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DELINEATION WORKPLAN

CENTURION PIPELINE LP – CROSSROADS AWC 8" ML (Leak Date: 07/1/17) NMOCD approves of th

RP # 1RP-4756

NMOCD approves of the proposed remedial activities for the southern portion and additional delineation for the northern portion of 1RP-4756. 2 more confirmation sample locations are required: between SP3/4 & SP5/6 and between SP6/10 & SP11.

This delineation workplan and remediation proposal addresses the release associated with RP # 1RP-4756.

The following information includes:

- 1. Scaled digital site map with spill area demarcated and leak point identified along with sample point locations and areas of remediation at appropriate depths.
- 2. GPS information for sample points and sample methodology
- 3. Depth to groundwater information (i.e., pdf of OSE search results and/or copy of Chevron groundwater trend map).
- 4. Laboratory analysis results summary table and original laboratory analysis reports
- 5. A copy of the initial C-141
- 6. Potentially other pertinent information as necessary for site specific purposes.

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

Centurion will excavate the spill area as depicted on the following site diagram. The leak area near SP2 (green shade on diagram) will be excavated to a depth of 8 feet. The leak area near SP3 and SP4 (pink shade on diagram) will be excavated to a depth of 3 feet. The leak area near SP5, SP6, SP9, and SP10 (light blue shade on diagram) will be excavated to a depth of 4 feet. The leak area near SP11 (purple shade on diagram) will be excavated to a depth of 6 feet. Bottom and sidewalls samples will be collected at the marked locations on the diagram.

The dark blue area to the north will be further delineated and a plan submitted for this area as soon as the south area is completed and all NMDOT permits are in place.

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.



Centurion, Crossroads AWC Pipeline

WEST, N 33.25654 W-103.11025 EAST, N 33.25655 W-103.10956 SOUTH, N 33.25628 W-103.11007 NORTH, N 33.25673 W-103.11005 SP11, N 33.25631 W-103.11017 SP10, N 33.25640 W-103.11019 SP9, N 33.25652 W-103.11016 SP8, N 33.25664 W-103.11012 SP7, N 33.25664 W-103.10992 SP6, N 33.25640 W-103.11007 SP5, N 33.25655 W-103.11004 SP4, N 33.25654 W-103.10993 SP3, N 33.25646 W-103.10993 SP2, N 33.25654 W-103.10975 SP1, N 33.25664 W-103.10971 Sample points, hand auger

Centurion Crossroads AWC Pipeline U/L D, Section 28, T12S, R38E Groundwater: <50'



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(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)	(R=POD has been replaced, O=orphaned, C=the file is closed)	nas been ed, is		(quarte	ors are	e 1=NW e smalle	(quarters are 1=NW 2=NE 3=SV) (quarters are smallest to largest)	W 4=5	SE) (NAD83 UTM in meters)	neters)	(In feet)	5	
POD Number	Code	POD Sub- basin (County	POD Sub- Dasin County 64 16 4 Sec Tws Rng	Sec	e Tws	Rng	X	Y	DistanceDepth	WellDepth	Water Water Column	er
L 06965		L	LE	24	20	12S	38E	675781	3681959*	, ,	65	39	26
L 07417		L	LE	4 3	28	12S	38E	676622	3679963*	1271	40	18	22
									Avera	Average Depth to Water:		28 feet	
										Minimum Depth:		18 feet	
										Maximum Depth:		39 feet	
<u>Record Count:</u> 2 IJTMNAD83 Radius Search (in meters):	Search (in	meters)	••										
Easting (X): 676198	86		North	Northing (Y): 3681162	368	1162			Radius: 1700				
*UTM location was derived from PLSS - see Help	from PLSS	5 - see He	dı										
The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.	VMOSE/ISC eliability, us	and is ac ability, or	cepted by suitability	the recipie / for any pa	nt wi	th the ex ar purpo	pressed u se of the	understanding data.	that the OSE/ISC	make no warranties, e	expressed or in	nplied, concerr	iing

WATER COLUMN/ AVERAGE DEPTH TO WATER

7/12/17 10:59 AM

http://nmwrrs.ose.state.nm.us/nmwrrs/ConvertUTMDispatcher[7/12/2017 10:59:57 AM]

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S.A.							
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		All Conversion Results are displayed as NAD 1983 UTM Zone 13 (X): 676198.0 mtrs Northing (Y): 3681162.0 mt ~~ Please keep screen open to copy UTM values for Reports. ~~	UTM - NAD27 Easting (X): 0 mtrs Northing (Y): 0 mtrs Zone:	Degree: Degrees: 0 ° Degrees: 0 °	State Plane Co Y: <mark>0 f</mark> t	State Plane Co Y: <mark>0</mark> ft	Public Land 016: <u>NW</u> 04: <u>NW</u>
		e displayed as <u>NAD</u> Northing (ben to copy UTM value:	UTM - NAD27 o mtrs Zone:	Degrees/Minutes/Seconds es: 0 ° Minutes: 0 '	State Plane Coordinate System - NAD83 o ft Zone:	State Plane Coordinate System - NAD27 o ft Zone:	Public Land Survey System (PLSS) 04: NW Sec: 28 Tws:
		as NAD 1983 UTM Zone 13 Northing (Y): 3681162.0 mtrs TM values for Reports. ~~		Seconds: 0 "	VAD83	VAD27	PLSS) Tws: 125 Rng: 38
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Laboratory Analytical Results Summary Crossroads AWC Pipeline

		Sample	SP1 @ 1'	SP1 @ 4'	SP1 @ 6'	SP1 @ 8'	SP1 @ 11'	SP1 @ 13'
Analyte	Method	Date	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.500	1.72	<0.400	<0.050	< 0.050	< 0.050
Toluene	BTEX 8021B		5.71	16.7	6.25	<0.050	<0.050	< 0.050
Ethylbenzene	BTEX 8021B		7.17	13.3	9.79	<0.050	<0.050	<0.050
Total Xylenes	BTEX 8021B		46.7	72.1	43.6	<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		59.6	104	59.7	< 0.300	< 0.300	< 0.300
Chloride	SM4500CI-B		64	368	336	256	176	192
GRO	TPH 8015M		2960	3020	4530	<10.0	<10.0	<10.0
DRO	TPH 8015M		13700	9230	17300	20.1	77.1	68.3
EXT DRO	TPH 8015M		1510	926	1750	21.5	13.5	12

		Sample	SP2 @ 1'	SP2 @ 4'	SP2 @ 6'	SP2 @ 8'	SP2 @ 11'	SP2 @ 13'	SP2 @ 18'
Analyte	Method	Date	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	8/8/17	1/17/18
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		0.51	0.603	0.544	<0.050	< 0.050	<0.050	<0.050
Toluene	BTEX 8021B		8.26	8.76	7.43	<0.050	< 0.050	<0.050	<0.050
Ethylbenzene	BTEX 8021B		10.4	10.9	10.5	<0.050	< 0.050	<0.050	<0.050
Total Xylenes	BTEX 8021B		52	53.6	45.8	<0.150	<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		71.2	73.8	64.3	<0.300	< 0.300	< 0.300	< 0.300
Chloride	SM4500CI-B		32	336	384	240	240	160	176
GRO	TPH 8015M		4700	3580	4480	<10.0	<10.0	<10.0	<10.0
DRO	TPH 8015M		18100	11900	17600	29.3	28.5	69.7	<10.0
EXT DRO	TPH 8015M		1770	1220	1820	25.1	<10.0	11.6	<10.0

		Sample	SP3 @ 1'	SP3 @ 2'	SP3 @ 3'	SP3 @ 5'	SP3 @ 10'
Analyte	Method	Date	8/8/17	8/8/17	8/8/17	1/17/18	1/17/18
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050	< 0.050
Toluene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050	< 0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150	0.18	<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300	<0.300	<0.300	<0.300
Chloride	SM4500CI-B		32	16	64	176	128
GRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0	<10.0
DRO	TPH 8015M		38.8	<10.0	51.7	<10.0	<10.0
EXT DRO	TPH 8015M		10.2	<10.0	14.9	<10.0	<10.0

		Sample	SP4 @ 1'	SP4 @ 2'	SP4 @ 3'	SP4 @ 5'	SP4 @ 10'
Analyte	Method	Date	8/8/17	8/8/17	8/8/17	1/17/18	1/17/18
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050	< 0.050
Toluene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050	< 0.050
Ethylbenzene	BTEX 8021B		< 0.050	<0.050	<0.050	<0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150	0.178	<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300	<0.300	<0.300	< 0.300
Chloride	SM4500CI-B		16	<16.0	64	160	144
GRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0	<10.0
DRO	TPH 8015M		16.1	<10.0	45.5	<10.0	<10.0
EXT DRO	TPH 8015M		<10.0	<10.0	12.8	<10.0	<10.0

		Sample	SP5 @ 1'	SP5 @ 2'	SP5 @ 3'	SP5 @ 4'	SP5 @ 5'	SP5 @ 10'	SP5 @ 15'
Analyte	Method	Date	8/9/17	89/17	8/9/17	1/18/18	1/18/18	1/18/18	1/18/18
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		13.3	5.52	6.77	< 0.050	< 0.050	< 0.050	<0.050
Toluene	BTEX 8021B		103	59.3	41.7	< 0.050	< 0.050	< 0.050	<0.050
Ethylbenzene	BTEX 8021B		78.1	41.1	25.1	< 0.050	< 0.050	< 0.050	<0.050
Total Xylenes	BTEX 8021B		276	207	136	<0.150	<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		470	313	209	< 0.300	< 0.300	< 0.300	<0.300
Chloride	SM4500CI-B		32	16	32	16	32	16	32
GRO	TPH 8015M		12500	7350	3240	<10.0	<10.0	<10.0	<10.0
DRO	TPH 8015M		26400	20200	8680	<10.0	<10.0	<10.0	<10.0
EXT DRO	TPH 8015M		2590	2030	1100	<10.0	<10.0	<10.0	<10.0

		Sample	SP6 @ 1'	SP6 @ 2'	SP6 @ 3'	SP6 @ 4'	SP6 @ 5'	SP6 @ 10'	SP6 @ 15'
Analyte	Method	Date	8/9/17	89/17	8/9/17	1/18/18	1/18/18	1/18/18	1/18/18
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		< 0.050	<0.050	< 0.050	<0.050	<0.050	< 0.050	<0.050
Toluene	BTEX 8021B		0.064	<0.050	< 0.050	<0.050	<0.050	< 0.050	<0.050
Ethylbenzene	BTEX 8021B		< 0.050	<0.050	< 0.050	<0.050	<0.050	< 0.050	<0.050
Total Xylenes	BTEX 8021B		0.163	0.263	0.347	<0.150	<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		< 0.300	<0.300	0.347	< 0.300	<0.300	< 0.300	<0.300
Chloride	SM4500CI-B		16	<16.0	<16.0	<16.0	<16.0	<16.0	16
GRO	TPH 8015M		<10.0	<10.0	12.3	<10.0	<10.0	<10.0	<10.0
DRO	TPH 8015M		346	863	1350	<10.0	<10.0	<10.0	<10.0
EXT DRO	TPH 8015M		82.6	188	312	<10.0	<10.0	<10.0	<10.0

		Sample	SP7 @ 1'	SP7 @ 2'	SP7 @ 3'
Analyte	Method	Date	8/9/17	89/17	8/9/17
			mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		15.4	10.3	12.2
Toluene	BTEX 8021B		107	69.7	71.6
Ethylbenzene	BTEX 8021B		64.6	39.9	42.6
Total Xylenes	BTEX 8021B		267	198	212
Total BTEX	BTEX 8021B		454	318	338
Chloride	SM4500CI-B		16	16	<16.0
GRO	TPH 8015M		10000	6910	6620
DRO	TPH 8015M		26100	24200	24400
EXT DRO	TPH 8015M		2840	2960	2930

		Sample	SP8 @ 1'	SP8 @ 2'	SP8 @ 3'
Analyte	Method	Date	8/9/17	89/17	8/9/17
			mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<5.00	5.9	6.05
Toluene	BTEX 8021B		40.4	44.2	51.1
Ethylbenzene	BTEX 8021B		26.8	30.5	34
Total Xylenes	BTEX 8021B		189	150	168
Total BTEX	BTEX 8021B		256	231	259
Chloride	SM4500CI-B		<16.0	<16.0	16
GRO	TPH 8015M		7490	5360	5110
DRO	TPH 8015M		23400	19300	18000
EXT DRO	TPH 8015M		2530	2010	2000

Laboratory Analytical Results Summary Crossroads AWC Pipeline

		Sample	SP9 @ 1'	SP9 @ 2'	SP9 @ 3'	SP9 @ 4'	SP9 @ 5'	SP9 @ 10'	SP9 @ 15'
Analyte	Method	Date	8/9/17	89/17	8/9/17	1/19/18	1/19/18	1/19/18	1/19/18
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050	<0.050	< 0.050	<0.050
Toluene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050	<0.050	< 0.050	<0.050
Ethylbenzene	BTEX 8021B		0.059	<0.050	<0.050	<0.050	<0.050	< 0.050	< 0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		< 0.300	<0.300	< 0.300	< 0.300	<0.300	< 0.300	< 0.300
Chloride	SM4500CI-B		<16.0	16	16	<16.0	16	<16.0	<16.0
GRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
DRO	TPH 8015M		736	170	172	<10.0	<10.0	<10.0	<10.0
EXT DRO	TPH 8015M		129	30.7	47.2	<10.0	<10.0	<10.0	<10.0

		Sample	SP10 @ 1'	SP10 @ 2'	SP10 @ 3'	SP10 @ 4'	SP10 @ 5'	SP10 @ 10'	SP10 @ 15'
Analyte	Method	Date	8/9/17	89/17	8/9/17	1/19/18	1/19/18	1/19/18	1/19/18
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050	<0.050	< 0.050	< 0.050
Toluene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050	<0.050	< 0.050	< 0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050	<0.050	< 0.050	< 0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300	<0.300	<0.300	<0.300	< 0.300	< 0.300
Chloride	SM4500CI-B		16	<16.0	<16.0	32	16	32	<16.0
GRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
DRO	TPH 8015M		528	245	127	<10.0	<10.0	<10.0	<10.0
EXT DRO	TPH 8015M		90	43.1	37.3	<10.0	<10.0	<10.0	<10.0

		Sample	SP11 @ 1'	SP11 @ 2'	SP11 @ 3'	SP11 @ 4'	SP11 @ 5'	SP11 @ 6'	SP11 @ 11'	SP11 @ 16'
Analyte	Method	Date	8/9/17	89/17	8/9/17	1/22/18	1/22/18	1/22/18	1/22/18	1/22/18
			mg/Kg	mg/Kg						
Benzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.500	<0.050	<0.050	< 0.050	< 0.050
Toluene	BTEX 8021B		<0.050	<0.050	<0.050	3.52	<0.050	<0.050	< 0.050	< 0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050	<0.050	4.82	<0.050	<0.050	< 0.050	< 0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150	23.3	0.348	<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300	<0.300	31.6	0.348	<0.300	< 0.300	< 0.300
Chloride	SM4500CI-B		<16.0	<16.0	<16.0	16	32	<16.0	16	16
GRO	TPH 8015M		<10.0	<10.0	<10.0	751	26.8	<10.0	<10.0	<10.0
DRO	TPH 8015M		549	252	117	2950	360	<10.0	<10.0	<10.0
EXT DRO	TPH 8015M		92.6	46.2	36.4	311	56.2	<10.0	<10.0	<10.0

		Sample	NORTH @ SURFACE	SOUTH @ SURFACE	EAST @ SURFACE	WEST @ SURFACE
Analyte	Method	Date	8/9/17	8/9/17	8/9/17	8/9/17
			mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Toluene	BTEX 8021B		<0.050	0.06	0.089	<0.050
Ethylbenzene	BTEX 8021B		<0.050	0.063	0.075	<0.050
Total Xylenes	BTEX 8021B		<0.150	0.306	0.329	<0.150
Total BTEX	BTEX 8021B		< 0.300	0.429	0.493	<0.300
Chloride	SM4500CI-B		16	16	16	32
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



August 17, 2017

Cliff Brunson BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: CROSSROADS AWC PIPELINE

Enclosed are the results of analyses for samples received by the laboratory on 08/10/17 10:45.

www.tceq.texas.gov/field/qa/lab_accred_certif.html. an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



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

Project Location: Project Number: Project Name: 08/17/2017 CENTURION- LEA CO NM NONE GIVEN CROSSROADS AWC PIPELINE 08/10/2017

Reported: Received:

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Jodi Henson Soil Cool & Intact

08/08/2017

Sample ID: SP 1 @ 1' (H702104-01)

BTEX 8021B	mg/kg	/kg	Analyze	Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	08/14/2017	ND	2.06	103	2.00	1.69	
Toluene*	5.71	0.500	08/14/2017	ND	1.89	94.7	2.00	1.24	
Ethylbenzene*	7.17	0.500	08/14/2017	ND	1.97	98.7	2.00	0.866	
Total Xylenes*	46.7	1.50	08/14/2017	ND	5.87	97.9	6.00	0.735	
Total BTEX	59.6	3.00	08/14/2017	ND					
	% 611	% 72-148							
Chloride, SM4500Cl-B	mg/kg	/kg	Analyzed By: AC	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	08/14/2017	ND	400	100	400	3.92	
TPH 8015M	mg/kg	/kg	Analyzed By: MS	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	2960	50.0	08/11/2017	ND	203	102	200	0.693	
DR0 >C10-C28	13700	50.0	08/11/2017	ND	202	101	200	1.29	
EXT DRO >C28-C36	1510	50.0	08/11/2017	ND					

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Surrogate: 1-Chlorooctane

Surrogate: 1-Chlorooctadecane

349 % 201 %

34.7-157 28.3-164

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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name: Reported: Received:

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Jodi Henson Soil Cool & Intact

08/08/2017

Sample ID: SP 1 @ 4' (H702104-02)

BTEX 8021B	mg/kg	/kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	1.72	0.500	08/14/2017	ND	2.06	103	2.00	1.69	
Toluene*	16.7	0.500	08/14/2017	ND	1.89	94.7	2.00	1.24	
Ethylbenzene*	13.3	0.500	08/14/2017	ND	1.97	98.7	2.00	0.866	
Total Xylenes*	72.1	1.50	08/14/2017	ND	5.87	97.9	6.00	0.735	
Total BTEX	104	3.00	08/14/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	121 %	% 72-148							
Chloride, SM4500Cl-B	mg/kg	/kg	Analyzed By: AC	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	08/14/2017	ND	400	100	400	3.92	
TPH 8015M	mg/kg	/kg	Analyzed By: MS	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GR0 C6-C10	3020	50.0	08/11/2017	ND	203	102	200	0.693	
DRO >C10-C28	9230	50.0	08/11/2017	ND	202	101	200	1.29	
EXT DRO >C28-C36	926	50.0	08/11/2017	ND					
Surrogate: 1-Chlorooctane	196 %	% 28.3-164	4						

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Surrogate: 1-Chlorooctadecane

222%

34.7-157

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Celey D. Keene, Lab Director/Quality Manager

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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name: Reported: Received:

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Jodi Henson Soil Cool & Intact

08/08/2017

Sample ID: SP 1 @ 6' (H702104-03)

BTEX 8021B	mg/kg	ſkg	Analyzed By: MS	i By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.400	0.400	08/12/2017	ND	1.92	95.8	2.00	2.15	QM-07, QR-03
Toluene*	6.25	0.400	08/12/2017	ND	1.76	87.9	2.00	1.78	QM-07, QR-03
Ethylbenzene*	9.79	0.400	08/12/2017	ND	1.84	92.0	2.00	2.23	QM-07, QR-03
Total Xylenes*	43.6	1.20	08/12/2017	ND	5.44	90.6	6.00	1.85	QM-07
Total BTEX	59.7	2.40	08/12/2017	ND					
- Surrogate: 4-Bromofluorobenzene (PIL)	133 %	% 72-148							
Chloride, SM4500Cl-B	mg/kg	'kg	Analyzed By: AC	1 By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	08/14/2017	ND	400	100	400	3.92	
TPH 8015M	mg/kg	'kg	Analyzed By: MS	i By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GR0 C6-C10	4530	50.0	08/11/2017	ND	203	102	200	0.693	
DRO >C10-C28	17300	50.0	08/11/2017	ND	202	101	200	1.29	
EXT DRO >C28-C36	1750	50.0	08/11/2017	ND					
Surrogate: 1-Chlorooctane	247 %	% 28.3-164	4						

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Surrogate: 1-Chlorooctadecane

442 %

34.7-157

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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name: Reported: Received:

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Jodi Henson Soil Cool & Intact

08/08/2017

Sample ID: SP 1 @ 8' (H702104-04)

BIEV 90718	ev /6	L NU	Alialyzeu by. Plo	u by. Mo					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/12/2017	ND	1.92	95.8	2.00	2.15	
Toluene*	<0.050	0.050	08/12/2017	ND	1.76	87.9	2.00	1.78	
Ethylbenzene*	<0.050	0.050	08/12/2017	ND	1.84	92.0	2.00	2.23	
Total Xylenes*	<0.150	0.150	08/12/2017	ND	5.44	90.6	6.00	1.85	
Total BTEX	<0.300	0.300	08/12/2017	ND					
	107 %	% 72-148	~						
Chloride, SM4500CI-B	mg/kg	/kg	Analyzed By: AC	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	08/14/2017	ND	400	100	400	3.92	
TPH 8015M	mg/kg	/ kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/11/2017	ND	203	102	200	0.693	
DR0 >C10-C28	20.1	10.0	08/11/2017	ND	202	101	200	1.29	
EXT DRO >C28-C36	21.5	10.0	08/11/2017	ND					
Surrogate: 1-Chlorooctane	79.3 %	% 28.3-164	4						

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Surrogate: 1-Chlorooctadecane

77.7%

34.7-157

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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name:

Reported: Received:

Sample Received By: Sampling Condition: Sampling Type: Sampling Date:

Jodi Henson Soil Cool & Intact

08/08/2017

Sample ID: SP 1 @ 11' (H702104-05)

	0.00)								
BTEX 8021B	mg/kg	kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/12/2017	ND	1.92	95.8	2.00	2.15	
Toluene*	<0.050	0.050	08/12/2017	ND	1.76	87.9	2.00	1.78	
Ethylbenzene*	<0.050	0.050	08/12/2017	ND	1.84	92.0	2.00	2.23	
Total Xylenes*	<0.150	0.150	08/12/2017	ND	5.44	90.6	6.00	1.85	
Total BTEX	<0.300	0.300	08/12/2017	ND					
Surrogate: 4-Bromofluorobenzene (PIL	107 %	6 72-148							
Chloride, SM4500Cl-B	mg/kg	kg	Analyzed By: AC	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	08/14/2017	ND	400	100	400	3.92	
TPH 8015M	mg/kg	kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/11/2017	ND	203	102	200	0.693	
DRO >C10-C28	77.1	10.0	08/11/2017	ND	202	101	200	1.29	
EXT DRO >C28-C36	13.5	10.0	08/11/2017	ND					
Surrogate: I-Chlorooctane	92.8 %	% 28.3-164	4						

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Surrogate: 1-Chlorooctadecane

94.4 %

34.7-157

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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name: Reported: Received:

Sample Received By: Sampling Condition: Sampling Type: Sampling Date:

Jodi Henson Soil Cool & Intact

08/08/2017

Sample ID: SP 1 @ 13' (H702104-06)

אדויא 2001 אין	ma/ka		Analyzed Ry: MS	Ry: MC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/12/2017	ND	1.92	95.8	2.00	2.15	
Toluene*	<0.050	0.050	08/12/2017	ND	1.76	87.9	2.00	1.78	
Ethylbenzene*	<0.050	0.050	08/12/2017	ND	1.84	92.0	2.00	2.23	
Total Xylenes*	<0.150	0.150	08/12/2017	ND	5.44	90.6	6.00	1.85	
Total BTEX	<0.300	0.300	08/12/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	105 %	% 72-148							
Chloride, SM4500Cl-B	mg/kg	kg	Analyzed By: AC	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	08/17/2017	ND	432	108	400	3.77	
TPH 8015M	mg/kg	kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/11/2017	ND	203	102	200	0.693	
DRO >C10-C28	68.3	10.0	08/11/2017	ND	202	101	200	1.29	
EXT DRO >C28-C36	12.0	10.0	08/11/2017	ND					
Surrogate: 1-Chlorooctane	87.2 %	% 28.3-164	4						

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Surrogate: 1-Chlorooctadecane

91.3 %

34.7-157

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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name: Reported: Received:

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Jodi Henson Soil Cool & Intact

08/08/2017

Sample ID: SP 2 @ 1' (H702104-07)

BTEX 8021B	mg	mg/kg	Analyzed By: MS	d By: MS					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.510	0.200	08/12/2017	ND	1.92	95.8	2.00	2.15	
Toluene*	8.26	0.200	08/12/2017	ND	1.76	87.9	2.00	1.78	
Ethylbenzene*	10.4	0.200	08/12/2017	ND	1.84	92.0	2.00	2.23	
Total Xylenes*	52.0	0.600	08/12/2017	ND	5.44	90.6	6.00	1.85	
Total BTEX	71.2	1.20	08/12/2017	ND					
Surrogate: 4-Bromofluorobenzene (PIL)	172 %	% 72-148							
Chloride, SM4500Cl-B	mg/kg	/kg	Analyzed By: AC	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/14/2017	ND	400	100	400	3.92	
TPH 8015M	mg/kg	/kg	Analyzed By: MS	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	4700	50.0	08/11/2017	ND	203	102	200	0.693	
DRO >C10-C28	18100	50.0	08/11/2017	ND	202	101	200	1.29	
EXT DRO >C28-C36	1770	50.0	08/11/2017	ND					
Surrogate: 1-Chlorooctane	248 %	% 28.3-164	4						

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Surrogate: 1-Chlorooctadecane

446 %

34.7-157

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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name:

Reported: Received:

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Jodi Henson Soil Cool & Intact

08/08/2017

Sample ID: SP 2 @ 4' (H702104-08)

BTEX 8021B	mg/kg	/kg	Analyzed By: MS	l By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.603	0.500	08/12/2017	ND	1.92	95.8	2.00	2.15	
Toluene*	8.76	0.500	08/12/2017	ND	1.76	87.9	2.00	1.78	
Ethylbenzene*	10.9	0.500	08/12/2017	ND	1.84	92.0	2.00	2.23	
Total Xylenes*	53.6	1.50	08/12/2017	ND	5.44	90.6	6.00	1.85	
Total BTEX	73.8	3.00	08/12/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	125 %	% 72-148							
Chloride, SM4500Cl-B	mg/kg	/kg	Analyzed By: AC	1 By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	08/17/2017	ND	432	108	400	3.77	
TPH 8015M	mg/kg	/ kg	Analyzed By: MS	i By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GR0 C6-C10	3580	50.0	08/11/2017	ND	203	102	200	0.693	
DRO >C10-C28	11900	50.0	08/11/2017	ND	202	101	200	1.29	
EXT DR0 >C28-C36	1220	50.0	08/11/2017	ND					
Surrogate: 1-Chlorooctane	205 %	% 28.3-164	4						

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Surrogate: 1-Chlorooctadecane

290 %

34.7-157

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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name:

Reported: Received:

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Jodi Henson Soil Cool & Intact

08/08/2017

Sample ID: SP 2 @ 6' (H702104-09)

BTEX 8021B	mg/kg	/kg	Analyzed By: MS	l By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.544	0.500	08/12/2017	ND	1.92	95.8	2.00	2.15	
Toluene*	7.43	0.500	08/12/2017	ND	1.76	87.9	2.00	1.78	
Ethylbenzene*	10.5	0.500	08/12/2017	ND	1.84	92.0	2.00	2.23	
Total Xylenes*	45.8	1.50	08/12/2017	ND	5.44	90.6	6.00	1.85	
Total BTEX	64.3	3.00	08/12/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	126 %	% 72-148							
Chloride, SM4500Cl-B	mg/kg	/kg	Analyzed By: AC	1 By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	384	16.0	08/17/2017	ND	432	108	400	3.77	
TPH 8015M	mg/kg	/kg	Analyzed By: MS	1 By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GR0 C6-C10	4480	50.0	08/11/2017	ND	203	102	200	0.693	
DR0 >C10-C28	17600	50.0	08/11/2017	ND	202	101	200	1.29	
EXT DRO >C28-C36	1820	50.0	08/11/2017	ND					
Surrogate: 1-Chlorooctane	249 %	% 28.3-164	4						
Surrogate: 1-Chlorooctane	249		4						

Cardinal Laboratories

Surrogate: 1-Chlorooctadecane

459 %

34.7-157

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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name:

Reported: Received:

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Jodi Henson Soil Cool & Intact

08/08/2017

Sample ID: SP 2 @ 8' (H702104-10)

Mialyze	Allalyzed by. HS	3				
Analyzed	Method Blank	ц,	% Recovery	True Value QC	RPD	Qualifier
08/12/2017	ND	1.92	95.8	2.00	2.15	
08/12/2017	ND	1.76	87.9	2.00	1.78	
08/12/2017	ND	1.84	92.0	2.00	2.23	
08/12/2017	ND	5.44	90.6	6.00	1.85	
08/12/2017	ND					
72-148						
Analyze	d By: AC					
Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
08/17/2017	ND	432	108	400	3.77	
Analyze	d By: MS					
Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
08/11/2017	ND	203	102	200	0.693	
08/11/2017	ND	202	101	200	1.29	
08/11/2017	ND					
	08/12 08/12 08/12 08/12 08/12 08/12 08/12 08/11	08/12/2017 08/12/2017 08/12/2017 08/12/2017 08/12/2017 08/12/2017 Analyzed Analyzed Analyzed Analyzed Analyzed 08/11/2017 08/11/2017	08/12/2017 ND Analyzed Method Blank 08/17/2017 ND Analyzed Method Blank 08/11/2017 ND 08/11/2017 ND 08/11/2017 ND 08/11/2017 ND	08/12/2017 ND 1.92 08/12/2017 ND 1.76 08/12/2017 ND 1.84 08/12/2017 ND 5.44 08/17/2017 ND 432 Analyzed Hethod Blank BS 08/11/2017 ND 432 08/11/2017 ND 203 08/11/2017 ND 202 08/11/2017 ND 202	08/12/2017 ND 1.92 95.8 $08/12/2017$ ND 1.76 87.9 $08/12/2017$ ND 1.84 92.0 $08/12/2017$ ND 5.44 90.6 $08/17/2017$ ND 85 96 Recovery $08/17/2017$ ND 432 108 $Analyzed$ Method Blank $B5$ 96 Recovery $08/11/2017$ ND 203 102 $08/11/2017$ ND 202 101	08/12/2017 ND 1.92 95.8 2.00 $08/12/2017$ ND 1.76 87.9 2.00 $08/12/2017$ ND 1.84 92.0 2.00 $08/12/2017$ ND 1.84 92.0 2.00 $08/12/2017$ ND 5.44 90.6 6.00 $08/12/2017$ ND 5.44 90.6 6.00 $08/12/2017$ ND 5.44 90.6 6.00 $08/12/2017$ ND 7100 8100 8100 $08/17/2017$ ND 432 108 400 $08/11/2017$ ND 203 102 200 $08/11/2017$ ND 202 101 200 $08/11/2017$ ND 202 101 200

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Surrogate: 1-Chlorooctadecane

94.1%

34.7-157

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

Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name:

Reported: Received:

Sample Received By: Sampling Condition: Sampling Type: Sampling Date:

Jodi Henson Soil Cool & Intact

08/08/2017

Sample ID: SP 2 @ 11' (H702104-11)

ידד. אַרעדידע: אַר יש דד (טעדראַדע)	J+-TT)								
BTEX 8021B	mg/kg	kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	ß	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/12/2017	ND	1.92	95.8	2.00	2.15	
Toluene*	<0.050	0.050	08/12/2017	ND	1.76	87.9	2.00	1.78	
Ethylbenzene*	<0.050	0.050	08/12/2017	ND	1.84	92.0	2.00	2.23	
Total Xylenes*	<0.150	0.150	08/12/2017	ND	5.44	90.6	6.00	1.85	
Total BTEX	<0.300	0.300	08/12/2017	ND					
Surrogate: 4-Bromofluorobenzene (PIL	108 %	% 72-148							
Chloride, SM4500Cl-B	mg/kg	kg	Analyzed By: AC	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	08/17/2017	ND	432	108	400	3.77	
TPH 8015M	mg/kg	kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/11/2017	ND	203	102	200	0.693	
DRO >C10-C28	28.5	10.0	08/11/2017	ND	202	101	200	1.29	
EXT DRO >C28-C36	<10.0	10.0	08/11/2017	ND					
Surrogate: 1-Chlorooctane	97.8 %	% 28.3-164	4						
Surrogate: 1-Chlorooctadecane	100 %	% 34.7-157	7						

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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name:

Reported: Received:

Sample Received By: Sampling Condition: Sampling Type: Sampling Date:

Jodi Henson Soil Cool & Intact

08/08/2017

Sample ID: SP 2 @ 13' (H702104-12)

запреть зг с @ тэ (п/остон-тс)	0								
BTEX 8021B	mg/kg	kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/12/2017	ND	1.92	95.8	2.00	2.15	
Toluene*	<0.050	0.050	08/12/2017	ND	1.76	87.9	2.00	1.78	
Ethylbenzene*	<0.050	0.050	08/12/2017	ND	1.84	92.0	2.00	2.23	
Total Xylenes*	<0.150	0.150	08/12/2017	ND	5.44	90.6	6.00	1.85	
Total BTEX	<0.300	0.300	08/12/2017	ND					
Surrogate: 4-Bromofluorobenzene (PIL)	105 %	% 72-148							
Chloride, SM4500Cl-B	mg/kg	kg	Analyzed By: AC	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	08/17/2017	ND	432	108	400	3.77	
TPH 8015M	mg/kg	kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/11/2017	ND	203	102	200	0.693	
DR0 >C10-C28	69.7	10.0	08/11/2017	ND	202	101	200	1.29	
EXT DRO >C28-C36	11.6	10.0	08/11/2017	ND					
Surrogate: 1-Chlorooctane	97.8 %	% 28.3-164	4						

Cardinal Laboratories

Surrogate: 1-Chlorooctadecane

99.9 %

34.7-157

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Celey D. Keene, Lab Director/Quality Manager

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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name: Reported: Received:

Sample Received By: Sampling Condition: Sampling Type: Sampling Date:

Jodi Henson Soil Cool & Intact

08/08/2017

Sample ID: SP 3 @ 1' (H702104-13)

יייזעבידע, אין	1-1-0)								
BTEX 8021B	mg/kg	kg	Analyzec	Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/12/2017	ND	1.92	95.8	2.00	2.15	
Toluene*	<0.050	0.050	08/12/2017	ND	1.76	87.9	2.00	1.78	
Ethylbenzene*	<0.050	0.050	08/12/2017	ND	1.84	92.0	2.00	2.23	
Total Xylenes*	<0.150	0.150	08/12/2017	ND	5.44	90.6	6.00	1.85	
Total BTEX	<0.300	0.300	08/12/2017	ND					
- Surrogate: 4-Bromofluorobenzene (PID	106 %	% 72-148	~						
Chloride, SM4500Cl-B	mg/kg	kg	Analyzed By: AC	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/17/2017	ND	432	108	400	3.77	
TPH 8015M	mg/kg	kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/11/2017	ND	203	102	200	0.693	
DRO >C10-C28	38.8	10.0	08/11/2017	ND	202	101	200	1.29	
EXT DRO >C28-C36	10.2	10.0	08/11/2017	ND					
noo	96.8 %		4						
2									

Cardinal Laboratories

Surrogate: 1-Chlorooctadecane

96.4 %

34.7-157

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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name:

Reported: Received:

Sample Received By: Sampling Condition: Sampling Type: Sampling Date:

Jodi Henson Soil Cool & Intact

08/08/2017

Sample ID: SP 3 @ 2' (H702104-14)

BIEX 80218	ну / Ка	/ Ky	Alidiyzeu by: MS	u by: M3					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/12/2017	ND	1.92	95.8	2.00	2.15	
Toluene*	<0.050	0.050	08/12/2017	ND	1.76	87.9	2.00	1.78	
Ethylbenzene*	<0.050	0.050	08/12/2017	ND	1.84	92.0	2.00	2.23	
Total Xylenes*	<0.150	0.150	08/12/2017	ND	5.44	90.6	6.00	1.85	
Total BTEX	<0.300	0.300	08/12/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	104 %	% 72-148	~						
Chloride, SM4500Cl-B	mg/kg	/kg	Analyzed By: AC	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/17/2017	ND	432	108	400	3.77	
TPH 8015M	mg/kg	/kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/11/2017	ND	203	102	200	0.693	
DRO >C10-C28	<10.0	10.0	08/11/2017	ND	202	101	200	1.29	
EXT DRO >C28-C36	<10.0	10.0	08/11/2017	ND					
Surrogate: 1-Chlorooctane	86.2 %	% 28.3-164	Ă						

Cardinal Laboratories

Surrogate: 1-Chlorooctadecane

88.6 %

34.7-157

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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name:

Reported: Received:

Sample Received By: Sampling Condition: Sampling Type: Sampling Date:

Jodi Henson Soil Cool & Intact

08/08/2017

Sample ID: SP 3 @ 3' (H702104-15)

BTEX 8021B	mg/kg	kg	Analyzed By: MS	1 By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/12/2017	ND	1.92	95.8	2.00	2.15	
Toluene*	<0.050	0.050	08/12/2017	ND	1.76	87.9	2.00	1.78	
Ethylbenzene*	<0.050	0.050	08/12/2017	ND	1.84	92.0	2.00	2.23	
Total Xylenes*	0.180	0.150	08/12/2017	ND	5.44	90.6	6.00	1.85	
Total BTEX	<0.300	0.300	08/12/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	104 %	% 72-148							
Chloride, SM4500Cl-B	mg/kg	kg	Analyzed By: AC	1 By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	08/17/2017	ND	432	108	400	3.77	
TPH 8015M	mg/kg	kg	Analyzed By: MS	i By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/12/2017	ND	202	101	200	4.84	
DRO >C10-C28	51.7	10.0	08/12/2017	ND	210	105	200	4.38	
EXT DRO >C28-C36	14.9	10.0	08/12/2017	ND					
Surrogate: 1-Chlorooctane	80.6 %	% 28.3-164	4						
			1						

Cardinal Laboratories

Surrogate: 1-Chlorooctadecane

82.4 %

34.7-157

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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name: Reported: Received:

Sample Received By: Sampling Condition: Sampling Type: Sampling Date:

Jodi Henson Soil Cool & Intact

08/08/2017

Sample ID: SP 4 @ 1' (H702104-16)

9							
Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
0.050	08/12/2017	ND	1.92	95.8	2.00	2.15	
0.050	08/12/2017	ND	1.76	87.9	2.00	1.78	
0.050	08/12/2017	ND	1.84	92.0	2.00	2.23	
0.150	08/12/2017	ND	5.44	90.6	6.00	1.85	
0.300	08/12/2017	ND					
72-148							
mg/kg	Analyze	1 By: AC					
Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
16.0	08/17/2017	ND	432	108	400	3.77	
mg/kg	Analyze	1 By: MS					
Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
10.0	08/12/2017	ND	202	101	200	4.84	
10.0	08/12/2017	ND	210	105	200	4.38	
10.0	08/12/2017	ND					
	eporting 0.05 0.05 0.05 0.15 0.15 0.30 eporting eporting 16.c 10.c 10.c	eporting Limit Anal 0.050 08/12 0.050 08/12 0.150 08/12 0.300 08/12 0.300 08/12 1.0.0 08/12 eporting Limit Anal 10.0 08/12 10.0 08/12	eporting Limit Analyzed 0.050 08/12/2017 0.050 08/12/2017 0.150 08/12/2017 0.150 08/12/2017 0.300 08/12/2017 72-148 72-148 72-148 72-148 Analyzed I 16.0 08/12/2017 10.0 08/12/2017 10.0 08/12/2017	eporting Limit Analyzed Wethod Blank 0.050 08/12/2017 ND 0.050 08/12/2017 ND 0.050 08/12/2017 ND 0.150 08/12/2017 ND 0.150 08/12/2017 ND 0.300 08/12/2017 ND 72-148 Analyzed By: AC 72-148 Analyzed By: AC 16.0 08/17/2017 ND 16.0 08/17/2017 ND 10.0 08/12/2017 ND 10.0 08/12/2017 ND 10.0 08/12/2017 ND 10.0 08/12/2017 ND	eporting Limit Analyzed Method Blank bs 0.050 08/12/2017 ND 1.92 0.050 08/12/2017 ND 1.76 0.050 08/12/2017 ND 1.84 0.150 08/12/2017 ND 5.44 0.300 08/12/2017 ND 5.44 0.300 08/12/2017 ND 5.44 72-148 Analyzed By: AC F Forting Limit Analyzed By: AC Analyzed By: MS Eporting Limit Analyzed Method Blank BS 10.0 08/12/2017 ND 202 10.0 08/12/2017 ND 210 10.0 08/12/2017 ND 210 10.0 08/12/2017 ND 210	eporting Limit Analyzed Method Blank BS % Recovery 0.050 08/12/2017 ND 1.92 95.8 0.050 08/12/2017 ND 1.76 87.9 0.050 08/12/2017 ND 1.84 92.0 0.150 08/12/2017 ND 5.44 90.6 0.300 08/12/2017 ND 5.44 90.6 72-148 Xanalyzed By: AC X X X Forting Limit Analyzed By: AC X X eporting Limit Analyzed Method Blank BS % Recovery 10.0 08/12/2017 ND 432 108 10.0 08/12/2017 ND 202 101 10.0 08/12/2017 ND 210 105 10.0 08/12/2017 ND 210 105	eporting Limit Analyzed Wetrod Blank BS $\%$ Recovery Frue Value QC 0.050 08/12/2017 ND 1.92 95.8 2.00 0.050 08/12/2017 ND 1.76 87.9 2.00 0.050 08/12/2017 ND 1.84 92.0 2.00 0.150 08/12/2017 ND 5.44 90.6 6.00 0.300 08/12/2017 ND 5.44 90.6 6.00 0.300 08/12/2017 ND 5.44 90.6 6.00 72-148 Frailyzet Frailyzet Frailyzet Frailyzet Frailyzet 16.0 08/17/2017 ND 432 108 400 10.0 08/12/2017 ND 202 101 200 10.0 08/12/2017 ND 210 105 200 10.0 08/12/2017 ND 210 105 200

Cardinal Laboratories

Surrogate: 1-Chlorooctadecane

93.0%

34.7-157

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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name: Reported: Received:

Sample Received By: Sampling Condition: Sampling Type: Sampling Date:

Jodi Henson Soil Cool & Intact

08/08/2017

Sample ID: SP 4 @ 2' (H702104-17)

BTEX 8021B	, ma/ka	Ā	Analvzed Bv: MS	d Bv: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/12/2017	ND	1.92	95.8	2.00	2.15	
Toluene*	<0.050	0.050	08/12/2017	ND	1.76	87.9	2.00	1.78	
Ethylbenzene*	<0.050	0.050	08/12/2017	ND	1.84	92.0	2.00	2.23	
Total Xylenes*	<0.150	0.150	08/12/2017	ND	5.44	90.6	6.00	1.85	
Total BTEX	<0.300	0.300	08/12/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	102 %	% 72-148							
Chloride, SM4500Cl-B	mg/kg	kg	Analyzed By: AC	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/17/2017	ND	432	108	400	3.77	
TPH 8015M	mg/kg	kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/12/2017	ND	202	101	200	4.84	
DRO >C10-C28	<10.0	10.0	08/12/2017	ND	210	105	200	4.38	
EXT DRO >C28-C36	<10.0	10.0	08/12/2017	ND					
Surrogate: 1-Chlorooctane	92.2 %	% 28.3-164	4						

Cardinal Laboratories

Surrogate: 1-Chlorooctadecane

91.1%

34.7-157

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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name: Reported: Received:

Sample Received By: Sampling Condition: Sampling Type: Sampling Date:

Jodi Henson Soil Cool & Intact

08/08/2017

Sample ID: SP 4 @ 3' (H702104-18)

DIEV OTTR	6.1 / E								
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/12/2017	ND	1.92	95.8	2.00	2.15	
Toluene*	<0.050	0.050	08/12/2017	ND	1.76	87.9	2.00	1.78	
Ethylbenzene*	<0.050	0.050	08/12/2017	ND	1.84	92.0	2.00	2.23	
Total Xylenes*	0.178	0.150	08/12/2017	ND	5.44	90.6	6.00	1.85	
Total BTEX	<0.300	0.300	08/12/2017	ND					
Surrogate: 4-Bromofluorobenzene (PIL	104 %	% 72-148	~						
Chloride, SM4500Cl-B	mg	mg/kg	Analyzed By: AC	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	08/17/2017	ND	432	108	400	3.77	
TPH 8015M	mg	mg/kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/12/2017	ND	202	101	200	4.84	
DRO >C10-C28	45.5	10.0	08/12/2017	ND	210	105	200	4.38	
EXT DRO >C28-C36	128	10.0	08/12/2017	N					

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Surrogate: 1-Chlorooctadecane

76.2%

34.7-157

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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name: Reported: Received:

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Jodi Henson Soil Cool & Intact

08/09/2017

Sample ID: SP 5 @ 1' (H702104-19)

BTEX 8021B	mg/kg	/kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	13.3	10.0	08/14/2017	ND	1.92	95.8	2.00	2.15	
Toluene*	103	10.0	08/14/2017	ND	1.76	87.9	2.00	1.78	
Ethylbenzene*	78.1	10.0	08/14/2017	ND	1.84	92.0	2.00	2.23	
Total Xylenes*	276	30.0	08/14/2017	ND	5.44	90.6	6.00	1.85	
Total BTEX	470	60.0	08/14/2017	ND					
Surrogate: 4-Bromofluorobenzene (PIL	106 %	% 72-148							
Chloride, SM4500Cl-B	mg/kg	/kg	Analyzed By: AC	1 By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/17/2017	ND	432	108	400	3.77	
TPH 8015M	mg/kg	/kg	Analyzed By: MS	i By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GR0 C6-C10	12500	50.0	08/12/2017	ND	202	101	200	4.84	
DR0 >C10-C28	26400	50.0	08/12/2017	ND	210	105	200	4.38	
EXT DRO >C28-C36	2590	50.0	08/12/2017	ND					
Surrogate: 1-Chlorooctane	333 %	% 28.3-164	4						

Cardinal Laboratories

Surrogate: 1-Chlorooctadecane

645 %

34.7-157

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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name: Reported: Received:

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Jodi Henson Soil Cool & Intact

08/09/2017

Sample ID: SP 5 @ 2' (H702104-20)

BTEX 8021B	mg/kg	/kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	5.52	5.00	08/14/2017	ND	1.92	95.8	2.00	2.15	
Toluene*	59.3	5.00	08/14/2017	ND	1.76	87.9	2.00	1.78	
Ethylbenzene*	41.1	5.00	08/14/2017	ND	1.84	92.0	2.00	2.23	
Total Xylenes*	207	15.0	08/14/2017	ND	5.44	90.6	6.00	1.85	
Total BTEX	313	30.0	08/14/2017	ND					
Surrogate: 4-Bromofluorobenzene (PIL)	106 %	% 72-148							
Chloride, SM4500Cl-B	mg/kg	/kg	Analyzed By: AC	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/17/2017	ND	432	108	400	3.77	
TPH 8015M	mg/kg	/kg	Analyzed By: MS	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GR0 C6-C10	7350	50.0	08/12/2017	ND	202	101	200	4.84	
DR0 >C10-C28	20200	50.0	08/12/2017	ND	210	105	200	4.38	
EXT DRO >C28-C36	2030	50.0	08/12/2017	ND					
Surrogate: 1-Chlorooctane	275 %	% 28.3-164	4						

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Surrogate: 1-Chlorooctadecane

499 %

34.7-157

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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name: Reported: Received:

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Jodi Henson Soil Cool & Intact

08/09/2017

Sample ID: SP 5 @ 3' (H702104-21)

BTEX 8021B	mg/kg	/kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	6.77	2.00	08/14/2017	ND	1.92	95.8	2.00	2.15	
Toluene*	41.7	2.00	08/14/2017	ND	1.76	87.9	2.00	1.78	
Ethylbenzene*	25.1	2.00	08/14/2017	ND	1.84	92.0	2.00	2.23	
Total Xylenes*	136	6.00	08/14/2017	ND	5.44	90.6	6.00	1.85	
Total BTEX	209	12.0	08/14/2017	ND					
Surrogate: 4-Bromofluorobenzene (PIL	109 %	% 72-148							
Chloride, SM4500Cl-B	mg/kg	/kg	Analyzed By: AC	1 By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/17/2017	ND	432	108	400	3.77	
TPH 8015M	mg/kg	/kg	Analyzed By: MS	1 By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GR0 C6-C10	3240	50.0	08/12/2017	ND	202	101	200	4.84	
DRO >C10-C28	8680	50.0	08/12/2017	ND	210	105	200	4.38	
EXT DRO >C28-C36	1100	50.0	08/12/2017	ND					
Surrogate: 1-Chlorooctane	172 %	% 28.3-164	4						

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Surrogate: 1-Chlorooctadecane

195 %

34.7-157

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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name:

Reported: Received:

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Jodi Henson Soil Cool & Intact

08/09/2017

Sample ID: SP 6 @ 1' (H702104-22)

	Į	Ī							
BIEX 8021B	ту/ку	кg	Analyzed by: MS	I BY: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/14/2017	ND	1.92	95.8	2.00	2.15	
Toluene*	0.064	0.050	08/14/2017	ND	1.76	87.9	2.00	1.78	
Ethylbenzene*	<0.050	0.050	08/14/2017	ND	1.84	92.0	2.00	2.23	
Total Xylenes*	0.163	0.150	08/14/2017	ND	5.44	90.6	6.00	1.85	
Total BTEX	<0.300	0.300	08/14/2017	ND					
Surrogate: 4-Bromofluorobenzene (PIL)	103 %	% 72-148							
Chloride, SM4500Cl-B	mg/kg	kg	Analyzed By: AC	1 By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/17/2017	ND	432	108	400	3.77	
TPH 8015M	mg/kg	kg	Analyzed By: MS	1 By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/12/2017	ND	202	101	200	4.84	
DRO >C10-C28	346	10.0	08/12/2017	ND	210	105	200	4.38	
EXT DRO >C28-C36	82.6	10.0	08/12/2017	ND					
Surrogate: 1-Chlorooctane	84.1 %	% 28.3-164	4						

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Surrogate: 1-Chlorooctadecane

97.7%

34.7-157

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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name:

Reported: Received:

Sample Received By: Sampling Condition: Sampling Type: Sampling Date:

Jodi Henson Soil Cool & Intact

08/09/2017

Sample ID: SP 6 @ 2' (H702104-23)

Analyte	Result R	Beporting Limit	Analyzed Methoc	Mothod Displ	5				
				ויופעווטע סומווג	8	% Recovery	True Value QC	RPD	Qualifier
Senzene* <	<0.050	0.050	08/14/2017	ND	1.95	97.4	2.00	1.41	
Toluene* <1	<0.050	0.050	08/14/2017	ND	1.81	90.3	2.00	3.03	
Ethylbenzene* <1	<0.050	0.050	08/14/2017	ND	1.89	94.6	2.00	2.37	
Total Xylenes* 0	0.263	0.150	08/14/2017	ND	5.66	94.3	6.00	2.51	
Total BTEX <	<0.300	0.300	08/14/2017	ND					
Surrogate: 4-Bromofluorobenzene (PIL)	102 %	72-148							
Chloride, SM4500Cl-B	mg/kg		Analyzed By: AC	1 By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride <	<16.0	16.0	08/17/2017	ND	432	108	400	3.77	
TPH 8015M	mg/kg	g	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10 <	<10.0	10.0	08/12/2017	ND	202	101	200	4.84	
DR0 >C10-C28	863	10.0	08/12/2017	ND	210	105	200	4.38	
EXT DRO >C28-C36	188	10.0	08/12/2017	ND					
Surrogate: 1-Chlorooctane	90.0%	28.3-164	*						
Surrogate: 1-Chlorooctadecane	104 %	34.7-157	7						

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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name:

Reported: Received:

Sample Received By: Sampling Condition: Sampling Type: Sampling Date:

Jodi Henson Soil Cool & Intact

08/09/2017

Sample ID: SP 6 @ 3' (H702104-24)

BTEX 8021B	mg/kg	/kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/14/2017	ND	1.95	97.4	2.00	1.41	
Toluene*	<0.050	0.050	08/14/2017	ND	1.81	90.3	2.00	3.03	
Ethylbenzene*	<0.050	0.050	08/14/2017	ND	1.89	94.6	2.00	2.37	
Total Xylenes*	0.347	0.150	08/14/2017	ND	5.66	94.3	6.00	2.51	
Total BTEX	0.347	0.300	08/14/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	102 %	% 72-148							
Chloride, SM4500Cl-B	mg/kg	/kg	Analyzed By: AC	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/17/2017	ND	432	108	400	3.77	
TPH 8015M	mg/kg	/kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GR0 C6-C10	12.3	10.0	08/12/2017	ND	202	101	200	4.84	
DRO >C10-C28	1350	10.0	08/12/2017	ND	210	105	200	4.38	
EXT DRO >C28-C36	312	10.0	08/12/2017	ND					
Surrogate: 1-Chlorooctane	78.8 %	% 28.3-164	4						

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Surrogate: 1-Chlorooctadecane

103 %

34.7-157

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Project Location:	Project Number:	Project Name:	Reported:	Received:
CENTURION- LEA CO NM	NONE GIVEN	CROSSROADS AWC PIPELINE	08/17/2017	08/10/2017

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Jodi Henson Soil Cool & Intact

08/09/2017

Sample ID: SP 7 @ 1' (H702104-25)

BTEX 8021B	mg/kg	/kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	15.4	5.00	08/14/2017	ND	1.95	97.4	2.00	1.41	
Toluene*	107	5.00	08/14/2017	ND	1.81	90.3	2.00	3.03	
Ethylbenzene*	64.6	5.00	08/14/2017	ND	1.89	94.6	2.00	2.37	
Total Xylenes*	267	15.0	08/14/2017	ND	5.66	94.3	6.00	2.51	
Total BTEX	454	30.0	08/14/2017	ND					
Surrogate: 4-Bromofluorobenzene (PIL	106 %	% 72-148							
Chloride, SM4500Cl-B	mg/kg	'kg	Analyzed By: AC	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/17/2017	ND	432	108	400	3.77	
TPH 8015M	mg/kg	' kg	Analyzed By: MS	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GR0 C6-C10	10000	50.0	08/12/2017	ND	202	101	200	4.84	
DRO >C10-C28	26100	50.0	08/12/2017	ND	210	105	200	4.38	
EXT DRO >C28-C36	2840	50.0	08/12/2017	ND					
Surrogate: 1-Chlorooctane	321 %	% 28.3-164	4						

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Surrogate: 1-Chlorooctadecane

631 %

34.7-157

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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name: Reported: Received:

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Jodi Henson Soil Cool & Intact

08/09/2017

Sample ID: SP 7 @ 2' (H702104-26)

BTEX 8021B	ma/ka	/kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	10.3	5.00	08/14/2017	ND	1.95	97.4	2.00	1.41	
Toluene*	69.7	5.00	08/14/2017	ND	1.81	90.3	2.00	3.03	
Ethylbenzene*	39.9	5.00	08/14/2017	ND	1.89	94.6	2.00	2.37	
Total Xylenes*	198	15.0	08/14/2017	ND	5.66	94.3	6.00	2.51	
Total BTEX	318	30.0	08/14/2017	ND					
	107 %	% 72-148							
Chloride, SM4500Cl-B	mg/kg	lkg	Analyzed By: AC	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/17/2017	ND	432	108	400	3.77	
TPH 8015M	mg/kg	/ kg	Analyzed By: MS	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	6910	50.0	08/12/2017	ND	202	101	200	4.84	
DR0 >C10-C28	24200	50.0	08/12/2017	ND	210	105	200	4.38	
EXT DR0 >C28-C36	2960	50.0	08/12/2017	ND					
Surrogate: 1-Chlorooctane	274 %	% 28.3-164	4						

Cardinal Laboratories

Surrogate: 1-Chlorooctadecane

626%

34.7-157

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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name: Reported: Received:

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Jodi Henson Soil Cool & Intact

08/09/2017

Sample ID: SP 7 @ 3' (H702104-27)

BTEX 8021B	mg/kg	/kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	12.2	5.00	08/14/2017	ND	1.95	97.4	2.00	1.41	
Toluene*	71.6	5.00	08/14/2017	ND	1.81	90.3	2.00	3.03	
Ethylbenzene*	42.6	5.00	08/14/2017	ND	1.89	94.6	2.00	2.37	
Total Xylenes*	212	15.0	08/14/2017	ND	5.66	94.3	6.00	2.51	
Total BTEX	338	30.0	08/14/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	106 %	% 72-148							
Chloride, SM4500Cl-B	mg/kg	'kg	Analyzed By: AC	1 By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/17/2017	ND	416	104	400	0.00	
TPH 8015M	mg/kg	' kg	Analyzed By: MS	i By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GR0 C6-C10	6620	50.0	08/12/2017	ND	202	101	200	4.84	
DR0 >C10-C28	24400	50.0	08/12/2017	ND	210	105	200	4.38	
EXT DRO >C28-C36	2930	50.0	08/12/2017	ND					
Surrogate: 1-Chlorooctane	281 %	% 28.3-164	4						

Cardinal Laboratories

Surrogate: 1-Chlorooctadecane

655 %

34.7-157

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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name:

Reported: Received:

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Jodi Henson Soil Cool & Intact

08/09/2017

Sample ID: SP 8 @ 1' (H702104-28)

BTEX 8021B	 mg/kg	kg	Analyzed By: MS	l By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<5.00	5.00	08/14/2017	ND	1.95	97.4	2.00	1.41	
Toluene*	40.4	5.00	08/14/2017	ND	1.81	90.3	2.00	3.03	
Ethylbenzene*	26.8	5.00	08/14/2017	ND	1.89	94.6	2.00	2.37	
Total Xylenes*	189	15.0	08/14/2017	ND	5.66	94.3	6.00	2.51	
Total BTEX	256	30.0	08/14/2017	ND					
	106 %	% 72-148							
Chloride, SM4500Cl-B	mg/kg	kg	Analyzed By: AC	1 By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/17/2017	ND	416	104	400	0.00	
TPH 8015M	mg/kg	kg	Analyzed By: MS	1 By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	7490	50.0	08/12/2017	ND	202	101	200	4.84	
DR0 >C10-C28	23400	50.0	08/12/2017	ND	210	105	200	4.38	
EXT DRO >C28-C36	2530	50.0	08/12/2017	ND					
Surrogate: 1-Chlorooctane	311 %	6 28.3-164	4						

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Surrogate: 1-Chlorooctadecane

596 %

34.7-157

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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name:

Reported: Received:

Sample Received By: Sampling Condition: Sampling Type: Sampling Date:

Jodi Henson Soil Cool & Intact

08/09/2017

Sample ID: SP 8 @ 2' (H702104-29)

BTEX 8021B	 mg/kg	'kg	Analyzed By: MS	i By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	5.90	5.00	08/14/2017	ND	1.95	97.4	2.00	1.41	
Toluene*	44.2	5.00	08/14/2017	ND	1.81	90.3	2.00	3.03	
Ethylbenzene*	30.5	5.00	08/14/2017	ND	1.89	94.6	2.00	2.37	
Total Xylenes*	150	15.0	08/14/2017	ND	5.66	94.3	6.00	2.51	
Total BTEX	231	30.0	08/14/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	106 %	% 72-148							
Chloride, SM4500Cl-B	mg/kg	'kg	Analyzed By: AC	1 By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/17/2017	ND	416	104	400	0.00	
TPH 8015M	mg/kg	'kg	Analyzed By: MS	i By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	5360	50.0	08/12/2017	ND	202	101	200	4.84	
DR0 >C10-C28	19300	50.0	08/12/2017	ND	210	105	200	4.38	
EXT DR0 >C28-C36	2010	50.0	08/12/2017	ND					
Surrogate: 1-Chlorooctane	249 %	% 28.3-164	4						

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Surrogate: 1-Chlorooctadecane

482 %

34.7-157

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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name:

Reported: Received:

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Jodi Henson Soil Cool & Intact

08/09/2017

Sample ID: SP 8 @ 3' (H702104-30)

BTEX 8021B	mg/kg	kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	6.05	5.00	08/14/2017	ND	1.95	97.4	2.00	1.41	
Toluene*	51.1	5.00	08/14/2017	ND	1.81	90.3	2.00	3.03	
Ethylbenzene*	34.0	5.00	08/14/2017	ND	1.89	94.6	2.00	2.37	
Total Xylenes*	168	15.0	08/14/2017	ND	5.66	94.3	6.00	2.51	
Total BTEX	259	30.0	08/14/2017	ND					
Surrogate: 4-Bromofluorobenzene (PIL)	107 %	% 72-148							
Chloride, SM4500Cl-B	mg/kg	'kg	Analyzed By: AC	1 By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/17/2017	ND	416	104	400	0.00	
TPH 8015M	mg/kg	'kg	Analyzed By: MS	i By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GR0 C6-C10	5110	50.0	08/12/2017	ND	202	101	200	4.84	
DR0 >C10-C28	18000	50.0	08/12/2017	ND	210	105	200	4.38	
EXT DRO >C28-C36	2000	50.0	08/12/2017	ND					
Surrogate: I-Chlorooctane	235 %	% 28.3-164	4						

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Surrogate: 1-Chlorooctadecane

456 %

34.7-157

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Celey D. Keene, Lab Director/Quality Manager



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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name: Reported: Received:

Sample Received By: Sampling Condition: Sampling Type: Sampling Date:

Jodi Henson Soil Cool & Intact

08/09/2017

Sample ID: SP 9 @ 1' (H702104-31)

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BTEX 8021B	mg/kg	kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/14/2017	ND	1.95	97.4	2.00	1.41	
Toluene*	<0.050	0.050	08/14/2017	ND	1.81	90.3	2.00	3.03	
Ethylbenzene*	0.059	0.050	08/14/2017	ND	1.89	94.6	2.00	2.37	
Total Xylenes*	<0.150	0.150	08/14/2017	ND	5.66	94.3	6.00	2.51	
Total BTEX	<0.300	0.300	08/14/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	108 %	6 72-148							
Chloride, SM4500Cl-B	mg/kg	kg	Analyzed By: AC	1 By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/17/2017	ND	416	104	400	0.00	
TPH 8015M	mg/kg	kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/12/2017	ND	202	101	200	4.84	
DR0 >C10-C28	736	10.0	08/12/2017	ND	210	105	200	4.38	
EXT DRO >C28-C36	129	10.0	08/12/2017	ND					
Surrogate: 1-Chlorooctane	75.7 %	% 28.3-164	4						

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Surrogate: 1-Chlorooctadecane

84.5 %

34.7-157

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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name:

Reported: Received:

Sample Received By: Sampling Condition: Sampling Type: Sampling Date:

Jodi Henson Soil Cool & Intact

08/09/2017

Sample ID: SP 9 @ 2' (H702104-32)

BTEX 8021B	mg/kg	kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/14/2017	ND	1.95	97.4	2.00	1.41	
Toluene*	<0.050	0.050	08/14/2017	ND	1.81	90.3	2.00	3.03	
Ethylbenzene*	<0.050	0.050	08/14/2017	ND	1.89	94.6	2.00	2.37	
Total Xylenes*	<0.150	0.150	08/14/2017	ND	5.66	94.3	6.00	2.51	
Total BTEX	<0.300	0.300	08/14/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	104 %	% 72-148							
Chloride, SM4500Cl-B	mg/kg	kg	Analyzed By: AC	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/17/2017	ND	416	104	400	0.00	
TPH 8015M	mg/kg	kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/12/2017	ND	202	101	200	4.84	
DR0 >C10-C28	170	10.0	08/12/2017	ND	210	105	200	4.38	
EXT DRO >C28-C36	30.7	10.0	08/12/2017	ND					
Surrogate: 1-Chlorooctane	73.6 %	% 28.3-164	4						

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Surrogate: 1-Chlorooctadecane

81.5 %

34.7-157

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Celey D. Keene, Lab Director/Quality Manager



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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name: Reported: Received:

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Jodi Henson Soil Cool & Intact

08/09/2017

Sample ID: SP 9 @ 3' (H702104-33)

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BTEX 8021B	mg/kg	kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/14/2017	ND	1.95	97.4	2.00	1.41	
Toluene*	<0.050	0.050	08/14/2017	ND	1.81	90.3	2.00	3.03	
Ethylbenzene*	<0.050	0.050	08/14/2017	ND	1.89	94.6	2.00	2.37	
Total Xylenes*	<0.150	0.150	08/14/2017	ND	5.66	94.3	6.00	2.51	
Total BTEX	<0.300	0.300	08/14/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	103 %	% 72-148							
Chloride, SM4500Cl-B	mg/kg	kg	Analyzed By: AC	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/17/2017	ND	416	104	400	0.00	
TPH 8015M	mg/kg	kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/12/2017	ND	202	101	200	4.84	
DR0 >C10-C28	172	10.0	08/12/2017	ND	210	105	200	4.38	
EXT DRO >C28-C36	47.2	10.0	08/12/2017	ND					
Surrogate: 1-Chlorooctane	74.8 %			į					
c									

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Surrogate: 1-Chlorooctadecane

76.1%

34.7-157

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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name: Reported: Received:

Sample Received By: Sampling Condition: Sampling Type: Sampling Date:

Jodi Henson Soil Cool & Intact

08/09/2017

Sample ID: SP 10 @ 1' (H702104-34)

	<u> </u>								
BTEX 8021B	mg/kg	kg	Analyzed By: MS	1 By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/14/2017	ND	1.95	97.4	2.00	1.41	
Toluene*	<0.050	0.050	08/14/2017	ND	1.81	90.3	2.00	3.03	
Ethylbenzene*	<0.050	0.050	08/14/2017	ND	1.89	94.6	2.00	2.37	
Total Xylenes*	<0.150	0.150	08/14/2017	ND	5.66	94.3	6.00	2.51	
Total BTEX	<0.300	0.300	08/14/2017	ND					
Surrogate: 4-Bromofluorobenzene (PIL	104 %	6 72-148							
Chloride, SM4500Cl-B	mg/kg	kg	Analyzed By: AC	1 By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/17/2017	ND	416	104	400	0.00	
TPH 8015M	mg/kg	kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/12/2017	ND	202	101	200	4.84	
DRO >C10-C28	528	10.0	08/12/2017	ND	210	105	200	4.38	
EXT DRO >C28-C36	90.0	10.0	08/12/2017	ND					
Surrogate: 1-Chlorooctane	73.1 %	% 28.3-164	4						

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Surrogate: 1-Chlorooctadecane

80.3 %

34.7-157

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Celey D. Keene, Lab Director/Quality Manager



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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name:

Reported: Received:

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Jodi Henson Soil Cool & Intact

08/09/2017

Sample ID: SP 10 @ 2' (H702104-35)

	ġ								
BTEX 8021B	mg/kg	kg	Analyzed By: MS	1 By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/14/2017	ND	1.95	97.4	2.00	1.41	
Toluene*	<0.050	0.050	08/14/2017	ND	1.81	90.3	2.00	3.03	
Ethylbenzene*	<0.050	0.050	08/14/2017	ND	1.89	94.6	2.00	2.37	
Total Xylenes*	<0.150	0.150	08/14/2017	ND	5.66	94.3	6.00	2.51	
Total BTEX	<0.300	0.300	08/14/2017	ND					
	104 %	% 72-148							
Chloride, SM4500Cl-B	mg/kg	kg	Analyzed By: AC	1 By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/17/2017	ND	416	104	400	0.00	
TPH 8015M	mg/kg	kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/12/2017	ND	218	109	200	9.71	
DR0 >C10-C28	245	10.0	08/12/2017	ND	234	117	200	11.9	
EXT DRO >C28-C36	43.1	10.0	08/12/2017	ND					
Surrogate: 1-Chlorooctane	94.9 %	% 28.3-164	4						
Surrogate: 1-Chlorooctadecane	% 601	% 34.7-157	7						

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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name: Reported: Received:

Sample Received By: Sampling Condition: Sampling Type: Sampling Date:

Jodi Henson Soil Cool & Intact

08/09/2017

Sample ID: SP 10 @ 3' (H702104-36)

	ġ		-						
BIEX 8021B	mg/ kg	kg	Analyzed By: MS	і ву: мз					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/14/2017	ND	1.95	97.4	2.00	1.41	
Toluene*	<0.050	0.050	08/14/2017	ND	1.81	90.3	2.00	3.03	
Ethylbenzene*	<0.050	0.050	08/14/2017	ND	1.89	94.6	2.00	2.37	
Total Xylenes*	<0.150	0.150	08/14/2017	ND	5.66	94.3	6.00	2.51	
Total BTEX	<0.300	0.300	08/14/2017	ND					
	103 %	% 72-148							
Chloride, SM4500Cl-B	mg/kg	kg	Analyzed By: AC	1 By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/17/2017	ND	416	104	400	0.00	
TPH 8015M	mg/kg	kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/14/2017	ND	212	106	200	1.84	
DR0 >C10-C28	127	10.0	08/14/2017	ND	210	105	200	0.298	
EXT DRO >C28-C36	37.3	10.0	08/14/2017	ND					
Surrogate: 1-Chlorooctane	73.9 %	% 28.3-164	4						
Surrogate: 1-Chlorooctadecane	80.6 %	% 34.7-157	7						

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Project Location: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Number: Project Name: Reported: Received:

Sample Received By: Sampling Condition: Sampling Type: Sampling Date:

Jodi Henson Soil Cool & Intact

08/09/2017

Sample ID: SP 11 @ 1' (H702104-37)

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	Ev / Fill	۲. Y	Analyzea by. Pio	4 by. Plo					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/14/2017	ND	1.95	97.4	2.00	1.41	
Toluene*	<0.050	0.050	08/14/2017	ND	1.81	90.3	2.00	3.03	
Ethylbenzene*	<0.050	0.050	08/14/2017	ND	1.89	94.6	2.00	2.37	
Total Xylenes*	<0.150	0.150	08/14/2017	ND	5.66	94.3	6.00	2.51	
Total BTEX	<0.300	0.300	08/14/2017	ND					
Surrogate: 4-Bromofluorobenzene (PIL)	104 %	% 72-148							
Chloride, SM4500Cl-B	mg/kg	kg	Analyzed By: AC	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/17/2017	ND	416	104	400	0.00	
TPH 8015M	mg/kg	kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/14/2017	ND	212	106	200	1.84	
DRO >C10-C28	549	10.0	08/14/2017	ND	210	105	200	0.298	
EXT DRO >C28-C36	92.6	10.0	08/14/2017	ND					
Surrogate: 1-Chlorooctane	87.0 %	% 28.3-164	4						
Surrogate: 1-Chlorooctadecane	95.3 %	% 34.7-157	7						

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Celey D. Keene, Lab Director/Quality Manager



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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name: Reported: Received:

Sample Received By: Sampling Condition: Sampling Type: Sampling Date:

Jodi Henson Soil Cool & Intact

08/09/2017

Sample ID: SP 11 @ 2' (H702104-38)

	00-10)								
BTEX 8021B	mg/kg	kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/14/2017	ND	1.95	97.4	2.00	1.41	
Toluene*	<0.050	0.050	08/14/2017	ND	1.81	90.3	2.00	3.03	
Ethylbenzene*	<0.050	0.050	08/14/2017	ND	1.89	94.6	2.00	2.37	
Total Xylenes*	<0.150	0.150	08/14/2017	ND	5.66	94.3	6.00	2.51	
Total BTEX	<0.300	0.300	08/14/2017	ND					
Surrogate: 4-Bromofluorobenzene (PIL	104 %	6 72-148							
Chloride, SM4500Cl-B	mg/kg	kg	Analyzed By: AC	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/17/2017	ND	416	104	400	0.00	
TPH 8015M	mg/kg	kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/14/2017	ND	212	106	200	1.84	
DR0 >C10-C28	252	10.0	08/14/2017	ND	210	105	200	0.298	
EXT DRO >C28-C36	46.2	10.0	08/14/2017	ND					
Surrogate: 1-Chlorooctane	77.3 %	% 28.3-164	4						
			1						

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Surrogate: 1-Chlorooctadecane

81.2 %

34.7-157

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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name: Reported: Received:

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Jodi Henson Soil Cool & Intact

08/09/2017

Sample ID: SP 11 @ 3' (H702104-39)

	(
BTEX 8021B	mg/kg	'kg	Analyze	Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/14/2017	ND	1.95	97.4	2.00	1.41	
Toluene*	<0.050	0.050	08/14/2017	ND	1.81	90.3	2.00	3.03	
Ethylbenzene*	<0.050	0.050	08/14/2017	ND	1.89	94.6	2.00	2.37	
Total Xylenes*	<0.150	0.150	08/14/2017	ND	5.66	94.3	6.00	2.51	
Total BTEX	<0.300	0.300	08/14/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	105 %	% 72-148							
Chloride, SM4500Cl-B	mg/kg	'kg	Analyzed By: AC	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/17/2017	ND	416	104	400	0.00	
TPH 8015M	mg/kg	' kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/14/2017	ND	212	106	200	1.84	
DR0 >C10-C28	117	10.0	08/14/2017	ND	210	105	200	0.298	
EXT DRO >C28-C36	36.4	10.0	08/14/2017	ND					
Surrogate: 1-Chlorooctane	94.4 %	% 28.3-164	4						
Surrogate: 1-Chlorooctadecane	102 %	% 34.7-157	7						

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Project Location:	Project Number:	Project Name:	Reported:	Received:
CENTURION- LEA CO NM	NONE GIVEN	CROSSROADS AWC PIPELINE	08/17/2017	08/10/2017

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Jodi Henson Soil Cool & Intact

08/09/2017

Sample ID: NORTH @ SURFACE (H702104-40)

BTEX 8021B	m	ma/ka	Analyze	Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	ß	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/14/2017	ND	1.95	97.4	2.00	1.41	
Toluene*	<0.050	0.050	08/14/2017	ND	1.81	90.3	2.00	3.03	
Ethylbenzene*	<0.050	0.050	08/14/2017	ND	1.89	94.6	2.00	2.37	
Total Xylenes*	<0.150	0.150	08/14/2017	ND	5.66	94.3	6.00	2.51	
Total BTEX	<0.300	0.300	08/14/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID] 105 %	% 72-148	8						
Chloride, SM4500CI-B	mg/kg	/kg	Analyze	Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/17/2017	ND	416	104	400	0.00	
TPH 8015M	mg/kg	/kg	Analyze	Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GR0 C6-C10	<10.0	10.0	08/14/2017	ND	212	106	200	1.84	
DRO >C10-C28	<10.0	10.0	08/14/2017	ND	210	105	200	0.298	
	100		08/14/2017						

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Surrogate: 1-Chlorooctadecane

81.0%

34.7-157

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Project Location: Project Number: CROSSROADS AWC PIPELINE NONE GIVEN 08/10/2017 CENTURION- LEA CO NM 08/17/2017

Project Name: Reported: Received:

Sample Received By: Sampling Condition: Sampling Type: Sampling Date:

Jodi Henson Soil Cool & Intact

08/09/2017

Sample ID: SOUTH @ SURFACE (H702104-41)

		į							
BIEX 8021B	mg/ kg	kg	Analyzed By: MS	I BY: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/14/2017	ND	1.95	97.4	2.00	1.41	
Toluene*	0.060	0.050	08/14/2017	ND	1.81	90.3	2.00	3.03	
Ethylbenzene*	0.063	0.050	08/14/2017	ND	1.89	94.6	2.00	2.37	
Total Xylenes*	0.306	0.150	08/14/2017	ND	5.66	94.3	6.00	2.51	
Total BTEX	0.429	0.300	08/14/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	103 %	6 72-148							
Chloride, SM4500Cl-B	mg/kg	kg	Analyzed By: AC	l By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/17/2017	ND	416	104	400	0.00	
TPH 8015M	mg/kg	kg	Analyzed By: MS	l By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/14/2017	ND	212	106	200	1.84	
DRO >C10-C28	<10.0	10.0	08/14/2017	ND	210	105	200	0.298	
EXT DRO >C28-C36	<10.0	10.0	08/14/2017	ND					
Surrogate: 1-Chlorooctane	77.8 %	% 28.3-164	4						

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Surrogate: 1-Chlorooctadecane

78.0%

34.7-157

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Project Location:	Project Number:	Project Name:	Reported:	Received:
CENTURION- LEA CO NM	NONE GIVEN	CROSSROADS AWC PIPELINE	08/17/2017	08/10/2017

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Jodi Henson Soil Cool & Intact

08/09/2017

Sample ID: EAST @ SURFACE (H702104-42)

BTEX 8021B	mg/kg	κġ 、	Analyzed By: MS	l By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/15/2017	ND	2.00	99.8	2.00	0.488	
Toluene*	0.089	0.050	08/15/2017	ND	1.87	93.5	2.00	1.49	
Ethylbenzene*	0.075	0.050	08/15/2017	ND	1.95	97.4	2.00	0.628	
Total Xylenes*	0.329	0.150	08/15/2017	ND	5.78	96.4	6.00	0.679	
Total BTEX	0.493	0.300	08/15/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	103 %	6 72-148							
Chloride, SM4500Cl-B	mg/kg	kg	Analyzed By: AC	I By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/17/2017	ND	416	104	400	0.00	
TPH 8015M	mg/kg	kg	Analyzed By: MS	l By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/14/2017	ND	212	106	200	1.84	
DRO >C10-C28	<10.0	10.0	08/14/2017	ND	210	105	200	0.298	
EXT DRO >C28-C36	<10.0	10.0	08/14/2017	ND					
Surrogate: 1-Chlorooctane	80.8 %	6 28.3-164	4						
Surrogate: 1-Chlorooctadecane	83.0 %	6 34.7-157	7						

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Project Location:	Project Number:	Project Name:	Reported:	Received:
CENTURION- LEA CO NM	NONE GIVEN	CROSSROADS AWC PIPELINE	08/17/2017	08/10/2017

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Jodi Henson Soil Cool & Intact

08/09/2017

Sample ID: WEST @ SURFACE (H702104-43)

BTEX 8021B	mg/kg	kg 、	Analyzed By: MS	l By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/15/2017	ND	2.00	99.8	2.00	0.488	
Toluene*	<0.050	0.050	08/15/2017	ND	1.87	93.5	2.00	1.49	
Ethylbenzene*	<0.050	0.050	08/15/2017	ND	1.95	97.4	2.00	0.628	
Total Xylenes*	<0.150	0.150	08/15/2017	ND	5.78	96.4	6.00	0.679	
Total BTEX	<0.300	0.300	08/15/2017	ND					
Surrogate: 4-Bromofluorobenzene (PIL)	102 %	% 72-148							
Chloride, SM4500Cl-B	mg/kg	kg	Analyzed By: AC	I By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/17/2017	ND	416	104	400	0.00	
TPH 8015M	mg/kg	kg	Analyzed By: MS	l By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/14/2017	ND	212	106	200	1.84	
DRO >C10-C28	<10.0	10.0	08/14/2017	ND	210	105	200	0.298	
EXT DRO >C28-C36	<10.0	10.0	08/14/2017	ND					
Surrogate: 1-Chlorooctane	71.5 %	% 28.3-164	4						

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Surrogate: 1-Chlorooctadecane

71.9 %

34.7-157

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Notes and Definitions

ı	***	**	RPD	ND	QM-07	QR-02	QR-03	S-04	S-06
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	Insufficient time to reach temperature.	Samples not received at proper temperature of 6°C or below.	Relative Percent Difference	Analyte NOT DETECTED at or above the reporting limit	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.	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.	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.

Celey D. Keene, Lab Director/Quality Manager

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST



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

Company Nam	e: BBC International, Inc.								-	B	ILL TO		-	-		-	AN		IC D	EQU	FOT	_		
Project Manag	er: Cliff Brunson							P.0). #:	-			T	T	T		AN	T		EQU	ESI	-	-	_
Address: P.C	D. Box 805							Co	mos	ny:	Centur	in /	1											
City: Hobbs	State: NM	7	in.	88	241	-		Att			ayton M	Audi	1											
Phone #: 575		5-39	-				-	-	dres		agrant	amala	-											
Project #:	Project Own				turi	M	1	-		S:			1											
	Crossroads AWC Pipeline	er,	fe	11	m	1015	-	City		_	-	_	-	1										
	on: Lea County, NM						_	Sta			Zip:		1	1		1								
Sampler Name		-		-	_	-	_		one	#:			1						1					
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Ť	SP2 @ 1' /	6	1	-	- 1	V			U	1	8/8/17	1:21 PM	1	1	1			-	-	-	+	+	-	
8	SP2 @ 4' /	G	1		1	1			1		8/8/17	1:45 PM	1	1	1			-		-	+-	+	+-	
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af's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable

service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profils incurred by client, its subsidiaries.

affliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated re

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cannot accept verbal changes. Please fax written changes to 505-393-2476 2.02 Corrected + 25°C

RDINAL LABORATORIES 101 East Marland, Hobbs, NM 88240

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2085

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

Project Manag	me: BBC International, Inc. ger: Cliff Brunson		_		_				1		B	ILL TO	,				-	AN		212	PEO	UEST			
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FOR LAB USE ONLY	Roger Hernandez	_	_					F	ax #:	1				1											
				F	-	MAT	RIX	-	PR	ESER	RV.	SAMPL	ING	-		F	-								
Lab I.D.	Sample I.D.	CORAB OR (C)OI	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	OTHER .	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	RTEX	210	TAL	1								
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SE NOTE: Liability and	Damages. Cardinal's liability and client's exclusive remedy f those for negligence and any other cause whether	or any claim	arisio	ambu	1			1	1	/	8	q /17	9:55 AM	1	1	1						-		-	-

oever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries,

affiliates or successors arising out of or related to the performance of services personale by Cardinal within 30 days at Relinquished By: Date: A Received By:	d by clent, és subsidiaries, led reasons or otherwise.
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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST



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

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ng those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by cleant, its subsidiaries.

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Nan	e: BBC International, Inc.						-	Т	-	B	ILL TO	,	-		_	_								
Project Manag	er: Cliff Brunson	-	-	_				P	.0. #	and the second second			1	-	-	-	AN	ALY	SIS F	REQL	JEST		_	
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34	SP10 @ 2'	6	11		-	1				1	8/9/17	10:38 AM	1	1	1						-	1	-	-
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analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be sable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profes incurred by client, its subsidiaries.

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST



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

Company Name: BBC International, Inc.							0.14	1-1	BI	LL TO	1. m.				-	ANA	LYS	S P	FOU	ECT			_
Project Manager: Cliff Brunson							P.O.			1		T		T		T	T	T	Lao	1	-	-	Ť
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SE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any es. All claims including those for negligence and any other cause whatsoever shall be dee in no event shall Cardinal be liable for incidential or consequential damages, including will so re successors attained out of or related to the performance of services bereurder by Card nquished By: // // Date://					writery a	END LECE	eved by	Cardin	al with	in 30 days afte	r completion of the	e applicat	sle										
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150

Received By:

Sample Condition



January 25, 2018

Cliff Brunson BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: CROSSROADS AWC PIPELINE

Enclosed are the results of analyses for samples received by the laboratory on 01/23/18 12:00.

www.tceq.texas.gov/field/qa/lab_accred_certif.html. an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. Accreditation

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



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

Project Location:	Project Number:	Project Name:	Reported:	Received:
CENTURION- LEA CO NM	NONE GIVEN	CROSSROADS AWC PIPELINE	01/25/2018	01/23/2018

Sampling Type: Sampling Condition: Sample Received By: Sampling Date:

Tamara Oldaker Soil Cool & Intact

01/17/2018

Sample ID: SP 2 @ 18 (H800243-01)

	0 0-)								
BTEX 8021B	mg/kg	ſkg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/24/2018	ND	2.12	106	2.00	5.87	QR-03
Toluene*	<0.050	0.050	01/24/2018	ND	2.15	108	2.00	5.39	
Ethylbenzene*	<0.050	0.050	01/24/2018	ND	2.18	109	2.00	5.25	
Total Xylenes*	<0.150	0.150	01/24/2018	ND	6.34	106	6.00	4.37	
Total BTEX	<0.300	0.300	01/24/2018	ND					
Surrogate: 4-Bromofluorobenzene (PIL)	109 %	% 72-148							
Chloride, SM4500Cl-B	mg/kg	kg	Analyzed By: AC	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	01/24/2018	ND	416	104	400	3.92	
TPH 8015M	mg/kg	'kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/24/2018	ND	208	104	200	6.61	
DRO >C10-C28*	<10.0	10.0	01/24/2018	ND	171	85.7	200	6.70	
EXT DRO >C28-C36	<10.0	10.0	01/24/2018	ND					
Surrogate: 1-Chlorooctane	104 %	% 41-142							

Cardinal Laboratories

Surrogate: 1-Chlorooctadecane

102 %

37.6-147

PLEASE NOTE: Liability and Damages. Cardinal's lability and client's exclusive remedy for any claim arising, whether based in contract or bort, 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 dam 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.

*=Accredited Analyte

2 P.S. N



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

Project Location: Project Number: CROSSROADS AWC PIPELINE 01/25/2018 NONE GIVEN 01/23/2018 CENTURION- LEA CO NM

Project Name:

Reported: Received:

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Tamara Oldaker Soil Cool & Intact

01/17/2018

Sample ID: SP 3 @ 5 (H800243-02)

	(_)								
BTEX 8021B	mg/kg	â	Analyzed By: MS	1 By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/24/2018	ND	2.12	106	2.00	5.87	
Toluene*	<0.050	0.050	01/24/2018	ND	2.15	108	2.00	5.39	
Ethylbenzene*	<0.050	0.050	01/24/2018	ND	2.18	109	2.00	5.25	
Total Xylenes*	<0.150	0.150	01/24/2018	ND	6.34	106	6.00	4.37	
Total BTEX	<0.300	0.300	01/24/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	106 %	5 72-148							
Chloride, SM4500Cl-B	mg/kg	ĝ	Analyzed By: AC	1 By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	01/24/2018	ND	416	104	400	3.92	
TPH 8015M	mg/kg	ĝ	Analyzed By: MS	i By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/24/2018	ND	208	104	200	6.61	
DRO >C10-C28*	<10.0	10.0	01/24/2018	ND	171	85.7	200	6.70	
EXT DRO >C28-C36	<10.0	10.0	01/24/2018	ND					
Surrogate: 1-Chlorooctane	77.7 %	6 41-142							

Cardinal Laboratories

Surrogate: 1-Chlorooctadecane

75.4%

37.6-147

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Page 3 of 31



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

Project Location: Project Number: CROSSROADS AWC PIPELINE 01/25/2018 NONE GIVEN 01/23/2018 CENTURION- LEA CO NM

Project Name:

Reported: Received:

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Tamara Oldaker Soil Cool & Intact

01/17/2018

Sample ID: SP 3 @ 10 (H800243-03)

BTEX 8021B	mg/kg	ĝ	Analyzed By: MS	I By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/24/2018	ND	2.12	106	2.00	5.87	
Toluene*	<0.050	0.050	01/24/2018	ND	2.15	108	2.00	5.39	
Ethylbenzene*	<0.050	0.050	01/24/2018	ND	2.18	109	2.00	5.25	
Total Xylenes*	<0.150	0.150	01/24/2018	ND	6.34	106	6.00	4.37	
Total BTEX	<0.300	0.300	01/24/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	108 %	5 72-148							
Chloride, SM4500Cl-B	mg/kg	ĝ	Analyzed By: AC	l By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	01/24/2018	ND	416	104	400	3.92	
TPH 8015M	mg/kg	ĝ	Analyzed By: MS	l By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/24/2018	ND	208	104	200	6.61	
DRO >C10-C28*	<10.0	10.0	01/24/2018	ND	171	85.7	200	6.70	
EXT DRO >C28-C36	<10.0	10.0	01/24/2018	ND					
Surrogate: 1-Chlorooctane	92.0 %	6 41-142							

Cardinal Laboratories

Surrogate: 1-Chlorooctadecane

89.1 %

37.6-147

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

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

Project Location:	Project Number:	Project Name:	Reported:	Received:
CENTURION- LEA CO NM	NONE GIVEN	CROSSROADS AWC PIPELINE	01/25/2018	01/23/2018

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Tamara Oldaker Soil Cool & Intact

01/17/2018

Sample ID: SP 4 @ 5 (H800243-04)

Sample In: SF + @ J (Hovoz+J-v+)		•							
BTEX 8021B	mg/kg	kg	Analyzed By: MS	1 By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/24/2018	ND	2.12	106	2.00	5.87	
Toluene*	<0.050	0.050	01/24/2018	ND	2.15	108	2.00	5.39	
Ethylbenzene*	<0.050	0.050	01/24/2018	ND	2.18	109	2.00	5.25	
Total Xylenes*	<0.150	0.150	01/24/2018	ND	6.34	106	6.00	4.37	
Total BTEX	<0.300	0.300	01/24/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	104 %	% 72-148							
Chloride, SM4500Cl-B	mg/kg	kg	Analyzed By: AC	1 By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	01/24/2018	ND	416	104	400	3.92	
TPH 8015M	mg/kg	kg	Analyzed By: MS	1 By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/24/2018	ND	208	104	200	6.61	
DRO >C10-C28*	<10.0	10.0	01/24/2018	ND	171	85.7	200	6.70	
EXT DRO >C28-C36	<10.0	10.0	01/24/2018	ND					
	79.6 %	% 41-142							

Cardinal Laboratories

Surrogate: 1-Chlorooctadecane

78.1%

37.6-147

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Page 5 of 31



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Analytical Results For:

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

Project Location:	Project Number:	Project Name:	Reported:	Received:	
CENTURION- LEA CO NM	NONE GIVEN	CROSSROADS AWC PIPELINE	01/25/2018	01/23/2018	

Sample Received By: Sampling Condition:

Sample ID: SP 4 @ 10 (H800243-05)

BTEX 8021B

mg/kg

Reporting Limit

Analyzed

Method Blank

ß

% Recovery

True Value QC

RPD

Qualifier

2.00 2.00

5.39 5.87 Analyzed By: MS

0.050 0.050 Analyte

GRO C6-C10*

<10.0

Result

Reporting Limit

Analyzed

Method Blank

ß

% Recovery

True Value QC

RPD

Qualifier

6.61

mg/kg

Analyte

TPH 8015M Chloride Chloride, SM4500CI-B

Analyte

Result 144

Reporting Limit

Analyzed

Method Blank

ß

% Recovery

True Value QC

RPD

Qualifier

Analyzed By: AC

16.0

01/24/2018

ND

416

104

400

3.92

Analyzed By: MS

Surrogate: 4-Bromofluorobenzene (PID

106 %

72-148

mg/kg

Total BTEX Total Xylenes* Ethylbenzene* Toluene* Benzene^{*}

<0.300 <0.150 <0.050 <0.050 <0.050 Result

0.300 0.150 0.050

01/24/2018 01/24/2018 01/24/2018 01/24/2018 01/24/2018

B B B ND ND

> 6.34 2.18 2.15 2.12

106

6.00 2.00

4.37 5.25

109 108 106

EXT DRO >C28-C36 DRO >C10-C28*

<10.0 <10.0

10.0

01/24/2018

ND ND ND

10.0 10.0

01/24/2018 01/24/2018

171 208

85.7 104

200 200

6.70

Surrogate: 1-Chlorooctadecane Surrogate: 1-Chlorooctane

92.5 % 94.7%

37.6-147 41-142

Soil 01/17/2018

Cool & Intact

Tamara Oldaker

Sampling Type: Sampling Date:



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

Project Location: Project Number: CROSSROADS AWC PIPELINE 01/25/2018 NONE GIVEN 01/23/2018 CENTURION- LEA CO NM

Project Name:

Reported: Received:

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Tamara Oldaker Soil Cool & Intact

01/18/2018

Sample ID: SP 5 @ 4 (H800243-06)

	00,	-							
BIEX 8021B	mg/ kg	kg	Analyzed By: MS	I BY: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/24/2018	ND	2.12	106	2.00	5.87	
Toluene*	<0.050	0.050	01/24/2018	ND	2.15	108	2.00	5.39	
Ethylbenzene*	<0.050	0.050	01/24/2018	ND	2.18	109	2.00	5.25	
Total Xylenes*	<0.150	0.150	01/24/2018	ND	6.34	106	6.00	4.37	
Total BTEX	<0.300	0.300	01/24/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	106 %	6 72-148							
Chloride, SM4500Cl-B	mg/kg	kg	Analyzed By: AC	1 By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	01/24/2018	ND	416	104	400	3.92	
TPH 8015M	mg/kg	kg	Analyzed By: MS	1 By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/24/2018	ND	208	104	200	6.61	
DRO >C10-C28*	<10.0	10.0	01/24/2018	ND	171	85.7	200	6.70	
EXT DRO >C28-C36	<10.0	10.0	01/24/2018	ND					
Surrogate: 1-Chlorooctane	96.1 %	6 41-142							

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Surrogate: 1-Chlorooctadecane

95.6%

37.6-147

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Sample ID: SP 5 @ 5 (H800243-07) **BTEX 8021B** mg/kg

GRO C6-C10* DRO >C10-C28* **TPH 8015M** Chloride Chloride, SM4500Cl-B Surrogate: 4-Bromofluorobenzene (PID Total BTEX Total Xylenes* Ethylbenzene* Toluene* Benzene^{*} Analyte Analyte Analyte <0.300 <0.150 <0.050 <0.050 <0.050 Result <10.0 <10.0 Result 32.0 Result 107 %mg/kg mg/kg Reporting Limit Reporting Limit Reporting Limit 0.050 0.050 0.300 0.150 0.050 10.0 10.0 16.0 72-148 01/24/2018 01/24/2018 01/24/2018 01/24/2018 01/24/2018 01/24/2018 01/24/2018 01/24/2018 Analyzed Analyzed Analyzed Analyzed By: MS Analyzed By: AC Analyzed By: MS Method Blank Method Blank Method Blank ND ND ND B B ND ND ND 6.34 2.18 2.15 2.12 199 203 416 ß ß ß % Recovery % Recovery % Recovery 99.5 101 109 108 106 104 106 True Value QC True Value QC True Value QC 6.00 2.00 2.00 2.00 200 200 400 0.234 0.384 5.39 5.87 4.37 5.25 RPD 3.92 RPD RPD Qualifier Qualifier Qualifier

Project Location: Project Number: 01/25/2018 CENTURION- LEA CO NM NONE GIVEN CROSSROADS AWC PIPELINE

Project Name: Reported: Received:

Sample Received By:

Soil Tamara Oldaker Cool & Intact

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

Analytical Results For:

_aboratories

BBC International, Inc. P.O. Box 805 Cliff Brunson

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

Sampling Condition: Sampling Type: Sampling Date:

01/18/2018

01/23/2018

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Surrogate: 1-Chlorooctadecane Surrogate: 1-Chlorooctane

82.5 % 88.3 %

37.6-147 41-142 EXT DRO >C28-C36

<10.0

10.0

01/24/2018

ND



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

Project Location:	Project Number:	Project Name:	Reported:	Received:
CENTURION- LEA CO NM	NONE GIVEN	CROSSROADS AWC PIPELINE	01/25/2018	01/23/2018

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Tamara Oldaker Soil Cool & Intact

01/18/2018

Sample ID: SP 5 @ 10 (H800243-08)

Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
ND	2.12	106	2.00	5.87	
ND	2.15	108	2.00	5.39	
ND	2.18	109	2.00	5.25	
ND	6.34	106	6.00	4.37	
ND					
Analyzed By: AC					
Method Blank	BS				
ND	110	% Recovery	True Value QC	RPD	Qualifier
Analyzed By: MS	014	% Recovery 104	True Value QC 400	RPD 3.92	Qualifier
	916	% Recovery 104	True Value QC 400	RPD 3.92	Qualifier
Method Blank	BS 10	% Recovery 104 % Recovery	True Value QC 400 True Value QC	RPD 3.92 RPD	Qualifier Qualifier
Method Blank ND	410 BS 203	% Recovery 104 % Recovery 101	True Value QC 400 True Value QC 200	RPD 3.92 RPD 0.384	Qualifier Qualifier
Method Blank ND ND	410 BS 203 199	% Recovery 104 % Recovery 101 99.5	True Value QC 400 True Value QC 200	RPD 3.92 RPD 0.384 0.234	Qualifier Qualifier
Sy: A det		ND 2.12 ND 2.15 ND 2.18 ND 6.34	2.12 2.15 2.18 6.34	2.12 106 2.15 108 2.18 109 6.34 106	2.12 106 2.00 2.15 108 2.00 2.18 109 2.00 6.34 106 6.00

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Surrogate: 1-Chlorooctadecane

85.5 %

37.6-147

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

al Results For:

CARDINAL aboratories

Fax To: NM, 88241 0x 805 unson ternational, Inc.

01/25/2018 CROSSROADS AWC PIPELINE 01/23/2018 NONE GIVEN

Project Name: Reported: Received:

Sample Received By: Sampling Type:

Cool & Intact

01/18/2018

Soil

Tamara Oldaker

(575) 397-0397

Sampling Date:

Sampling Condition:

<0.050 <0.050

0.050 0.050 Analyte

Result

Reporting Limit

Analyzed

Method Blank

ß

% Recovery

True Value QC

RPD

Qualifier

2.00

Analyzed By: MS

GRO C6-C10*

<10.0

Result

Reporting Limit

Analyzed

Method Blank

ß

% Recovery

True Value QC

RPD

Qualifier

32.0 Result

16.0

01/24/2018

ND

416

104

400

3.92 RPD

Analyzed By: MS

mg/kg

Analyte

TPH 8015M Chloride Chloride, SM4500Cl-B

Analyte

Surrogate: 4-Bromofluorobenzene (PID

107 %

72-148

mg/kg

Analyzed By: AC

Reporting Limit

Analyzed

Method Blank

ß

% Recovery

True Value QC

Qualifier

Total BTEX Total Xylenes* Ethylbenzene* Toluene* Benzene^{*}

<0.300 <0.150 <0.050

0.300 0.150 0.050

01/24/2018 01/24/2018 01/24/2018 01/24/2018 01/24/2018

B B B ND ND

> 6.34 2.18 2.15 2.12

106

6.00

4.37 5.25

109 108 106

2.00 2.00

> 5.39 5.87

EXT DRO >C28-C36 DRO >C10-C28*

<10.0 <10.0

10.0

01/24/2018

ND ND ND

10.0 10.0

01/24/2018 01/24/2018

199 203

99.5 101

200 200

0.234 0.384

Surrogate: 1-Chlorooctadecane Surrogate: 1-Chlorooctane

87.2 % 94.5 %

37.6-147 41-142 **BTEX 8021B** Project Location: Project Number: CENTURION- LEA CO NM mg/kg

Sample ID: SP 5 @ 15 (H800243-09)

Hobbs N	
P.O. Boy	
Cliff Bru	
BBC Inte	
Analytic	

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

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

01/25/2018 CROSSROADS AWC PIPELINE 01/23/2018 NONE GIVEN

Sampling Condition: Sampling Type: Sampling Date:

01/18/2018

Soil Tamara Oldaker Cool & Intact

Sample ID: SP 6 @ 4 (H800243-10)

Project Location: Project Number: Project Name: Reported: Received:

BTEX 8021B

Analyte

CENTURION- LEA CO NM Sample Received By:

Result 107 %mg/kg mg/kg Reporting Limit 0.050 0.050 0.300 0.150 0.050 72-148 01/24/2018 01/24/2018 01/24/2018 01/24/2018 01/24/2018 Analyzed Analyzed By: AC Analyzed By: MS Method Blank B B ND ND ND 6.34 2.18 2.15 2.12 ß % Recovery 109 108 106 106 True Value QC 6.00 2.00 2.00 2.00 5.39 5.87 4.37 5.25 RPD Qualifier

Chloride, SM4500Cl-B Surrogate: 4-Bromofluorobenzene (PID Analyte <0.300 <0.150 <0.050 <0.050 <0.050 <16.0 Result Reporting Limit 16.0 01/24/2018 Analyzed Method Blank ND 416 ß % Recovery 104 True Value QC 400 3.92 RPD Qualifier

Total BTEX Total Xylenes* Ethylbenzene* Toluene* Benzene^{*}

GRO C6-C10*

<10.0

Result

Reporting Limit

Analyzed

Method Blank

ß

% Recovery

True Value QC

RPD

Qualifier

Analyzed By: MS

mg/kg

Analyte

EXT DRO >C28-C36 DRO >C10-C28*

<10.0 <10.0

10.0

01/24/2018 01/24/2018 01/24/2018

ND ND ND

> 199 203

99.5 101

200 200

0.234 0.384

10.0 10.0

Surrogate: 1-Chlorooctadecane Surrogate: 1-Chlorooctane

83.0% 90.2%

37.6-147 41-142 Chloride

TPH 8015M

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Cardinal Laboratories

78.5 % 37.6-147

Surrogate: 1-Chlorooctadecane

BTEX 8021B	mg/kg	kg	Analyzed By: MS	l By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/24/2018	ND	2.12	106	2.00	5.87	
Toluene*	<0.050	0.050	01/24/2018	ND	2.15	108	2.00	5.39	
Ethylbenzene*	<0.050	0.050	01/24/2018	ND	2.18	109	2.00	5.25	
Total Xylenes*	<0.150	0.150	01/24/2018	ND	6.34	106	6.00	4.37	
Total BTEX	<0.300	0.300	01/24/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	109 %	6 72-148							
Chloride, SM4500Cl-B	mg/kg	kg	Analyzed By: AC	l By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	01/24/2018	ND	416	104	400	3.92	
TPH 8015M	mg/kg	kg	Analyzed By: MS	l By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/24/2018	ND	203	101	200	0.384	
DRO >C10-C28*	<10.0	10.0	01/24/2018	ND	199	99.5	200	0.234	
EXT DRO >C28-C36	<10.0	10.0	01/24/2018	ND					
Surrogate: 1-Chlorooctane	85.5 %	% 41-142							

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Analytical Results For:

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

Sampling Type: Sampling Condition: Sampling Date:

01/25/2018

01/23/2018

CROSSROADS AWC PIPELINE

NONE GIVEN

CENTURION- LEA CO NM

Sample ID: SP 6 @ 5 (H800243-11)

Project Location: Project Number: Project Name: Reported: Received:

Tamara Oldaker Cool & Intact

Sample Received By:

Soil

01/18/2018

Page 13 of 31

Celey D. Keene, Lab Director/Quality Manager

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<0.300 <0.150 <0.050 0.300 0.150 0.050 01/24/2018 01/24/2018 01/24/2018 B B B 6.34 2.18

> 106 109 108 106

> 6.00 2.00 2.00 2.00

4.37

5.25 5.39 5.87

Total Xylenes* Ethylbenzene* Toluene* Benzene*

Total BTEX	<0.300	0.300	01/24/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	103 %	6 72-148							
Chloride, SM4500Cl-B	mg/kg	kg	Analyzed By: AC	1 By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	01/24/2018	ND	416	104	400	0.00	
TPH 8015M	mg/kg	kg	Analyzed By: MS	i By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/24/2018	ND	203	101	200	0.384	
DRO >C10-C28*	<10.0	10.0	01/24/2018	ND	199	99.5	200	0.234	
EXT DRO >C28-C36	<10.0	10.0	01/24/2018	ND					
Surrogate: 1-Chlorooctane	83.8 %	% 41-142							

Surrogate: 1-Chlorooctadecane

76.8 %

37.6-147

Analytical Results For:

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

01/25/2018 CROSSROADS AWC PIPELINE 01/23/2018

Sample ID: SP 6 @ 10 (H800243-12)

Project Location: Project Number: Project Name: Reported: Received:

NONE GIVEN

CENTURION- LEA CO NM

BTEX 8021B

mg/kg

Analyzed By: MS

Method Blank

% Recovery

True Value QC

RPD

Qualifier

Reporting Limit

Analyte

<0.050 <0.050 Result

0.050 0.050

01/24/2018 01/24/2018 Analyzed

ND B

2.15 2.12 ß Sample Received By: Sampling Condition: Sampling Type: Sampling Date:

Tamara Oldaker

Soil 01/18/2018

Cool & Intact

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Surrogate: 1-Chlorooctadecane Surrogate: 1-Chlorooctane GRO C6-C10*

<10.0

Result

Reporting Limit

Analyzed

Method Blank

ß

% Recovery

True Value QC

RPD

Qualifier

mg/kg

Analyte

TPH 8015M Chloride Chloride, SM4500Cl-B

Analyte

Result 16.0

Reporting Limit

Analyzed

Method Blank

ß

% Recovery

True Value QC

Qualifier

16.0

01/24/2018

ND

416

104

400

0.00 RPD

Analyzed By: MS

Surrogate: 4-Bromofluorobenzene (PID

107 %

72-148

mg/kg

Analyzed By: AC

Total BTEX Total Xylenes* Ethylbenzene* Toluene* Benzene^{*}

<0.300 <0.150 <0.050 <0.050 <0.050 Result

0.300 0.150 0.050

01/24/2018 01/24/2018 01/24/2018 01/24/2018 01/24/2018 Analyzed

B B ND ND ND

> 6.34 2.18 2.15 2.12

106

6.00

4.37 5.25

109 108 106

2.00 2.00

> 5.39 5.87

EXT DRO >C28-C36 DRO >C10-C28*

<10.0 <10.0

10.0

01/24/2018 01/24/2018 01/24/2018

ND ND ND

> 199 203

99.5 101

200 200

0.234 0.384

10.0 10.0

82.2 % 75.2%

37.6-147 41-142

CROSSROADS AWC PIPELINE CENTURION- LEA CO NM Analyzed By: MS Sample Received By: Sampling Condition: Sampling Type:

Sample ID: SP 6 @ 15 (H800243-13)

Project Location: Project Number: Project Name: Reported: Received:

BTEX 8021B

mg/kg

Reporting Limit

Method Blank

ß

% Recovery

True Value QC

RPD

Qualifier

2.00

0.050 0.050 Analyte

Soil Tamara Oldaker Cool & Intact

01/18/2018

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Analytical Results For:

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Fax To: Hobbs NM, 88241

Sampling Date:

01/25/2018

NONE GIVEN

01/23/2018
Page 15 of 31

Celey D. Keene, Lab Director/Quality Manager

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GRO C6-C10*

<10.0

Result

Reporting Limit

Analyzed

Method Blank

ß

% Recovery

True Value QC

RPD

Qualifier

Analyte

EXT DRO >C28-C36 DRO >C10-C28*

<10.0 <10.0

10.0

01/24/2018 01/24/2018 01/24/2018

ND ND ND

> 199 203

99.5 101

200 200

0.234 0.384

10.0 10.0

Surrogate: 1-Chlorooctadecane Surrogate: 1-Chlorooctane

83.7% 90.5 %

37.6-147 41-142 Chloride

<16.0 Result

16.0

01/24/2018

ND

416

104

400

0.00

Qualifier

Analyzed By: MS

mg/kg

Chloride, SM4500Cl-B

Analyte

Surrogate: 4-Bromofluorobenzene (PID

% 601

72-148

mg/kg

Reporting Limit

Analyzed

Method Blank

ß

% Recovery

Analyzed By: AC

Total BTEX Total Xylenes* Ethylbenzene* Toluene* Benzene^{*}

<0.300 <0.150 <0.050 <0.050 <0.050 Result

0.300 0.150 0.050

01/24/2018 01/24/2018 01/24/2018 01/24/2018 01/24/2018

B B ND ND ND

> 6.34 2.18 2.15 2.12

106

6.00

4.37 5.25

109 108 106

2.00 2.00

> 5.39 5.87

TPH 8015M

P.O. Box 805 Cliff Brunson

Fax To:

Project Location: Project Number: 01/25/2018 CROSSROADS AWC PIPELINE 01/23/2018 CENTURION- LEA CO NM NONE GIVEN

Project Name: Reported: Received:

Sample ID: SP 9 @ 4 (H800243-14)

BTEX 8021B

mg/kg

Reporting Limit

Analyzed

Method Blank

ß

% Recovery

True Value QC

RPD

Qualifier

2.00

Analyzed By: MS

0.050 0.050 Analyte

Sample Received By: Sampling Condition: Sampling Type: Sampling Date:

Soil

01/19/2018 Tamara Oldaker Cool & Intact

BBC International, Inc. Hobbs NM, 88241 (575) 397-0397

True Value QC RPD

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01/25/2018 NONE GIVEN CROSSROADS AWC PIPELINE 01/23/2018 CENTURION- LEA CO NM

Project Name:

Reported: Received:

Project Location: Project Number:

Sample Received By:

BTE Sample ID: SP 9 @ 5 (H800243-15)

заприети: эк э @ э (полотно-тэ)	(CT_								
BTEX 8021B	mg/kg	kg	Analyzed By: MS	l By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/24/2018	ND	2.12	106	2.00	5.87	
Toluene*	<0.050	0.050	01/24/2018	ND	2.15	108	2.00	5.39	
Ethylbenzene*	<0.050	0.050	01/24/2018	ND	2.18	109	2.00	5.25	
Total Xylenes*	<0.150	0.150	01/24/2018	ND	6.34	106	6.00	4.37	
Total BTEX	<0.300	0.300	01/24/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	102 %	% 72-148							
Chloride, SM4500Cl-B	mg/kg	kg	Analyzed By: AC	l By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	01/24/2018	ND	416	104	400	0.00	
TPH 8015M	mg/kg	kg	Analyzed By: MS	By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GR0 C6-C10*	<10.0	10.0	01/24/2018	ND	203	101	200	0.384	

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Analytical Results For:

Cool & Intact

Soil 01/19/2018

Tamara Oldaker

Sampling Condition: Sampling Type: Sampling Date:

Surrogate: 1-Chlorooctadecane Surrogate: 1-Chlorooctane

82.0%89.3 %

37.6-147 41-142 EXT DRO >C28-C36 DRO >C10-C28*

<10.0 <10.0

01/24/2018 01/24/2018

B D

199

99.5

200

0.234

10.0 10.0

Page 17 of 31

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GRO C6-C10*

<10.0

Result

Reporting Limit

Analyzed

Method Blank

ß

% Recovery

True Value QC

RPD

Qualifier

Analyte

EXT DRO >C28-C36 DRO >C10-C28*

<10.0 <10.0

10.0

01/24/2018 01/24/2018 01/24/2018

ND ND ND

> 199 203

99.5 101

200 200

0.234 0.384

10.0 10.0

85.8 % 78.8 %

37.6-147 41-142

Surrogate: 1-Chlorooctadecane Surrogate: 1-Chlorooctane Chloride

<16.0 Result

16.0

01/24/2018

ND

416

104

400

0.00 RPD

Analyzed By: MS

mg/kg

Chloride, SM4500Cl-B

Analyte

Surrogate: 4-Bromofluorobenzene (PID

111 %

72-148

mg/kg

Reporting Limit

Analyzed

Method Blank

ß

% Recovery

True Value QC

Qualifier

Analyzed By: AC

Total BTEX Total Xylenes* Ethylbenzene* Toluene* Benzene^{*}

<0.300 <0.150 <0.050 <0.050 <0.050 Result

0.300 0.150 0.050

01/24/2018 01/24/2018 01/24/2018 01/24/2018 01/24/2018

B B ND ND ND

> 6.34 2.18 2.15 2.12

106

6.00

4.37 5.25

109 108 106

2.00 2.00

> 5.39 5.87

TPH 8015M

01/25/2018 01/23/2018 Fax To: Hobbs NM, 88241 (575) 397-0397

CROSSROADS AWC PIPELINE NONE GIVEN

Sample ID: SP 9 @ 10 (H800243-16)

Project Location: Project Number: Project Name: Reported: Received:

CENTURION- LEA CO NM

BTEX 8021B

mg/kg

Reporting Limit

Analyzed

Method Blank

ß

% Recovery

True Value QC

RPD

Qualifier

2.00

Analyzed By: MS

0.050 0.050 Analyte

Sample Received By: Sampling Condition: Sampling Type: Sampling Date:

Tamara Oldaker

Soil

Cool & Intact

01/19/2018

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Surrogate: 1-Chlorooctadecane Surrogate: 1-Chlorooctane GRO C6-C10*

<10.0

Result

Reporting Limit

Analyzed

Method Blank

ß

% Recovery

True Value QC

RPD

Qualifier

Analyte

EXT DRO >C28-C36 DRO >C10-C28*

<10.0 <10.0

10.0

01/24/2018 01/24/2018 01/24/2018

ND ND ND

> 199 203

99.5 101

200 200

0.234 0.384

10.0 10.0

86.2 % 79.5 %

37.6-147 41-142 Chloride

<16.0 Result

16.0

01/24/2018

ND

416

104

400

0.00 RPD

Analyzed By: MS

mg/kg

Chloride, SM4500Cl-B

Analyte

Surrogate: 4-Bromofluorobenzene (PID

105 %

72-148

mg/kg

Reporting Limit

Analyzed

Method Blank

ß

% Recovery

True Value QC

Qualifier

Analyzed By: AC

Total BTEX Total Xylenes* Ethylbenzene* Toluene* Benzene^{*}

<0.300 <0.150 <0.050 <0.050 <0.050 Result

0.300 0.150 0.050

01/24/2018 01/24/2018 01/24/2018 01/24/2018 01/24/2018

B B ND ND ND

> 6.34 2.18 2.15 2.12

106

6.00

4.37 5.25

109 108 106

2.00 2.00

> 5.39 5.87

TPH 8015M

01/25/2018 CROSSROADS AWC PIPELINE 01/23/2018 CENTURION- LEA CO NM NONE GIVEN Fax To:

Sample ID: SP 9 @ 15 (H800243-17)

Project Location: Project Number: Project Name: Reported: Received:

BTEX 8021B

mg/kg

Reporting Limit

Analyzed

Method Blank

ß

% Recovery

True Value QC

RPD

Qualifier

2.00

Analyzed By: MS

0.050 0.050 Analyte

Sample Received By:

Soil

Tamara Oldaker Cool & Intact

(575) 397-0397 Sampling Condition: Sampling Type: Sampling Date:

01/19/2018

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

Analytical Results For:

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GRO C6-C10*

<10.0

Result

Reporting Limit

Analyzed

Method Blank

ß

% Recovery

True Value QC

RPD

Qualifier

32.0 Result

16.0

01/24/2018

ND

416

104

400

0.00 RPD

Analyzed By: MS

mg/kg

Analyte

TPH 8015M Chloride Chloride, SM4500Cl-B

Analyte

Surrogate: 4-Bromofluorobenzene (PID

105 %

72-148

mg/kg

Analyzed By: AC

Reporting Limit

Analyzed

Method Blank

ß

% Recovery

True Value QC

Qualifier

Total BTEX Total Xylenes* Ethylbenzene* Toluene* Benzene^{*}

<0.300 <0.150 <0.050 <0.050 <0.050 Result

0.300 0.150 0.050

01/24/2018 01/24/2018 01/24/2018 01/24/2018 01/24/2018

B B ND ND ND

> 6.34 2.18 2.15 2.12

106

6.00

4.37 5.25

109 108 106

2.00 2.00

> 5.39 5.87

EXT DRO >C28-C36 DRO >C10-C28*

<10.0 <10.0

10.0

01/24/2018 01/24/2018 01/24/2018

ND ND ND

> 199 203

99.5 101

200 200

0.234 0.384

10.0 10.0

Surrogate: 1-Chlorooctadecane Surrogate: 1-Chlorooctane

86.0% 93.3 %

37.6-147 41-142

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

01/25/2018 CROSSROADS AWC PIPELINE 01/23/2018 CENTURION- LEA CO NM NONE GIVEN

Sample ID: SP 10 @ 4 (H800243-18)

Project Location: Project Number: Project Name: Reported: Received:

BTEX 8021B

mg/kg

Reporting Limit

Analyzed

Method Blank

ß

% Recovery

True Value QC

RPD

Qualifier

2.00

Analyzed By: MS

0.050 0.050 Analyte

Sample Received By: Sampling Condition: Sampling Type: Sampling Date:

Tamara Oldaker

Soil

Cool & Intact

01/19/2018



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aboratories

Analytical Results For:

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

01/23/2018

Received:

Sample Received By: Sampling Condition:

Fax To:

Soil

Cool & Intact

Sampling Type: Sampling Date:

01/19/2018

Tamara Oldaker

01/24/2018 01/24/2018 01/24/2018 Method Blank B B ND 2.18 2.15 2.12 ß

<0.050 0.050

<0.150 <0.050 0.150 0.050 01/24/2018 B

Ethylbenzene* Toluene* Benzene*

Surrogate: 4-Bromofluorobenzene (PID	108 %	6 72-148							
Chloride, SM4500Cl-B	mg/kg	kg	Analyzed By: AC	i By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	01/24/2018	ND	416	104	400	0.00	
TPH 8015M	mg/kg	kg	Analyzed By: MS	1 By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/24/2018	ND	203	101	200	0.384	
DRO >C10-C28*	<10.0	10.0	01/24/2018	ND	199	99.5	200	0.234	
EXT DRO >C28-C36	<10.0	10.0	01/24/2018	ND					
Surrogate: 1-Chlorooctane	85.0 %	% 41-142							

Surrogate: 1-Chlorooctadecane

78.4 %

37.6-147

Total BTEX Total Xylenes* <0.300 0.300

01/24/2018

B

6.34

106 109 108 106

6.00 2.00 2.00 2.00

4.37

5.25 5.39 5.87

<0.050 Result Reporting Limit 0.050 Analyzed Sample ID: SP 10 @ 5 (H800243-19)

Project Location:

BTEX 8021B

mg/kg

Analyzed By: MS

% Recovery

True Value QC

RPD

Qualifier

Analyte

Project Number: Project Name: Reported: 01/25/2018 NONE GIVEN CROSSROADS AWC PIPELINE

CENTURION- LEA CO NM



4 N

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BBC International, Inc. Fax To: P.O. Box 805 Cliff Brunson

CROSSROADS AWC PIPELINE 01/25/2018 NONE GIVEN 01/23/2018 CENTURION- LEA CO NM

Project Name:

Reported: Received:

Project Location: Project Number:

Sample Received By:

Sample ID: SP 10 @ 10 (H800243-20)	243-20)								
BTEX 8021B	mg/kg	'kg	Analyze	Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/24/2018	ND	2.12	106	2.00	5.87	
Toluene*	<0.050	0.050	01/24/2018	ND	2.15	108	2.00	5.39	
Ethylbenzene*	<0.050	0.050	01/24/2018	ND	2.18	109	2.00	5.25	
Total Xylenes*	<0.150	0.150	01/24/2018	ND	6.34	106	6.00	4.37	
Total BTEX	<0.300	0.300	01/24/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	108~%	% 72-148							
Chloride, SM4500Cl-B	mg/kg	'kg	Analyze	Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	01/24/2018	ND	416	104	400	0.00	
TPH 8015M	mg/kg	'kg	Analyze	Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/24/2018	ND	203	101	200	0.384	
DRO >C10-C28*	<10.0	10.0	01/24/2018	ND	199	99.5	200	0.234	
EXT DRO >C28-C36	<10.0	10.0	01/24/2018	ND					

CARDINAL aboratories

Analytical Results For:

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

Hobbs NM, 88241 (575) 397-0397

Tamara Oldaker

Soil 01/19/2018

Cool & Intact

Sampling Type: Sampling Condition: Sampling Date:

6 2 -0.0 TO.0

Surrogate: 1-Chlorooctadecane 76.7% Surrogate: 1-Chlorooctane

83.6 %

37.6-147 41-142



Page 22 of 31

Celey D. Keene, Lab Director/Quality Manager

4

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Cardinal Laboratories

GRO C6-C10*

<10.0

Result

Reporting Limit

Analyzed

Method Blank

ß

% Recovery

True Value QC

RPD

Qualifier

Analyte

EXT DRO >C28-C36 DRO >C10-C28*

<10.0 <10.0

10.0

01/24/2018 01/24/2018 01/24/2018

ND ND ND

> 199 203

99.5

200 200

0.234 0.384

101

10.0 10.0

85.5 % 77.7%

37.6-147 41-142

Surrogate: 1-Chlorooctadecane Surrogate: 1-Chlorooctane Chloride

<16.0 Result

16.0

01/24/2018

ND

416

104

400

0.00

Analyzed By: MS

mg/kg

Chloride, SM4500Cl-B

Analyte

Surrogate: 4-Bromofluorobenzene (PID

112 %

72-148

mg/kg

Analyzed By: AC

Reporting Limit

Analyzed

Method Blank

ß

% Recovery

True Value QC

RPD

Qualifier

Total BTEX Total Xylenes* Ethylbenzene* Toluene* Benzene^{*}

<0.300 <0.150 <0.050 <0.050 <0.050 Result

0.300 0.150 0.050

01/24/2018 01/24/2018 01/24/2018 01/24/2018 01/24/2018

B B ND ND ND

> 6.41 2.07 2.05 2.00

107 104 103

6.00 2.00

0.203 0.664 0.742 0.282

TPH 8015M

*=Accredited Analyte

01/25/2018 CROSSROADS AWC PIPELINE 01/23/2018 Fax To:

Sample Received By: Sampling Condition: Sampling Type:

Soil

Project Location: CENTURION- LEA CO NM Project Number: Project Name: Reported: Received:

NONE GIVEN

Sample ID: SP 10 @ 15 (H800243-21) **BTEX 8021B** mg/kg

Analyte

Reporting Limit

Analyzed

Method Blank

ß

% Recovery

True Value QC

RPD

Qualifier

99.9

2.00 2.00

Analyzed By: MS

0.050 0.050

Analytical Results For: BBC International, Inc. P.O. Box 805 Cliff Brunson

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

_aboratories

Hobbs NM, 88241

Cool & Intact

01/19/2018

Tamara Oldaker

(575) 397-0397 Sampling Date:



Analytical Results For:

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

Project Location: Project Number: CROSSROADS AWC PIPELINE 01/25/2018 NONE GIVEN 01/23/2018 CENTURION- LEA CO NM

Project Name:

Reported: Received:

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Tamara Oldaker Soil Cool & Intact

01/22/2018

Sample ID: SP 11 @ 4 (H800243-22)

BTEX 8021B	mg/kg	'kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	01/24/2018	ND	2.00	99.9	2.00	0.282	
Toluene*	3.52	0.500	01/24/2018	ND	2.05	103	2.00	0.742	
Ethylbenzene*	4.82	0.500	01/24/2018	ND	2.07	104	2.00	0.664	
Total Xylenes*	23.3	1.50	01/24/2018	ND	6.41	107	6.00	0.203	
Total BTEX	31.6	3.00	01/24/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	127 %	% 72-148							
Chloride, SM4500Cl-B	mg/kg	'kg	Analyzed By: AC	1 By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	01/24/2018	ND	416	104	400	0.00	
TPH 8015M	mg/kg	kg	Analyzed By: MS	d By: MS					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	751	10.0	01/24/2018	ND	203	101	200	0.384	
DRO >C10-C28*	2950	10.0	01/24/2018	ND	199	99.5	200	0.234	
EXT DRO >C28-C36	311	10.0	01/24/2018	ND					
Surrogate: I-Chlorooctane	180 %	% 41-142							

Cardinal Laboratories

Surrogate: 1-Chlorooctadecane

196 %

37.6-147

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11 4 N

Celey D. Keene, Lab Director/Quality Manager

Page 23 of 31



Analytical Results For:

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

01/23/2018 01/25/2018 CROSSROADS AWC PIPELINE NONE GIVEN CENTURION- LEA CO NM

Project Name:

Received: Reported:

Project Number: Project Location:

> Sampling Date: Sampling Type: Sampling Condition: Sample Received By:

Soil Cool & Intact Tamara Oldaker 01/22/2018

Sample ID: SP 11 @ 5 (H800243-23)

BTEX 8021B	mg/kg	kg	Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/24/2018	ND	2.00	99.9	2.00	0.282	
Toluene*	<0.050	0.050	01/24/2018	ND	2.05	103	2.00	0.742	
Ethylbenzene*	<0.050	0.050	01/24/2018	ND	2.07	104	2.00	0.664	
Total Xylenes*	0.348	0.150	01/24/2018	ND	6.41	107	6.00	0.203	
Total BTEX	0.348	0.300	01/24/2018	ND					
Surrogate: 4-Bromofluorobenzene (PIL)	119 %	% 72-148							
Chloride, SM4500Cl-B	mg/kg	kg	Analyzed By: AC	1 By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	01/24/2018	ND	416	104	400	0.00	
TPH 8015M	mg/kg	kg	Analyzed By: MS	i By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	26.8	10.0	01/24/2018	ND	203	101	200	0.384	
DR0 >C10-C28*	360	10.0	01/24/2018	ND	199	99.5	200	0.234	
EXT DRO >C28-C36	56.2	10.0	01/24/2018	ND					
Surrogate: 1-Chlorooctane	99.7 %	% 41-142							
1									

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Surrogate: 1-Chlorooctadecane

101 %

37.6-147

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11 4 N

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

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

Fax To: P.O. Box 805 Cliff Brunson Hobbs NM, 88241

01/25/2018 CROSSROADS AWC PIPELINE 01/23/2018 CENTURION- LEA CO NM NONE GIVEN

Sampling Date:

Tamara Oldaker Cool & Intact

Sample Received By: Sampling Condition: Sampling Type:

Soil

01/22/2018

Sample ID: SP 11 @ 6 (H800243-24)

Project Location: Project Number: Project Name: Reported: Received:

BTEX 8021B

mg/kg

Reporting Limit

Analyzed

Method Blank

ß

% Recovery

True Value QC

RPD

Qualifier

99.9

2.00 2.00

Analyzed By: MS

0.050 0.050 Analyte

(575) 397-0397

BBC International, Inc.

aboratories

True Value QC 400 0.00 RPD Qualifier

GRO C6-C10*

<10.0

Result

Reporting Limit

Analyzed

Method Blank

ß

% Recovery

True Value QC

RPD

Qualifier

Analyte

EXT DRO >C28-C36 DRO >C10-C28*

<10.0 <10.0

10.0

01/24/2018 01/24/2018 01/24/2018

ND ND ND

> 199 203

99.5

200 200

0.234 0.384

101

10.0 10.0

Surrogate: 1-Chlorooctadecane Surrogate: 1-Chlorooctane

81.8% 88.6 %

37.6-147 41-142 Chloride

<16.0 Result

16.0

01/24/2018

ND

416

104

Analyzed By: MS

mg/kg

Chloride, SM4500Cl-B

Analyte

Surrogate: 4-Bromofluorobenzene (PID

112 %

72-148

mg/kg

Analyzed By: AC

Reporting Limit

Analyzed

Method Blank

ß

% Recovery

Total BTEX Total Xylenes* Ethylbenzene* Toluene* Benzene^{*}

<0.300 <0.150 <0.050 <0.050 <0.050 Result

0.300 0.150 0.050

01/24/2018 01/24/2018 01/24/2018 01/24/2018 01/24/2018

B B ND ND ND

> 6.41 2.07 2.05 2.00

107 104 103

6.00 2.00

0.203 0.664 0.742 0.282

TPH 8015M



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

Analytical Results For:

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

BBC International, Inc.

aboratories

01/25/2018 NONE GIVEN CROSSROADS AWC PIPELINE 01/23/2018 CENTURION- LEA CO NM

Sample ID: SP 11 @ 11 (H800243-25)

Project Location: Project Number: Project Name: Reported: Received:

BTEX 8021B

mg/kg

Reporting Limit

Analyzed

Method Blank

ß

% Recovery

True Value QC

RPD

Qualifier

99.9

2.00 2.00

Analyzed By: MS

0.050 0.050 Analyte

Sample Received By: Sampling Condition: Sampling Type: Sampling Date:

Cool & Intact

Tamara Oldaker

Soil

01/22/2018

GRO C6-C10*

<10.0

Result

Reporting Limit

Analyzed

Method Blank

ß

% Recovery

True Value QC

RPD

Qualifier

mg/kg

Analyte

TPH 8015M Chloride Chloride, SM4500Cl-B

Analyte

Result 16.0

Reporting Limit

Analyzed

Method Blank

ß

% Recovery

True Value QC

RPD

Qualifier

16.0

01/24/2018

ND

416

104

400

0.00

Analyzed By: MS

Surrogate: 4-Bromofluorobenzene (PID

115 %

72-148

mg/kg

Analyzed By: AC

Total BTEX Total Xylenes* Ethylbenzene* Toluene* Benzene^{*}

<0.300 <0.150 <0.050 <0.050 <0.050 Result

0.300 0.150 0.050

01/24/2018 01/24/2018 01/24/2018 01/24/2018 01/24/2018

B B ND ND ND

> 6.41 2.07 2.05 2.00

107 104 103

6.00 2.00

0.203 0.664 0.742 0.282

EXT DRO >C28-C36 DRO >C10-C28*

<10.0 <10.0

10.0

01/24/2018 01/24/2018 01/24/2018

ND ND ND

> 199 203

99.5

200 200

0.234 0.384

101

10.0 10.0

Surrogate: 1-Chlorooctadecane Surrogate: 1-Chlorooctane

72.7% 78.5 %

37.6-147 41-142



4

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Surrogate: 1-Chlorooctadecane Surrogate: 1-Chlorooctane 82.4 % 76.1%

37.6-147 41-142 GRO C6-C10*

<10.0

Result

Reporting Limit

Analyzed

Method Blank

ß

% Recovery

True Value QC

RPD

Qualifier

mg/kg

Analyte

TPH 8015M Chloride Chloride, SM4500Cl-B

Analyte

Result 16.0

Reporting Limit

Analyzed

Method Blank

ß

% Recovery

True Value QC

RPD

Qualifier

16.0

01/24/2018

ND

416

104

400

0.00

Analyzed By: MS

Surrogate: 4-Bromofluorobenzene (PID

113 %

72-148

mg/kg

Analyzed By: AC

Total BTEX Total Xylenes* Ethylbenzene* Toluene* Benzene^{*}

<0.300 <0.150 <0.050 <0.050 <0.050 Result

0.300 0.150 0.050

01/24/2018 01/24/2018 01/24/2018 01/24/2018 01/24/2018

B B ND ND ND

> 6.41 2.07 2.05 2.00

107 104 103

6.00 2.00

0.203 0.664 0.742 0.282

EXT DRO >C28-C36 DRO >C10-C28*

<10.0 <10.0

10.0

01/24/2018 01/24/2018 01/24/2018

ND ND ND

> 199 203

99.5

200 200

0.234 0.384

101

10.0 10.0

Fax To:

(575) 397-0397

P.O. Box 805 Cliff Brunson

Hobbs NM, 88241

aboratories

Analytical Results For:

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

BBC International, Inc.

01/25/2018 NONE GIVEN CROSSROADS AWC PIPELINE 01/23/2018 CENTURION- LEA CO NM

Sample ID: SP 11 @ 16 (H800243-26)

Project Location: Project Number: Project Name: Reported: Received:

BTEX 8021B

mg/kg

Reporting Limit

Analyzed

Method Blank

ß

% Recovery

True Value QC

RPD

Qualifier

99.9

2.00 2.00

Analyzed By: MS

0.050 0.050 Analyte

Sample Received By:

Soil Tamara Oldaker Cool & Intact

Sampling Condition: Sampling Type: Sampling Date:

01/22/2018

2 Prop N

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Cardinal Laboratories

r.

Samples reported on an as received basis (wet) unless otherwise noted on report Chloride by SM4500Cl-B does not require samples be received at or below 6°C

¥	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
-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.
1-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
C	Analyte NOT DETECTED at or above the reporting limit

Notes and Definitions

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

-	
B)	RDINAL LABORATORIES
C CA	101 East Marland, Hobbs, NM 88240

101 East Marland, Hobbs, NM 88240		ANALYSIS REQUEST
(505) 393-2326 FAX (505) 000	BILL TO	
any Name: BBC International, Inc.	P.O. #:	
t Manager: Cliff Brunson	Company:	
ess: P.O. Box 805 State: NM Zip: 88241	Attn: Jennie 61 Very	
Hobbs FTF 207 0397	Address:	
re #: 575-397-6388 Fax #: 575-397-0397	City:	
Project Owner: Collocation	State: Zip:	
act Name: Crossrouds AWE Pigeline	Phone #:	
ect Location:	Fax #:	\downarrow
pler Name: Jeff Ur melas MATE	IX PRESERV. SAMPLING	
		4
	μi J J J	
ab I.D. Sample I.D. BRY BILL I	OIL OTHER:	
ab I.D. Sample 1.D. Brain and Alexandree Ale	5 0 0 2 0 0 UNIL 10:45 V V V	
800242 GI 0 10	VIIIIVVV	
ISP2018 GIV	V DISS V V V	
3583010	V ISAG VVV	
CLORE C TIT	V V D3.03 V V V	
ESP Y Q10 GIL	V 111818 9:30 V V	
GSP SQY GIL	1 10:01 V V	
8 58 5 0 10 61	1 12:59 1	
9585615	/ Solution and the limited to the amount paid by the client for the	
P S S S S S S S S S S S S S S S S S	sed in contract or for, share by Cardinal within 30 days after completion of the approace e in writing and received by Cardinal within 30 days after completion of the approace	
EASE NOTE: Liability and Damages. Cardinal's liability and cleans a Excerner shall be deemed waived unless mais alyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless in including without limitation, business including without limitation, business including subscreensors arriving out of or related to the performance of services hereunder by Cardinal, regardless of whet includes of subscreensors arriving out of or related to the performance of services hereunder by Cardinal, regardless of whet includes of subscreensors arriving out of or related to the performance of services hereunder by Cardinal, regardless of whete performance of the services here the services here the cardinal services here the services	Interruptions, loss of dec of the above stated reasons of otherwise her such claim is based upon any of the above stated reasons of otherwise Phone Result: Yes Eacy Regult: Yes	No Add'l Phone #:
Received by.	Fax Result: Li res	A Lit A
Relinquished By: 1/2/118 Time; man July	Mining Ar	ich alins
Drug Descived By	Calla b	Marci a la
Relinguished By: 1.23.18	ava Warton	ush. de 1230 me head space.
In the In the sale	ple Condition CHECKEDBY: Internet (Initials)	1 10000
	Ves Tres 50 #25 + as 80	me head space.
	No No	
Sampler - UPS - Bus - Other: Orrelation Die Songer	hanges to 505-393-2476	

† Cardinal cannot accept

5

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST



	(505) 393-2326 FAX (505) 393-2476	5						_			-			-	ANAL	SIS I	REQUE	ST		_
ompany Name	BBC International, Inc.								BIL	LTO	-	1	T							
							P.0							1			1	1 1	1 1	
	r: Cliff Brunson						Cor	npany	V: K	560								1 1		0
ddress: P.O.	Box 805	-	00	044		-	Att		Cil	Key								1 1		
ity: Hobbs	State: NM	Zip:	88	241		-	-											1 1		
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ampler Name:	Jeff Ornelas			-	MATR	XIX		PRES	ERV.	SAMPLI	NG			-						
FOR LAB USE ONLY		a.		T	TT				1-3					X						
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PLEASE NOTE: Liability and Damages. Cardinate liability and client's exclusive remedy for any claim ansing whether based in contract or fort, shall be image to the annual ways after completion of the applicable places. Cardinate liability and client's exclusive remedy for any claim ansing whether to add a share completion of the applicable places. Cardinate liability and client's exclusive remedy for any claim ansing whether to add a share completion of the applicable places.

analyses. All claims including those for negligence and any other cause water water and service. In no event shall Cardinal be table for incidental or consequental damages, including service.	without limitation, business interruptions, loss of use, or loss of productions ardinal, regardless of whether such claim is based upon any of the above stated re-	Phone Result: Q Ye		
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† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 31 of 31

101 East Marland, Hobbs, NM 88240

	FAX (505) 393-2476				1	-	BI	LL TO		-			A	ALY	SIS R	EQUE	ST		_	
Company Name: BBC Interna					P.C). #:	211													
Project Manager: Cliff Brunsc	on				-	mpa		SPC												
Address: P.O. Box 805	NIM		000	041	At	-	C	Iver												
City: Hobbs	State: NM				1	dres	0													
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	ability and client's exclusive remedy for nd any other cause whatsoever shall be ental or consequential damages, include performance of services hereunder by	g without Cardinal	limitatio	on, business interruption ess of whether such cl	ing loop	and use	or loss o	I profits incurred by	client, its subsid	Saries.	DY				hone #:		_			
Relinquished By: Relinquished By: Fluttic Amery Delivered By: (Circle One Sampler - UPS - Bus - Other	Date: 113218 Time: 113318 Time: 113100 Date: 13100 13100 13100	Rec	Leive	ed By: ed By: Sample Cor Cool Inta	~e a ditio	7 A	CHE	CKED BY: nitials)	Fax Resi	ult:	5			Add'l F		edd 1	122	2.		

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

pOY1719551648	
nOY1719551654	
1RP-4756 FOY1719551546	* Attach Additional Sheets If Necessary
see attached directive	Date: 07/06/2017 Phone: 432-699-4338
Conditions of Approval: Attached:	E-mail Address: Clayton_McDonald@oxy.com
Approval Date: 7/14/2017 Expiration Date:	Title: ENVIRONMENTAL SPECIALIST
Approved by Environmental Specialist:	Printed Name: CLAYTON MCDONALD
OIL CONSERVATION DIVISION	Signature: NANN Jon Al
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.	I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the oper operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, h environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance or local laws and/or regulations.
	Describe Area Affected and Cleanup Action Taken. Pasture was area affected. Clean-up will follow maintenance.
By Olivia Yu at 2:10 pm, Jul 14, 2017	Describe Cause of Problem and Remedial Action Taken. Internal Corrosion caused leak. Pipe replacement in progress.
DECEIVED	If a Watercourse was Impacted, Describe Fully,* No watercourse impacted
If YES, Volume Impacting the Watercourse.	Was a Watercourse Reached? Yes X No
Date and Hour 7/2/17 12:38 PM	
om?	Was Immediate Notice Given? 🛛 Yes 🗖 No 🗖 Not Required
7/1/17 11:50 AM Date and Hour of Discovery: Jul 1, 2017 12:00 AM	Source of Release INTERNAL Date and Hour of Occurrence: CORROSIO
Volume of Release 25 BARRELS Volume Recovered 2 BARRELS	Type of Release Sweet Crude Oil
NATURE OF RELEASE	NATUR
Longitude -103.11006	Latitude 33.25647
North/South Line Feet from the East/West Line County LEA	Unit Letter Section Township Range Ecet from the D 28 12S 38E
LOCATION OF RELEASE	LOCATI
API No.	Surface Owner Jeff & Jenna Decker Mineral Owner
Facility Description Crossroads-AWC 8" ML	Facility Name Crossroads - Texas State Line
Telephone No. 432-699-4338	Address P O Box 51790 Midland, TX 79710
Contact CLAYTON MCDONALD	Name of Company Centurion Pipeline LP
OPERATOR Action Final Report Final Report	Release Notification
Santa Fe, NM 87505 RECEIVED	Francis Dr., Santa Fe, NM 87505
Oil Conservation Division JUL 1 (Southil 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.	87410
Energy Minerals and Natural Resources BS Revised August 8, 2011	1625 N. French Dr., Hobbs, NM 88240 <u>District II</u> 811 S. First St., Artesia, NM 88210



P.O. Box 51790 Midland, Texas 79710 Phone (432) 686-1482 Fax (432) 686-1425

HOBBS OCD

July 06, 2017

RECEIVED

New Mexico Oil Conservation Division Dist 1 1625 N French Dr. Hobbs, New Mexico 88240

Leak located at referenced Legal Description: Section: 28, Township: 12S, Range: 38E LEA County, NEW MEXICO Centurion Leak Number CP55139857

51790 ; Midland, TX 79710 ; Phone (432) 686-1482 or Fax (432) 686-1425. Attached for further handling, is the NMC141 pertaining to the leak that occurred on 7/1/17 in, Section: 28, Township: 12S, Range: 38E. Any correspondence regarding this leak needs to be directed to Centurion Pipeline L.P.; P.O. Box

If further information is required, please advise.

Sincerely,

ang and alle v

CLAYTON MCDONALD ENVIRONMENTAL SPECIALIST 432-699-4338

Attachments

Operator/Responsible Party,

contained on that form has been entered into our incident database and remediation case number _1RP-4756 ____ has been The OCD has received the form C-141 you provided on _7/10/2017_ regarding an unauthorized release. The information assigned. Please refer to this case number in all future correspondence.

health and the environment. Our regulations (19.15.29.11 NMAC) state the following, It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public

plan submitted to and approved by the division or with an abatement plan submitted in accordance with health or the environment. The responsible person shall address releases in accordance with a remediation The responsible person shall complete division-approved corrective action for releases that endanger public 19.15.30 NMAC. [emphasis added]

investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant with this release be submitted to the OCD District _1_ office in __Hobbs_ upon the efforts it oversees. As such, the Division is requiring a workplan for the characterization of impacts associated characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate justification. Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all __ on or before _8/14/2017_. If and when

adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude release characterization workplan and subsequent reporting: property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the

and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, within the impacted area and beyond. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must

encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or these values must be demonstrated as existing above the water table. Method 300. Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents As above, this is not an exclusive list of potential contaminants and can be modified. Vertical

Nominal detection limits for field and laboratory analyses must be provided

• Composite sampling is not generally allowed.

the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. • Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including

Copies of the actual laboratory results must be provided including chain of custody documentation. for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated).

assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable least one groundwater monitoring well to be installed in the area of likely maximum contamination. • Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an

must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide results must be provided including chain of custody documentation. laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and extents of that contamination. If groundwater contamination is encountered, an additional investigation workplan may be required to determine the Groundwater and/or surface water samples, if any, must be analyzed by a competent

and fieldwork is recommended, especially if unusual circumstances are encountered. not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring

of remedial efforts must still be provided to the OCD before any release incident will be closed. removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by

Jim Griswold

OCD Environmental Bureau Chief 1220 South St. Francis Drive Santa Fe, New Mexico 87505 505-476-3465 jim.griswold@state.nm.us