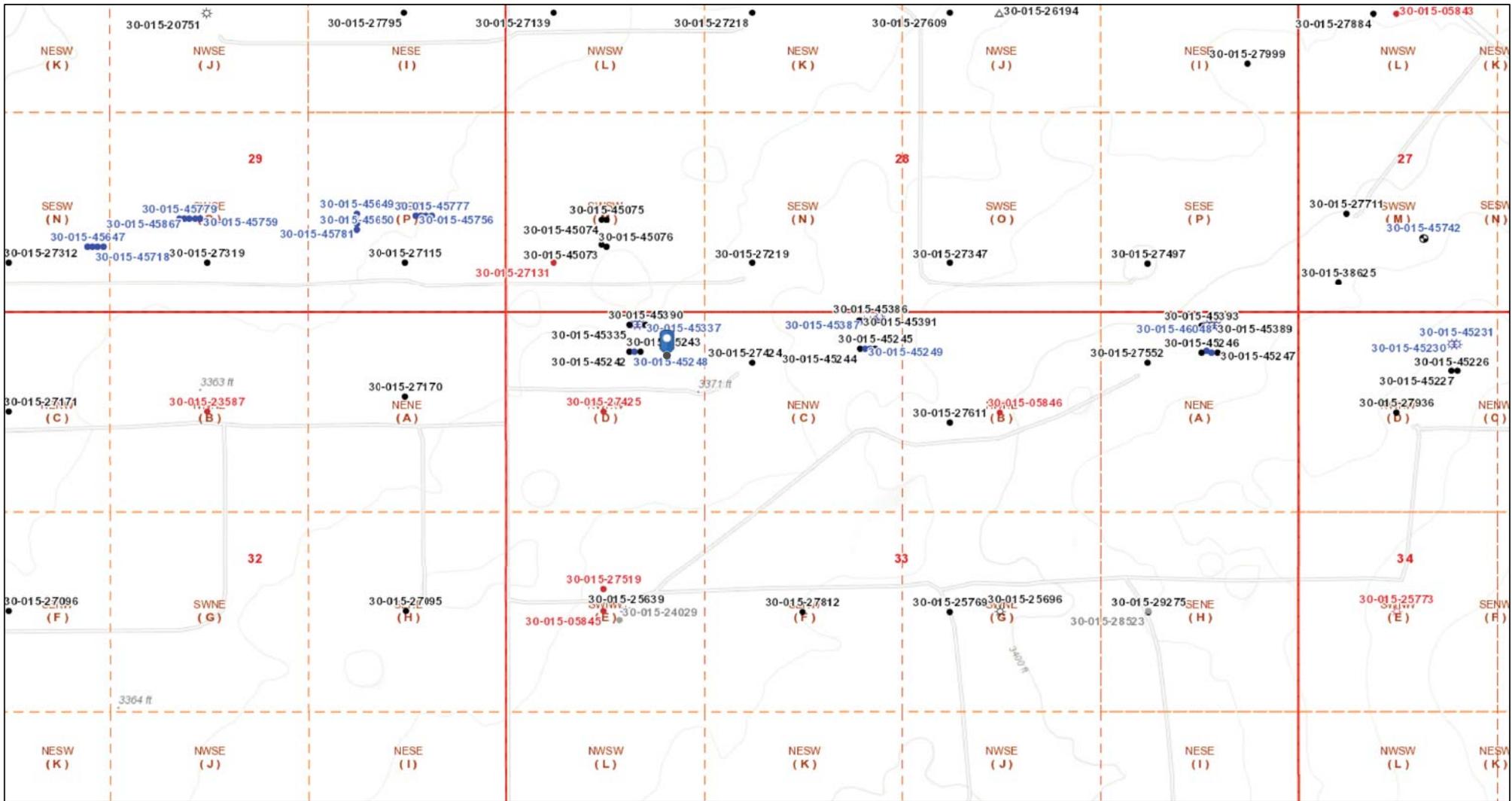


Page Contact Information: [New Mexico Water Data Maintainer](#)

Page Last Modified: 2019-05-01 13:49:28 EDT

0.45 0.41 nadww01

Oxy, Iridium MDP1 28 21 Fed Com #2H



6/18/2019 10:40:15 AM

1:9,028

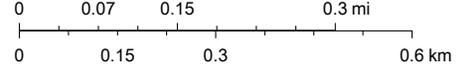
Well Locations - Small Scale

Well Locations - Large Scale

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

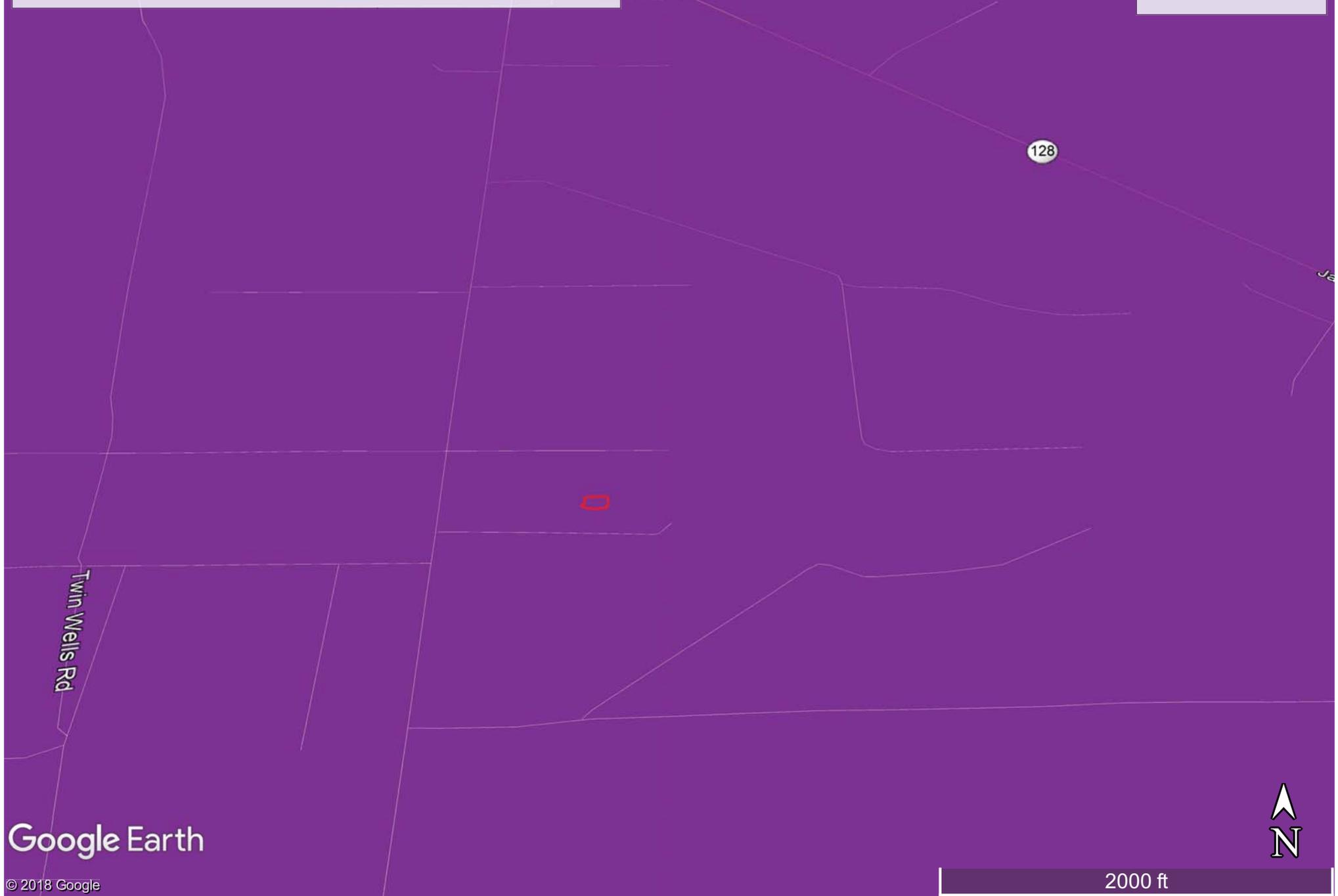
Oxy, Iridium MDP1 28 21 Fed Com #2H

Leak date: 3/9/19
Eddy County, NM

BLM CAVE KARST MAP

Legend

-  Leak area
-  Low potential



Google Earth

© 2018 Google

2000 ft

National Flood Hazard Layer FIRMette



32°16'17.78"N



103°47'34.77"W

Legend

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

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i>
		With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i>
		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 <i>Zone X</i>
		Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i>
		Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i>
		Area with Flood Risk due to Levee <i>Zone D</i>

OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i>
		Effective LOMRs
		Area of Undetermined Flood Hazard <i>Zone D</i>

GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall

OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature

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 6/18/2019 at 12:59:56 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.



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

32°15'47.36"N

103°46'57.32"W



Laboratory Analytical Results Summary
Iridium MDP1 28 21 Fed Com 2H (3/9/19)

Analyte	Method	Sample ID	SP1 @	SP1 @ 1'	SP1 @ 2'
			SURFACE		
Date			6/13/19	6/13/19	6/13/19
			mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.025	<0.025	n/a
Toluene	BTEX 8021B		<0.025	<0.025	n/a
Ethylbenzene	BTEX 8021B		<0.025	<0.025	n/a
Total Xylenes	BTEX 8021B		<0.075	<0.075	n/a
Total BTEX	BTEX 8021B		<0.150	<0.150	n/a
Chloride	SM4500Cl-B		512	464	464
GRO	TPH 8015M		<10.0	<10.0	n/a
DRO	TPH 8015M		655	<10.0	n/a
EXT DRO	TPH 8015M		47.3	<10.0	n/a

Analyte	Method	Sample ID	SP2 @	SP2 @ 1'	SP2 @ 2'
			SURFACE		
Date			6/13/19	6/13/19	6/13/19
			mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.025	n/a	n/a
Toluene	BTEX 8021B		<0.025	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.025	n/a	n/a
Total Xylenes	BTEX 8021B		<0.075	n/a	n/a
Total BTEX	BTEX 8021B		<0.150	n/a	n/a
Chloride	SM4500Cl-B		1800	64	80
GRO	TPH 8015M		<10.0	n/a	n/a
DRO	TPH 8015M		43.9	n/a	n/a
EXT DRO	TPH 8015M		<10.0	n/a	n/a

Analyte	Method	Sample ID	SP3 @	SP3 @ 1'	SP3 @ 2'
			SURFACE		
Date			6/13/19	6/13/19	6/13/19
			mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.025	n/a	n/a
Toluene	BTEX 8021B		<0.025	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.025	n/a	n/a
Total Xylenes	BTEX 8021B		<0.075	n/a	n/a
Total BTEX	BTEX 8021B		<0.150	n/a	n/a
Chloride	SM4500Cl-B		1780	<16.0	16
GRO	TPH 8015M		<10.0	n/a	n/a
DRO	TPH 8015M		47.3	n/a	n/a
EXT DRO	TPH 8015M		<10.0	n/a	n/a

Analyte	Method	Sample ID	SP4 @	SP4 @ 1'	SP4 @ 2'
			SURFACE		
Date			6/13/19	6/13/19	6/13/19
			mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.025	<0.025	n/a
Toluene	BTEX 8021B		<0.025	<0.025	n/a
Ethylbenzene	BTEX 8021B		<0.025	<0.025	n/a
Total Xylenes	BTEX 8021B		<0.075	<0.075	n/a
Total BTEX	BTEX 8021B		<0.150	<0.150	n/a
Chloride	SM4500Cl-B		10800	32	32
GRO	TPH 8015M		<10.0	<10.0	n/a
DRO	TPH 8015M		1410	<10.0	n/a
EXT DRO	TPH 8015M		439	<10.0	n/a

Analyte	Method	Sample ID	SP5 @	SP5 @ 1'	SP5 @ 2'
			SURFACE		
Date			6/13/19	6/13/19	6/13/19
			mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		0.053	<0.025	n/a
Toluene	BTEX 8021B		<0.025	<0.025	n/a
Ethylbenzene	BTEX 8021B		<0.025	<0.025	n/a
Total Xylenes	BTEX 8021B		<0.075	<0.075	n/a
Total BTEX	BTEX 8021B		<0.150	<0.150	n/a
Chloride	SM4500Cl-B		41600	144	96
GRO	TPH 8015M		<10.0	<10.0	n/a
DRO	TPH 8015M		1120	<10.0	n/a
EXT DRO	TPH 8015M		98.1	<10.0	n/a

Analyte	Method	Sample ID	SP6 @	SP6 @ 1'	SP6 @ 2'
			SURFACE		
Date			6/13/19	6/13/19	6/13/19
			mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		0.027	<0.025	n/a
Toluene	BTEX 8021B		<0.025	<0.025	n/a
Ethylbenzene	BTEX 8021B		<0.025	<0.025	n/a
Total Xylenes	BTEX 8021B		<0.075	<0.075	n/a
Total BTEX	BTEX 8021B		<0.150	<0.150	n/a
Chloride	SM4500Cl-B		53600	32	32
GRO	TPH 8015M		<10.0	<10.0	n/a
DRO	TPH 8015M		949	<10.0	n/a
EXT DRO	TPH 8015M		76.5	<10.0	n/a

Analyte	Method	Sample ID	NORTH @	EAST @	WEST @	SOUTH @
			SURFACE	SURFACE	SURFACE	SURFACE
Date			6/13/19	6/13/19	6/13/19	6/13/19
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.025	<0.025	<0.025	<0.025
Toluene	BTEX 8021B		<0.025	<0.025	<0.025	<0.025
Ethylbenzene	BTEX 8021B		<0.025	<0.025	<0.025	<0.025
Total Xylenes	BTEX 8021B		<0.075	<0.075	<0.075	<0.075
Total BTEX	BTEX 8021B		<0.150	<0.150	<0.150	<0.150
Chloride	SM4500Cl-B		32	32	32	32
GRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0
DRO	TPH 8015M		11.2	<10.0	28.8	<10.0
EXT DRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0

June 25, 2019

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: IRIDIUM MDP1 28 21 FED COM 2H

Enclosed are the results of analyses for samples received by the laboratory on 06/14/19 14:30.

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/ga/lab_accred_certif.html.

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

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

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

 Project: IRIDIUM MDP1 28 21 FED COM 2H
 Project Number: (3/9/19)
 Project Manager: Cliff Brunson
 Fax To: (575) 397-0397

 Reported:
 25-Jun-19 16:44

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP 1 @ SURFACE	H902074-01	Soil	13-Jun-19 09:19	14-Jun-19 14:30
SP 1 @ 1'	H902074-02	Soil	13-Jun-19 09:25	14-Jun-19 14:30
SP 1 @ 2'	H902074-03	Soil	13-Jun-19 09:40	14-Jun-19 14:30
SP 2 @ SURFACE	H902074-04	Soil	13-Jun-19 10:15	14-Jun-19 14:30
SP 2 @ 1'	H902074-05	Soil	13-Jun-19 10:30	14-Jun-19 14:30
SP 2 @ 2'	H902074-06	Soil	13-Jun-19 10:45	14-Jun-19 14:30
SP 3 @ SURFACE	H902074-07	Soil	13-Jun-19 10:49	14-Jun-19 14:30
SP 3 @ 1'	H902074-08	Soil	13-Jun-19 10:59	14-Jun-19 14:30
SP 3 @ 2'	H902074-09	Soil	13-Jun-19 11:15	14-Jun-19 14:30
SP 4 @ SURFACE	H902074-10	Soil	13-Jun-19 11:33	14-Jun-19 14:30
SP 4 @ 1'	H902074-11	Soil	13-Jun-19 11:50	14-Jun-19 14:30
SP 4 @ 2'	H902074-12	Soil	13-Jun-19 12:47	14-Jun-19 14:30
SP 5 @ SURFACE	H902074-13	Soil	13-Jun-19 13:11	14-Jun-19 14:30
SP 5 @ 1'	H902074-14	Soil	13-Jun-19 13:33	14-Jun-19 14:30
SP 5 @ 2'	H902074-15	Soil	13-Jun-19 13:52	14-Jun-19 14:30
SP 6 @ SURFACE	H902074-16	Soil	13-Jun-19 14:15	14-Jun-19 14:30
SP 6 @ 1'	H902074-17	Soil	13-Jun-19 14:33	14-Jun-19 14:30
SP 6 @ 2'	H902074-18	Soil	13-Jun-19 14:45	14-Jun-19 14:30
NORTH @ SURFACE	H902074-19	Soil	13-Jun-19 14:50	14-Jun-19 14:30
EAST @ SURFACE	H902074-20	Soil	13-Jun-19 14:55	14-Jun-19 14:30
WEST @ SURFACE	H902074-21	Soil	13-Jun-19 15:01	14-Jun-19 14:30
SOUTH @ SURFACE	H902074-22	Soil	13-Jun-19 15:11	14-Jun-19 14:30

Client added TPH and BTEX to samples 02, 11, 14 and 17 on 06/24/19. This is the revised report and will replace the one sent on 06/20/19.

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Project: IRIDIUM MDP1 28 21 FED COM 2H
 Project Number: (3/9/19)
 Project Manager: Cliff Brunson
 Fax To: (575) 397-0397

 Reported:
 25-Jun-19 16:44

SP 1 @ SURFACE
H902074-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Inorganic Compounds

Chloride	512		16.0	mg/kg	4	9061902	AC	19-Jun-19	4500-Cl-B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9061701	MS	17-Jun-19	8015B	
DRO >C10-C28*	655		10.0	mg/kg	1	9061701	MS	17-Jun-19	8015B	
EXT DRO >C28-C36	47.3		10.0	mg/kg	1	9061701	MS	17-Jun-19	8015B	
Surrogate: 1-Chlorooctane			84.6 %	41-142		9061701	MS	17-Jun-19	8015B	
Surrogate: 1-Chlorooctadecane			118 %	37.6-147		9061701	MS	17-Jun-19	8015B	

Volatile Organic Compounds by EPA Method 8260B

Benzene*	<0.025		0.025	mg/kg	50	9061807	ms	18-Jun-19	8260B	
Toluene*	<0.025		0.025	mg/kg	50	9061807	ms	18-Jun-19	8260B	
Ethylbenzene*	<0.025		0.025	mg/kg	50	9061807	ms	18-Jun-19	8260B	
Total Xylenes*	<0.075		0.075	mg/kg	50	9061807	ms	18-Jun-19	8260B	
Total BTEX	<0.150		0.150	mg/kg	50	9061807	ms	18-Jun-19	8260B	
Surrogate: Dibromofluoromethane			97.7 %	90.4-111		9061807	ms	18-Jun-19	8260B	
Surrogate: Toluene-d8			101 %	85.3-114		9061807	ms	18-Jun-19	8260B	
Surrogate: 4-Bromofluorobenzene			94.1 %	80.1-121		9061807	ms	18-Jun-19	8260B	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Project: IRIDIUM MDP1 28 21 FED COM 2H
 Project Number: (3/9/19)
 Project Manager: Cliff Brunson
 Fax To: (575) 397-0397

 Reported:
 25-Jun-19 16:44

SP 1 @ 1'
H902074-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Inorganic Compounds

Chloride	464		16.0	mg/kg	4	9061902	AC	19-Jun-19	4500-Cl-B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9062403	MS	25-Jun-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9062403	MS	25-Jun-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9062403	MS	25-Jun-19	8015B	
Surrogate: 1-Chlorooctane			80.3 %	41-142		9062403	MS	25-Jun-19	8015B	
Surrogate: 1-Chlorooctadecane			86.7 %	37.6-147		9062403	MS	25-Jun-19	8015B	

Volatile Organic Compounds by EPA Method 8260B

Benzene*	<0.025		0.025	mg/kg	50	9062419	ms	25-Jun-19	8260B	
Toluene*	<0.025		0.025	mg/kg	50	9062419	ms	25-Jun-19	8260B	
Ethylbenzene*	<0.025		0.025	mg/kg	50	9062419	ms	25-Jun-19	8260B	
Total Xylenes*	<0.075		0.075	mg/kg	50	9062419	ms	25-Jun-19	8260B	
Total BTEX	<0.150		0.150	mg/kg	50	9062419	ms	25-Jun-19	8260B	
Surrogate: Dibromofluoromethane			99.2 %	90.4-111		9062419	ms	25-Jun-19	8260B	
Surrogate: Toluene-d8			98.1 %	85.3-114		9062419	ms	25-Jun-19	8260B	
Surrogate: 4-Bromofluorobenzene			99.7 %	80.1-121		9062419	ms	25-Jun-19	8260B	

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Project: IRIDIUM MDP1 28 21 FED COM 2H
 Project Number: (3/9/19)
 Project Manager: Cliff Brunson
 Fax To: (575) 397-0397

 Reported:
 25-Jun-19 16:44

SP 1 @ 2'
H902074-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Inorganic Compounds

Chloride	464		16.0	mg/kg	4	9061902	AC	19-Jun-19	4500-CI-B	
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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Project: IRIDIUM MDP1 28 21 FED COM 2H
 Project Number: (3/9/19)
 Project Manager: Cliff Brunson
 Fax To: (575) 397-0397

 Reported:
 25-Jun-19 16:44

SP 2 @ SURFACE
H902074-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Inorganic Compounds

Chloride	1800		16.0	mg/kg	4	9061902	AC	19-Jun-19	4500-Cl-B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9061701	MS	17-Jun-19	8015B	
DRO >C10-C28*	43.9		10.0	mg/kg	1	9061701	MS	17-Jun-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9061701	MS	17-Jun-19	8015B	

Surrogate: 1-Chlorooctane			87.0 %	41-142		9061701	MS	17-Jun-19	8015B	
Surrogate: 1-Chlorooctadecane			89.4 %	37.6-147		9061701	MS	17-Jun-19	8015B	

Volatile Organic Compounds by EPA Method 8260B

Benzene*	<0.025		0.025	mg/kg	50	9061807	ms	18-Jun-19	8260B	
Toluene*	<0.025		0.025	mg/kg	50	9061807	ms	18-Jun-19	8260B	
Ethylbenzene*	<0.025		0.025	mg/kg	50	9061807	ms	18-Jun-19	8260B	
Total Xylenes*	<0.075		0.075	mg/kg	50	9061807	ms	18-Jun-19	8260B	
Total BTEX	<0.150		0.150	mg/kg	50	9061807	ms	18-Jun-19	8260B	

Surrogate: Dibromofluoromethane			95.5 %	90.4-111		9061807	ms	18-Jun-19	8260B	
Surrogate: Toluene-d8			101 %	85.3-114		9061807	ms	18-Jun-19	8260B	
Surrogate: 4-Bromofluorobenzene			94.3 %	80.1-121		9061807	ms	18-Jun-19	8260B	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Project: IRIDIUM MDP1 28 21 FED COM 2H
 Project Number: (3/9/19)
 Project Manager: Cliff Brunson
 Fax To: (575) 397-0397

 Reported:
 25-Jun-19 16:44

SP 2 @ 1'
H902074-05 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Inorganic Compounds

Chloride	64.0		16.0	mg/kg	4	9061902	AC	19-Jun-19	4500-CI-B	
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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Project: IRIDIUM MDP1 28 21 FED COM 2H
 Project Number: (3/9/19)
 Project Manager: Cliff Brunson
 Fax To: (575) 397-0397

 Reported:
 25-Jun-19 16:44

SP 2 @ 2'
H902074-06 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Inorganic Compounds

Chloride	80.0		16.0	mg/kg	4	9061902	AC	19-Jun-19	4500-Cl-B	
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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Project: IRIDIUM MDP1 28 21 FED COM 2H
 Project Number: (3/9/19)
 Project Manager: Cliff Brunson
 Fax To: (575) 397-0397

 Reported:
 25-Jun-19 16:44

SP 3 @ SURFACE
H902074-07 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Inorganic Compounds

Chloride	1780		16.0	mg/kg	4	9061902	AC	19-Jun-19	4500-CI-B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9061801	MS	18-Jun-19	8015B	
DRO >C10-C28*	47.3		10.0	mg/kg	1	9061801	MS	18-Jun-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9061801	MS	18-Jun-19	8015B	

Surrogate: 1-Chlorooctane			92.7 %	41-142		9061801	MS	18-Jun-19	8015B	
Surrogate: 1-Chlorooctadecane			98.9 %	37.6-147		9061801	MS	18-Jun-19	8015B	

Volatile Organic Compounds by EPA Method 8260B

Benzene*	<0.025		0.025	mg/kg	50	9061807	ms	18-Jun-19	8260B	
Toluene*	<0.025		0.025	mg/kg	50	9061807	ms	18-Jun-19	8260B	
Ethylbenzene*	<0.025		0.025	mg/kg	50	9061807	ms	18-Jun-19	8260B	
Total Xylenes*	<0.075		0.075	mg/kg	50	9061807	ms	18-Jun-19	8260B	
Total BTEX	<0.150		0.150	mg/kg	50	9061807	ms	18-Jun-19	8260B	

Surrogate: Dibromofluoromethane			96.1 %	90.4-111		9061807	ms	18-Jun-19	8260B	
Surrogate: Toluene-d8			101 %	85.3-114		9061807	ms	18-Jun-19	8260B	
Surrogate: 4-Bromofluorobenzene			93.3 %	80.1-121		9061807	ms	18-Jun-19	8260B	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Project: IRIDIUM MDP1 28 21 FED COM 2H
 Project Number: (3/9/19)
 Project Manager: Cliff Brunson
 Fax To: (575) 397-0397

 Reported:
 25-Jun-19 16:44

SP 3 @ 1'
H902074-08 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Inorganic Compounds

Chloride	<16.0		16.0	mg/kg	4	9061902	AC	19-Jun-19	4500-CI-B	
----------	-------	--	------	-------	---	---------	----	-----------	-----------	--

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Project: IRIDIUM MDP1 28 21 FED COM 2H
 Project Number: (3/9/19)
 Project Manager: Cliff Brunson
 Fax To: (575) 397-0397

 Reported:
 25-Jun-19 16:44

SP 3 @ 2'
H902074-09 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Inorganic Compounds

Chloride	16.0		16.0	mg/kg	4	9061902	AC	19-Jun-19	4500-Cl-B	
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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Project: IRIDIUM MDP1 28 21 FED COM 2H
 Project Number: (3/9/19)
 Project Manager: Cliff Brunson
 Fax To: (575) 397-0397

 Reported:
 25-Jun-19 16:44

SP 4 @ SURFACE
H902074-10 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Inorganic Compounds

Chloride	10800		16.0	mg/kg	4	9061902	AC	19-Jun-19	4500-Cl-B	
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Petroleum Hydrocarbons by GC FID
S-04

GRO C6-C10*	<10.0		10.0	mg/kg	1	9061801	MS	18-Jun-19	8015B	
DRO >C10-C28*	1410		10.0	mg/kg	1	9061801	MS	18-Jun-19	8015B	
EXT DRO >C28-C36	439		10.0	mg/kg	1	9061801	MS	18-Jun-19	8015B	

Surrogate: 1-Chlorooctane

100 %

41-142

9061801

MS

18-Jun-19

8015B

Surrogate: 1-Chlorooctadecane

186 %

37.6-147

9061801

MS

18-Jun-19

8015B

Volatile Organic Compounds by EPA Method 8260B

Benzene*	<0.025		0.025	mg/kg	50	9061807	ms	18-Jun-19	8260B	
Toluene*	<0.025		0.025	mg/kg	50	9061807	ms	18-Jun-19	8260B	
Ethylbenzene*	<0.025		0.025	mg/kg	50	9061807	ms	18-Jun-19	8260B	
Total Xylenes*	<0.075		0.075	mg/kg	50	9061807	ms	18-Jun-19	8260B	
Total BTEX	<0.150		0.150	mg/kg	50	9061807	ms	18-Jun-19	8260B	

Surrogate: Dibromofluoromethane

94.4 %

90.4-111

9061807

ms

18-Jun-19

8260B

Surrogate: Toluene-d8

102 %

85.3-114

9061807

ms

18-Jun-19

8260B

Surrogate: 4-Bromofluorobenzene

93.7 %

80.1-121

9061807

ms

18-Jun-19

8260B

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Project: IRIDIUM MDP1 28 21 FED COM 2H
 Project Number: (3/9/19)
 Project Manager: Cliff Brunson
 Fax To: (575) 397-0397

 Reported:
 25-Jun-19 16:44

SP 4 @ 1'
H902074-11 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
---------	--------	-----	-----------------	-------	----------	-------	---------	----------	--------	-------

Cardinal Laboratories
Inorganic Compounds

Chloride	32.0		16.0	mg/kg	4	9061902	AC	19-Jun-19	4500-Cl-B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9062403	MS	25-Jun-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9062403	MS	25-Jun-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9062403	MS	25-Jun-19	8015B	
Surrogate: 1-Chlorooctane			81.1 %	41-142		9062403	MS	25-Jun-19	8015B	
Surrogate: 1-Chlorooctadecane			85.5 %	37.6-147		9062403	MS	25-Jun-19	8015B	

Volatile Organic Compounds by EPA Method 8260B

Benzene*	<0.025		0.025	mg/kg	50	9062419	ms	25-Jun-19	8260B	
Toluene*	<0.025		0.025	mg/kg	50	9062419	ms	25-Jun-19	8260B	
Ethylbenzene*	<0.025		0.025	mg/kg	50	9062419	ms	25-Jun-19	8260B	
Total Xylenes*	<0.075		0.075	mg/kg	50	9062419	ms	25-Jun-19	8260B	
Total BTEX	<0.150		0.150	mg/kg	50	9062419	ms	25-Jun-19	8260B	
Surrogate: Dibromofluoromethane			98.9 %	90.4-111		9062419	ms	25-Jun-19	8260B	
Surrogate: Toluene-d8			99.6 %	85.3-114		9062419	ms	25-Jun-19	8260B	
Surrogate: 4-Bromofluorobenzene			99.3 %	80.1-121		9062419	ms	25-Jun-19	8260B	

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Project: IRIDIUM MDP1 28 21 FED COM 2H
 Project Number: (3/9/19)
 Project Manager: Cliff Brunson
 Fax To: (575) 397-0397

 Reported:
 25-Jun-19 16:44

SP 4 @ 2'
H902074-12 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Inorganic Compounds

Chloride	32.0		16.0	mg/kg	4	9061902	AC	19-Jun-19	4500-CI-B	
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Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Project: IRIDIUM MDP1 28 21 FED COM 2H
 Project Number: (3/9/19)
 Project Manager: Cliff Brunson
 Fax To: (575) 397-0397

 Reported:
 25-Jun-19 16:44

SP 5 @ SURFACE
H902074-13 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Inorganic Compounds

Chloride	41600		16.0	mg/kg	4	9061902	AC	19-Jun-19	4500-Cl-B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9061801	MS	18-Jun-19	8015B	
DRO >C10-C28*	1120		10.0	mg/kg	1	9061801	MS	18-Jun-19	8015B	
EXT DRO >C28-C36	98.1		10.0	mg/kg	1	9061801	MS	18-Jun-19	8015B	

Surrogate: 1-Chlorooctane

88.3 %

41-142

9061801

MS

18-Jun-19

8015B

Surrogate: 1-Chlorooctadecane

145 %

37.6-147

9061801

MS

18-Jun-19

8015B

Volatile Organic Compounds by EPA Method 8260B

Benzene*	0.053		0.025	mg/kg	50	9061807	ms	18-Jun-19	8260B	
Toluene*	<0.025		0.025	mg/kg	50	9061807	ms	18-Jun-19	8260B	
Ethylbenzene*	<0.025		0.025	mg/kg	50	9061807	ms	18-Jun-19	8260B	
Total Xylenes*	<0.075		0.075	mg/kg	50	9061807	ms	18-Jun-19	8260B	
Total BTEX	<0.150		0.150	mg/kg	50	9061807	ms	18-Jun-19	8260B	

Surrogate: Dibromofluoromethane

95.2 %

90.4-111

9061807

ms

18-Jun-19

8260B

Surrogate: Toluene-d8

102 %

85.3-114

9061807

ms

18-Jun-19

8260B

Surrogate: 4-Bromofluorobenzene

93.5 %

80.1-121

9061807

ms

18-Jun-19

8260B

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Project: IRIDIUM MDP1 28 21 FED COM 2H
 Project Number: (3/9/19)
 Project Manager: Cliff Brunson
 Fax To: (575) 397-0397

 Reported:
 25-Jun-19 16:44

SP 5 @ 1'
H902074-14 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Inorganic Compounds

Chloride	144		16.0	mg/kg	4	9061902	AC	19-Jun-19	4500-Cl-B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9062403	MS	25-Jun-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9062403	MS	25-Jun-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9062403	MS	25-Jun-19	8015B	
Surrogate: 1-Chlorooctane			87.3 %	41-142		9062403	MS	25-Jun-19	8015B	
Surrogate: 1-Chlorooctadecane			88.0 %	37.6-147		9062403	MS	25-Jun-19	8015B	

Volatile Organic Compounds by EPA Method 8260B

Benzene*	<0.025		0.025	mg/kg	50	9062419	ms	25-Jun-19	8260B	
Toluene*	<0.025		0.025	mg/kg	50	9062419	ms	25-Jun-19	8260B	
Ethylbenzene*	<0.025		0.025	mg/kg	50	9062419	ms	25-Jun-19	8260B	
Total Xylenes*	<0.075		0.075	mg/kg	50	9062419	ms	25-Jun-19	8260B	
Total BTEX	<0.150		0.150	mg/kg	50	9062419	ms	25-Jun-19	8260B	
Surrogate: Dibromofluoromethane			97.0 %	90.4-111		9062419	ms	25-Jun-19	8260B	
Surrogate: Toluene-d8			100 %	85.3-114		9062419	ms	25-Jun-19	8260B	
Surrogate: 4-Bromofluorobenzene			98.7 %	80.1-121		9062419	ms	25-Jun-19	8260B	

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Project: IRIDIUM MDP1 28 21 FED COM 2H
 Project Number: (3/9/19)
 Project Manager: Cliff Brunson
 Fax To: (575) 397-0397

 Reported:
 25-Jun-19 16:44

SP 5 @ 2'
H902074-15 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Inorganic Compounds

Chloride	96.0		16.0	mg/kg	4	9061902	AC	19-Jun-19	4500-Cl-B	
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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Project: IRIDIUM MDP1 28 21 FED COM 2H
 Project Number: (3/9/19)
 Project Manager: Cliff Brunson
 Fax To: (575) 397-0397

 Reported:
 25-Jun-19 16:44

SP 6 @ SURFACE
H902074-16 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Inorganic Compounds

Chloride	53600		16.0	mg/kg	4	9061713	AC	19-Jun-19	4500-Cl-B	QM-07
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9061801	MS	18-Jun-19	8015B	
DRO >C10-C28*	949		10.0	mg/kg	1	9061801	MS	18-Jun-19	8015B	
EXT DRO >C28-C36	76.5		10.0	mg/kg	1	9061801	MS	18-Jun-19	8015B	
<i>Surrogate: 1-Chlorooctane</i>			96.1 %	41-142		9061801	MS	18-Jun-19	8015B	
<i>Surrogate: 1-Chlorooctadecane</i>			143 %	37.6-147		9061801	MS	18-Jun-19	8015B	

Volatile Organic Compounds by EPA Method 8260B

Benzene*	0.027		0.025	mg/kg	50	9061807	ms	18-Jun-19	8260B	
Toluene*	<0.025		0.025	mg/kg	50	9061807	ms	18-Jun-19	8260B	
Ethylbenzene*	<0.025		0.025	mg/kg	50	9061807	ms	18-Jun-19	8260B	
Total Xylenes*	<0.075		0.075	mg/kg	50	9061807	ms	18-Jun-19	8260B	
Total BTEX	<0.150		0.150	mg/kg	50	9061807	ms	18-Jun-19	8260B	
<i>Surrogate: Dibromofluoromethane</i>			96.2 %	90.4-111		9061807	ms	18-Jun-19	8260B	
<i>Surrogate: Toluene-d8</i>			101 %	85.3-114		9061807	ms	18-Jun-19	8260B	
<i>Surrogate: 4-Bromofluorobenzene</i>			96.0 %	80.1-121		9061807	ms	18-Jun-19	8260B	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Project: IRIDIUM MDP1 28 21 FED COM 2H
 Project Number: (3/9/19)
 Project Manager: Cliff Brunson
 Fax To: (575) 397-0397

 Reported:
 25-Jun-19 16:44

SP 6 @ 1'
H902074-17 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Inorganic Compounds

Chloride	32.0		16.0	mg/kg	4	9061713	AC	19-Jun-19	4500-Cl-B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9062403	MS	25-Jun-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9062403	MS	25-Jun-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9062403	MS	25-Jun-19	8015B	
Surrogate: 1-Chlorooctane			85.7 %	41-142		9062403	MS	25-Jun-19	8015B	
Surrogate: 1-Chlorooctadecane			93.8 %	37.6-147		9062403	MS	25-Jun-19	8015B	

Volatile Organic Compounds by EPA Method 8260B

Benzene*	<0.025		0.025	mg/kg	50	9062419	ms	25-Jun-19	8260B	
Toluene*	<0.025		0.025	mg/kg	50	9062419	ms	25-Jun-19	8260B	
Ethylbenzene*	<0.025		0.025	mg/kg	50	9062419	ms	25-Jun-19	8260B	
Total Xylenes*	<0.075		0.075	mg/kg	50	9062419	ms	25-Jun-19	8260B	
Total BTEX	<0.150		0.150	mg/kg	50	9062419	ms	25-Jun-19	8260B	
Surrogate: Dibromofluoromethane			97.8 %	90.4-111		9062419	ms	25-Jun-19	8260B	
Surrogate: Toluene-d8			99.8 %	85.3-114		9062419	ms	25-Jun-19	8260B	
Surrogate: 4-Bromofluorobenzene			96.8 %	80.1-121		9062419	ms	25-Jun-19	8260B	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Project: IRIDIUM MDP1 28 21 FED COM 2H
 Project Number: (3/9/19)
 Project Manager: Cliff Brunson
 Fax To: (575) 397-0397

 Reported:
 25-Jun-19 16:44

SP 6 @ 2'
H902074-18 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Inorganic Compounds

Chloride	32.0		16.0	mg/kg	4	9061713	AC	19-Jun-19	4500-Cl-B	
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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Project: IRIDIUM MDP1 28 21 FED COM 2H
 Project Number: (3/9/19)
 Project Manager: Cliff Brunson
 Fax To: (575) 397-0397

 Reported:
 25-Jun-19 16:44

NORTH @ SURFACE
H902074-19 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Inorganic Compounds

Chloride	32.0		16.0	mg/kg	4	9061713	AC	19-Jun-19	4500-Cl-B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9061801	MS	18-Jun-19	8015B	
DRO >C10-C28*	11.2		10.0	mg/kg	1	9061801	MS	18-Jun-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9061801	MS	18-Jun-19	8015B	

Surrogate: 1-Chlorooctane			91.5 %	41-142		9061801	MS	18-Jun-19	8015B	
Surrogate: 1-Chlorooctadecane			94.3 %	37.6-147		9061801	MS	18-Jun-19	8015B	

Volatile Organic Compounds by EPA Method 8260B

Benzene*	<0.025		0.025	mg/kg	50	9061807	ms	19-Jun-19	8260B	
Toluene*	<0.025		0.025	mg/kg	50	9061807	ms	19-Jun-19	8260B	
Ethylbenzene*	<0.025		0.025	mg/kg	50	9061807	ms	19-Jun-19	8260B	
Total Xylenes*	<0.075		0.075	mg/kg	50	9061807	ms	19-Jun-19	8260B	
Total BTEX	<0.150		0.150	mg/kg	50	9061807	ms	19-Jun-19	8260B	

Surrogate: Dibromofluoromethane			97.2 %	90.4-111		9061807	ms	19-Jun-19	8260B	
Surrogate: Toluene-d8			102 %	85.3-114		9061807	ms	19-Jun-19	8260B	
Surrogate: 4-Bromofluorobenzene			93.6 %	80.1-121		9061807	ms	19-Jun-19	8260B	

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Project: IRIDIUM MDP1 28 21 FED COM 2H
 Project Number: (3/9/19)
 Project Manager: Cliff Brunson
 Fax To: (575) 397-0397

 Reported:
 25-Jun-19 16:44

EAST @ SURFACE
H902074-20 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Inorganic Compounds

Chloride	32.0		16.0	mg/kg	4	9061713	AC	19-Jun-19	4500-Cl-B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9061801	MS	18-Jun-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9061801	MS	18-Jun-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9061801	MS	18-Jun-19	8015B	
Surrogate: 1-Chlorooctane			94.3 %	41-142		9061801	MS	18-Jun-19	8015B	
Surrogate: 1-Chlorooctadecane			96.3 %	37.6-147		9061801	MS	18-Jun-19	8015B	

Volatile Organic Compounds by EPA Method 8260B

Benzene*	<0.025		0.025	mg/kg	50	9061807	ms	19-Jun-19	8260B	
Toluene*	<0.025		0.025	mg/kg	50	9061807	ms	19-Jun-19	8260B	
Ethylbenzene*	<0.025		0.025	mg/kg	50	9061807	ms	19-Jun-19	8260B	
Total Xylenes*	<0.075		0.075	mg/kg	50	9061807	ms	19-Jun-19	8260B	
Total BTEX	<0.150		0.150	mg/kg	50	9061807	ms	19-Jun-19	8260B	
Surrogate: Dibromofluoromethane			95.0 %	90.4-111		9061807	ms	19-Jun-19	8260B	
Surrogate: Toluene-d8			103 %	85.3-114		9061807	ms	19-Jun-19	8260B	
Surrogate: 4-Bromofluorobenzene			92.1 %	80.1-121		9061807	ms	19-Jun-19	8260B	

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Project: IRIDIUM MDP1 28 21 FED COM 2H
 Project Number: (3/9/19)
 Project Manager: Cliff Brunson
 Fax To: (575) 397-0397

 Reported:
 25-Jun-19 16:44

WEST @ SURFACE
H902074-21 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Inorganic Compounds

Chloride	32.0		16.0	mg/kg	4	9061713	AC	19-Jun-19	4500-Cl-B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9061801	MS	18-Jun-19	8015B	
DRO >C10-C28*	28.8		10.0	mg/kg	1	9061801	MS	18-Jun-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9061801	MS	18-Jun-19	8015B	

Surrogate: 1-Chlorooctane			92.2 %	41-142		9061801	MS	18-Jun-19	8015B	
Surrogate: 1-Chlorooctadecane			98.5 %	37.6-147		9061801	MS	18-Jun-19	8015B	

Volatile Organic Compounds by EPA Method 8260B

Benzene*	<0.025		0.025	mg/kg	50	9061807	ms	19-Jun-19	8260B	
Toluene*	<0.025		0.025	mg/kg	50	9061807	ms	19-Jun-19	8260B	
Ethylbenzene*	<0.025		0.025	mg/kg	50	9061807	ms	19-Jun-19	8260B	
Total Xylenes*	<0.075		0.075	mg/kg	50	9061807	ms	19-Jun-19	8260B	
Total BTEX	<0.150		0.150	mg/kg	50	9061807	ms	19-Jun-19	8260B	

Surrogate: Dibromofluoromethane			98.0 %	90.4-111		9061807	ms	19-Jun-19	8260B	
Surrogate: Toluene-d8			101 %	85.3-114		9061807	ms	19-Jun-19	8260B	
Surrogate: 4-Bromofluorobenzene			92.2 %	80.1-121		9061807	ms	19-Jun-19	8260B	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Project: IRIDIUM MDP1 28 21 FED COM 2H
 Project Number: (3/9/19)
 Project Manager: Cliff Brunson
 Fax To: (575) 397-0397

 Reported:
 25-Jun-19 16:44

SOUTH @ SURFACE
H902074-22 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Inorganic Compounds

Chloride	32.0		16.0	mg/kg	4	9061713	AC	19-Jun-19	4500-Cl-B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9061801	MS	18-Jun-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9061801	MS	18-Jun-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9061801	MS	18-Jun-19	8015B	
Surrogate: 1-Chlorooctane			98.6 %	41-142		9061801	MS	18-Jun-19	8015B	
Surrogate: 1-Chlorooctadecane			100 %	37.6-147		9061801	MS	18-Jun-19	8015B	

Volatile Organic Compounds by EPA Method 8260B

Benzene*	<0.025		0.025	mg/kg	50	9061807	ms	19-Jun-19	8260B	
Toluene*	<0.025		0.025	mg/kg	50	9061807	ms	19-Jun-19	8260B	
Ethylbenzene*	<0.025		0.025	mg/kg	50	9061807	ms	19-Jun-19	8260B	
Total Xylenes*	<0.075		0.075	mg/kg	50	9061807	ms	19-Jun-19	8260B	
Total BTEX	<0.150		0.150	mg/kg	50	9061807	ms	19-Jun-19	8260B	
Surrogate: Dibromofluoromethane			98.1 %	90.4-111		9061807	ms	19-Jun-19	8260B	
Surrogate: Toluene-d8			99.1 %	85.3-114		9061807	ms	19-Jun-19	8260B	
Surrogate: 4-Bromofluorobenzene			92.7 %	80.1-121		9061807	ms	19-Jun-19	8260B	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Project: IRIDIUM MDP1 28 21 FED COM 2H
 Project Number: (3/9/19)
 Project Manager: Cliff Brunson
 Fax To: (575) 397-0397

 Reported:
 25-Jun-19 16:44

Inorganic Compounds - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9061713 - 1:4 DI Water										
Blank (9061713-BLK1)										
Prepared & Analyzed: 17-Jun-19										
Chloride	ND	16.0	mg/kg							
LCS (9061713-BS1)										
Prepared & Analyzed: 17-Jun-19										
Chloride	400	16.0	mg/kg	400		100	80-120			
LCS Dup (9061713-BSD1)										
Prepared & Analyzed: 17-Jun-19										
Chloride	416	16.0	mg/kg	400		104	80-120	3.92	20	
Batch 9061902 - 1:4 DI Water										
Blank (9061902-BLK1)										
Prepared & Analyzed: 19-Jun-19										
Chloride	ND	16.0	mg/kg							
LCS (9061902-BS1)										
Prepared & Analyzed: 19-Jun-19										
Chloride	400	16.0	mg/kg	400		100	80-120			
LCS Dup (9061902-BSD1)										
Prepared & Analyzed: 19-Jun-19										
Chloride	400	16.0	mg/kg	400		100	80-120	0.00	20	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Project: IRIDIUM MDP1 28 21 FED COM 2H
 Project Number: (3/9/19)
 Project Manager: Cliff Brunson
 Fax To: (575) 397-0397

 Reported:
 25-Jun-19 16:44

Petroleum Hydrocarbons by GC FID - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 9061701 - General Prep - Organics
Blank (9061701-BLK1)

Prepared & Analyzed: 17-Jun-19

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
<i>Surrogate: 1-Chlorooctane</i>	49.7		mg/kg	50.0		99.4	41-142			
<i>Surrogate: 1-Chlorooctadecane</i>	50.6		mg/kg	50.0		101	37.6-147			

LCS (9061701-BS1)

Prepared & Analyzed: 17-Jun-19

GRO C6-C10	186	10.0	mg/kg	200		93.2	76.5-133			
DRO >C10-C28	177	10.0	mg/kg	200		88.3	72.9-138			
Total TPH C6-C28	363	10.0	mg/kg	400		90.8	78-132			
<i>Surrogate: 1-Chlorooctane</i>	52.5		mg/kg	50.0		105	41-142			
<i>Surrogate: 1-Chlorooctadecane</i>	51.1		mg/kg	50.0		102	37.6-147			

LCS Dup (9061701-BSD1)

Prepared & Analyzed: 17-Jun-19

GRO C6-C10	186	10.0	mg/kg	200		93.0	76.5-133	0.218	20.6	
DRO >C10-C28	174	10.0	mg/kg	200		87.1	72.9-138	1.36	20.6	
Total TPH C6-C28	360	10.0	mg/kg	400		90.1	78-132	0.773	18	
<i>Surrogate: 1-Chlorooctane</i>	52.3		mg/kg	50.0		105	41-142			
<i>Surrogate: 1-Chlorooctadecane</i>	51.8		mg/kg	50.0		104	37.6-147			

Batch 9061801 - General Prep - Organics
Blank (9061801-BLK1)

Prepared & Analyzed: 18-Jun-19

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
<i>Surrogate: 1-Chlorooctane</i>	52.6		mg/kg	50.0		105	41-142			
<i>Surrogate: 1-Chlorooctadecane</i>	53.7		mg/kg	50.0		107	37.6-147			

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Project: IRIDIUM MDP1 28 21 FED COM 2H
 Project Number: (3/9/19)
 Project Manager: Cliff Brunson
 Fax To: (575) 397-0397

 Reported:
 25-Jun-19 16:44

Petroleum Hydrocarbons by GC FID - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 9061801 - General Prep - Organics

LCS (9061801-BS1)		Prepared & Analyzed: 18-Jun-19								
GRO C6-C10	192	10.0	mg/kg	200		95.8	76.5-133			
DRO >C10-C28	184	10.0	mg/kg	200		91.9	72.9-138			
Total TPH C6-C28	375	10.0	mg/kg	400		93.8	78-132			
Surrogate: 1-Chlorooctane	54.5		mg/kg	50.0		109	41-142			
Surrogate: 1-Chlorooctadecane	53.3		mg/kg	50.0		107	37.6-147			

LCS Dup (9061801-BS1)		Prepared & Analyzed: 18-Jun-19								
GRO C6-C10	194	10.0	mg/kg	200		96.8	76.5-133	1.04	20.6	
DRO >C10-C28	184	10.0	mg/kg	200		91.9	72.9-138	0.0484	20.6	
Total TPH C6-C28	377	10.0	mg/kg	400		94.4	78-132	0.554	18	
Surrogate: 1-Chlorooctane	55.2		mg/kg	50.0		110	41-142			
Surrogate: 1-Chlorooctadecane	54.2		mg/kg	50.0		108	37.6-147			

Batch 9062403 - General Prep - Organics

Blank (9062403-BLK1)		Prepared & Analyzed: 24-Jun-19								
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	46.7		mg/kg	50.0		93.3	41-142			
Surrogate: 1-Chlorooctadecane	52.2		mg/kg	50.0		104	37.6-147			

LCS (9062403-BS1)		Prepared & Analyzed: 24-Jun-19								
GRO C6-C10	199	10.0	mg/kg	200		99.5	76.5-133			
DRO >C10-C28	212	10.0	mg/kg	200		106	72.9-138			
Total TPH C6-C28	411	10.0	mg/kg	400		103	78-132			
Surrogate: 1-Chlorooctane	49.6		mg/kg	50.0		99.2	41-142			
Surrogate: 1-Chlorooctadecane	49.9		mg/kg	50.0		99.7	37.6-147			

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Project: IRIDIUM MDP1 28 21 FED COM 2H
 Project Number: (3/9/19)
 Project Manager: Cliff Brunson
 Fax To: (575) 397-0397

 Reported:
 25-Jun-19 16:44

Petroleum Hydrocarbons by GC FID - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 9062403 - General Prep - Organics
LCS Dup (9062403-BSD1)

Prepared & Analyzed: 24-Jun-19

GRO C6-C10	213	10.0	mg/kg	200	106	76.5-133	6.66	20.6		
DRO >C10-C28	217	10.0	mg/kg	200	109	72.9-138	2.30	20.6		
Total TPH C6-C28	430	10.0	mg/kg	400	108	78-132	4.44	18		
<i>Surrogate: 1-Chlorooctane</i>	<i>51.0</i>		mg/kg	<i>50.0</i>	<i>102</i>	<i>41-142</i>				
<i>Surrogate: 1-Chlorooctadecane</i>	<i>52.7</i>		mg/kg	<i>50.0</i>	<i>105</i>	<i>37.6-147</i>				

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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 P.O. Box 805
 Hobbs NM, 88241

 Project: IRIDIUM MDP1 28 21 FED COM 2H
 Project Number: (3/9/19)
 Project Manager: Cliff Brunson
 Fax To: (575) 397-0397

 Reported:
 25-Jun-19 16:44

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 9061807 - Volatiles
Blank (9061807-BLK1)

Prepared & Analyzed: 18-Jun-19

Benzene	ND	0.025	mg/kg							
Toluene	ND	0.025	mg/kg							
Ethylbenzene	ND	0.025	mg/kg							
Total Xylenes	ND	0.075	mg/kg							
Total BTEX	ND	0.150	mg/kg							
<i>Surrogate: Dibromofluoromethane</i>	<i>1.20</i>		mg/kg	<i>1.25</i>		<i>96.0</i>	<i>90.4-111</i>			
<i>Surrogate: Toluene-d8</i>	<i>1.26</i>		mg/kg	<i>1.25</i>		<i>100</i>	<i>85.3-114</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>1.20</i>		mg/kg	<i>1.25</i>		<i>95.7</i>	<i>80.1-121</i>			

LCS (9061807-BS1)

Prepared & Analyzed: 18-Jun-19

Benzene	1.89	0.025	mg/kg	2.00		94.6	75.1-126			
Toluene	2.05	0.025	mg/kg	2.00		103	71.7-121			
Ethylbenzene	2.03	0.025	mg/kg	2.00		101	80.2-118			
m+p - Xylene	4.50	0.050	mg/kg	4.00		113	83-124			
Total Xylenes	6.71	0.075	mg/kg	6.00		112	84.1-122			
o-Xylene	2.20	0.025	mg/kg	2.00		110	84.7-121			
<i>Surrogate: Dibromofluoromethane</i>	<i>1.20</i>		mg/kg	<i>1.25</i>		<i>95.9</i>	<i>90.4-111</i>			
<i>Surrogate: Toluene-d8</i>	<i>1.28</i>		mg/kg	<i>1.25</i>		<i>102</i>	<i>85.3-114</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>1.28</i>		mg/kg	<i>1.25</i>		<i>102</i>	<i>80.1-121</i>			

LCS Dup (9061807-BSD1)

Prepared & Analyzed: 18-Jun-19

Benzene	1.94	0.025	mg/kg	2.00		96.8	75.1-126	2.28	15.7	
Toluene	2.08	0.025	mg/kg	2.00		104	71.7-121	1.49	14.4	
Ethylbenzene	2.05	0.025	mg/kg	2.00		103	80.2-118	1.23	14.1	
m+p - Xylene	4.53	0.050	mg/kg	4.00		113	83-124	0.639	14.6	
o-Xylene	2.20	0.025	mg/kg	2.00		110	84.7-121	0.0508	14	
Total Xylenes	6.74	0.075	mg/kg	6.00		112	84.1-122	0.446	14.1	
<i>Surrogate: Dibromofluoromethane</i>	<i>1.19</i>		mg/kg	<i>1.25</i>		<i>95.4</i>	<i>90.4-111</i>			
<i>Surrogate: Toluene-d8</i>	<i>1.26</i>		mg/kg	<i>1.25</i>		<i>101</i>	<i>85.3-114</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>1.28</i>		mg/kg	<i>1.25</i>		<i>102</i>	<i>80.1-121</i>			

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Project: IRIDIUM MDP1 28 21 FED COM 2H
 Project Number: (3/9/19)
 Project Manager: Cliff Brunson
 Fax To: (575) 397-0397

 Reported:
 25-Jun-19 16:44

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 9062419 - Volatiles
Blank (9062419-BLK1)

Prepared: 24-Jun-19 Analyzed: 25-Jun-19

Benzene	ND	0.025	mg/kg							
Toluene	ND	0.025	mg/kg							
Ethylbenzene	ND	0.025	mg/kg							
Total Xylenes	ND	0.075	mg/kg							
Total BTEX	ND	0.150	mg/kg							
<i>Surrogate: Dibromofluoromethane</i>	<i>1.23</i>		mg/kg	<i>1.25</i>		<i>98.4</i>	<i>90.4-111</i>			
<i>Surrogate: Toluene-d8</i>	<i>1.24</i>		mg/kg	<i>1.25</i>		<i>99.0</i>	<i>85.3-114</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>1.14</i>		mg/kg	<i>1.25</i>		<i>91.0</i>	<i>80.1-121</i>			

LCS (9062419-BS1)

Prepared: 24-Jun-19 Analyzed: 25-Jun-19

Benzene	1.93	0.025	mg/kg	2.00		96.5	75.1-126			
Toluene	2.04	0.025	mg/kg	2.00		102	71.7-121			
Ethylbenzene	1.98	0.025	mg/kg	2.00		98.8	80.2-118			
m+p - Xylene	4.43	0.050	mg/kg	4.00		111	83-124			
Total Xylenes	6.59	0.075	mg/kg	6.00		110	84.1-122			
o-Xylene	2.16	0.025	mg/kg	2.00		108	84.7-121			
<i>Surrogate: Dibromofluoromethane</i>	<i>1.22</i>		mg/kg	<i>1.25</i>		<i>97.3</i>	<i>90.4-111</i>			
<i>Surrogate: Toluene-d8</i>	<i>1.23</i>		mg/kg	<i>1.25</i>		<i>98.4</i>	<i>85.3-114</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>1.28</i>		mg/kg	<i>1.25</i>		<i>103</i>	<i>80.1-121</i>			

LCS Dup (9062419-BSD1)

Prepared: 24-Jun-19 Analyzed: 25-Jun-19

Benzene	1.84	0.025	mg/kg	2.00		92.0	75.1-126	4.76	15.7	
Toluene	1.95	0.025	mg/kg	2.00		97.7	71.7-121	4.52	14.4	
Ethylbenzene	1.89	0.025	mg/kg	2.00		94.6	80.2-118	4.34	14.1	
m+p - Xylene	4.19	0.050	mg/kg	4.00		105	83-124	5.43	14.6	
Total Xylenes	6.24	0.075	mg/kg	6.00		104	84.1-122	5.54	14.1	
o-Xylene	2.04	0.025	mg/kg	2.00		102	84.7-121	5.76	14	
<i>Surrogate: Dibromofluoromethane</i>	<i>1.23</i>		mg/kg	<i>1.25</i>		<i>98.0</i>	<i>90.4-111</i>			
<i>Surrogate: Toluene-d8</i>	<i>1.24</i>		mg/kg	<i>1.25</i>		<i>99.3</i>	<i>85.3-114</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>1.28</i>		mg/kg	<i>1.25</i>		<i>102</i>	<i>80.1-121</i>			

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Project: IRIDIUM MDP1 28 21 FED COM 2H
Project Number: (3/9/19)
Project Manager: Cliff Brunson
Fax To: (575) 397-0397

Reported:
25-Jun-19 16:44

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

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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Celey D. Keene, Lab Director/Quality Manager



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101 East Marland, Hobbs, NM 88240

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

1 of 3

Company Name: BBC International, Inc.		BILL TO		ANALYSIS REQUEST											
Project Manager: Cliff Brunson		P.O. #:													
Address: P.O. Box 805		Company:													
City: Hobbs State: NM Zip: 88241		Attn: <i>Oxy Dittich</i>													
Phone #: 575-397-6388 Fax #: 575-397-0397		Address:													
Project #: Project Owner: Oxy		City:													
Project Name: Iridium MDP1 28 21 Fed Com 2H (3/9/19)		State: Zip:													
Project Location: Eddy County, NM		Phone #:													
Sampler Name: Jeff Ornelas		Fax #:													

Lab I.D.	Sample I.D.	GRAB OR (COMP. # CONTAINERS)	MATRIX						PRESERV.			SAMPLING		CI	BTEX	TPH/DT	Additional TPH Ext + BTEX	
			GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE	ICE / COOL	OTHER	DATE	TIME					
<i>H902074</i>																		
1	SP1 @ SURFACE	↓			✓					✓			6/13/19	9:19 AM	✓	✓	✓	
2	SP1 @ 1'	↓											6/13/19	9:25 AM	✓			X
3	SP1 @ 2'	↓											6/13/19	9:40 AM	✓			
4	SP2 @ SURFACE	↓											6/13/19	10:15 AM	✓	✓	✓	
5	SP2 @ 1'	↓											6/13/19	10:30 AM	✓			
6	SP2 @ 2'	↓											6/13/19	10:45 AM	✓			
7	SP3 @ SURFACE	↓											6/13/19	10:49 AM	✓	✓	✓	
8	SP3 @ 1'	↓											6/13/19	10:59 AM	✓			
9	SP3 @ 2'	↓											6/13/19	11:15 AM	✓			
10	SP4 @ SURFACE	↓											6/13/19	11:33 AM	✓	✓	✓	

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Relinquished By: <i>Jeff Ornelas</i>	Date: <i>6/13/19</i> Time: <i>5:00pm</i>	Received By: <i>Israel Peña</i>	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
Relinquished By: <i>Israel Peña</i>	Date: <i>6-14-19</i> Time: <i>2:30 PM</i>	Received By: <i>Jamara Olds Key</i>	Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	<i>o.i.c #97</i>	Sample Condition Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No	CHECKED BY: (Initials) <i>TO</i>	
REMARKS:			<i>OP57531498 1224164 01040502</i>	

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



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

3 of 3

Company Name: BBC International, Inc.				BILL TO				ANALYSIS REQUEST														
Project Manager: Cliff Brunson				P.O. #:																		
Address: P.O. Box 805				Company: <i>Oxy District</i>																		
City: Hobbs		State: NM Zip: 88241		Attn: <i>District</i>																		
Phone #: 575-397-6388		Fax #: 575-397-0397		Address:																		
Project #:		Project Owner: Oxy		City:																		
Project Name: Iridium MDP1 28 21 Fed Com 2H (3/9/19)				State: Zip:																		
Project Location: Eddy County, NM				Phone #:																		
Sampler Name: Jeff Ornelas				Fax #:																		
FOR LAB USE ONLY																						
Lab I.D.		Sample I.D.		GRAB OR (COMP. # CONTAINERS	MATRIX				PRESERV.		SAMPLING											
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME							
<i>H902074</i>				<i>G</i>			<i>✓</i>				<i>✓</i>			<i>6/13/19</i>	<i>3:01 PM</i>	<i>✓</i>	<i>✓</i>	<i>✓</i>				
<i>21</i>		WEST @ SURFACE		<i>G</i>			<i>✓</i>				<i>✓</i>			<i>6/13/19</i>	<i>3:11 PM</i>	<i>✓</i>	<i>✓</i>	<i>✓</i>				
<i>22</i>		SOUTH @ SURFACE		<i>G</i>			<i>✓</i>				<i>✓</i>											
<i>MDP 6/14/19</i>																						

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Relinquished By: <i>Jeff Ornelas</i>		Date: <i>6/13/19</i>		Received By: <i>Israel Pena</i>		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:	
		Time: <i>5:00pm</i>				Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Fax #:	
Relinquished By: <i>Israel Pena</i>		Date: <i>6-14-19</i>		Received By: <i>Jamara Olden</i>		REMARKS:			
		Time: <i>2:30PM</i>							
Delivered By: (Circle One)				Sample Condition		CHECKED BY:			
Sampler - UPS - Bus - Other: <i>UPS #97</i>				Cool Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		(Initials) <i>T.O.</i>			

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