WORLD-WIDE ENVIRONMENTAL SPECIALISTS



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> **RECEIVED** By JKeyes at 7:26 am, Nov 23, 2015

# COG – PATTERSON B-52 FED COM #2H

By JKeyes at 7:26 am, Nov 23, 2015

# **REMEDIATION PLAN**

COG will excavate the spill area as depicted on the following site diagram. The entire spill area will be excavated to a depth of 6 inches as depicted. This battery was burned due to a lightning strike and the damaged tanks and liner has been removed. The site will be backfilled with clean soil and rebuilt.

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





# **Groundwater Plot**

# Concho Patterson B-52 Fed Com #2H





Section Quarters

# Concho Patterson B-52 Fed Com #2H



#### Laboratory Analytical Results Summary Patterson B-52 Fed Com #2H

		Sample	SP1 @ 1'	SP1 @ 2'	SP1 @ 3'	SP1 @ 4'
Analyte	Method	Date	11/5/15	11/5/15	11/5/15	11/5/15
			mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	<0.050	< 0.050	< 0.050
Toluene	BTEX 8021B		< 0.050	<0.050	< 0.050	< 0.050
Ethylbenzene	BTEX 8021B		< 0.050	< 0.050	< 0.050	< 0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		< 0.300	< 0.300	< 0.300	< 0.300
Chloride	SM4500CI-B		208	368	176	128
GRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0
DRO	TPH 8015M		116	<10.0	<10.0	<10.0

		Sample	SP2 @ 1'	SP2 @ 2'	SP2 @ 3'	SP2 @ 4'
Analyte	Method	Date	11/5/15	11/5/15	11/5/15	11/5/15
			mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	< 0.050	<0.050	<0.050
Toluene	BTEX 8021B		<0.050	<0.050	< 0.050	<0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050	< 0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		< 0.300	< 0.300	< 0.300	<0.300
Chloride	SM4500CI-B		352	304	320	<16.0
GRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0
DRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0

	Sample		SP4 @ 1'	SP4 @ 2'
Analyte	Method	Date	11/5/15	11/5/15
			mg/Kg	mg/Kg
Benzene	BTEX 8021B		< 0.050	< 0.050
Toluene	BTEX 8021B		< 0.050	< 0.050
Ethylbenzene	BTEX 8021B		< 0.050	< 0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150
Total BTEX	BTEX 8021B		< 0.300	<0.300
Chloride	SM4500CI-B		176	<16.0
GRO	TPH 8015M	TPH 8015M		<10.0
DRO	TPH 8015M		10.8	<10.0

		Sample	SP5 @ 1'	SP5 @ 2'
Analyte	Method	Date	11/5/15	11/5/15
			mg/Kg	mg/Kg
Benzene	BTEX 8021B		< 0.050	<0.050
Toluene	BTEX 8021B		< 0.050	< 0.050
Ethylbenzene	BTEX 8021B		< 0.050	< 0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150
Total BTEX	BTEX 8021B		< 0.300	< 0.300
Chloride	SM4500CI-B		<16.0	<16.0
GRO	TPH 8015M		<10.0	<10.0
DRO	TPH 8015M		<10.0	<10.0

		Sample	SP3 @ 1'	SP3 @ 2'
Analyte	Method	Date	11/5/15	11/5/15
			mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	<0.050
Toluene	BTEX 8021B		<0.050	< 0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300
Chloride	SM4500CI-B		320	32
GRO	TPH 8015M		<10.0	<10.0
DRO	TPH 8015M		<10.0	10.2



November 13, 2015

Cliff Brunson BBC International, Inc.

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P.O. Box 805

Hobbs, NM 88241

RE: PATTERSON B-52 #2H

Enclosed are the results of analyses for samples received by the laboratory on 11/09/15 9:08.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/ga/lab\_accred\_certif.html">www.tceq.texas.gov/field/ga/lab\_accred\_certif.html</a>.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



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

Received:	11/09/2015	Sampling Date:	11/05/2015
Reported:	11/13/2015	Sampling Type:	Soil
Project Name:	PATTERSON B-52 #2H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	126		

#### Sample ID: SP1 @ 1 (H502958-01)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/12/2015	ND	2.06	103	2.00	13.7	
Toluene*	<0.050	0.050	11/12/2015	ND	2.27	113	2.00	12.0	
Ethylbenzene*	<0.050	0.050	11/12/2015	ND	2.06	103	2.00	10.2	
Total Xylenes*	<0.150	0.150	11/12/2015	ND	6.46	108	6.00	10.1	
Total BTEX	<0.300	0.300	11/12/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	102 %	73.6-14	0						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	11/11/2015	ND	384	96.0	400	8.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/10/2015	ND	184	92.2	200	4.70	
DRO >C10-C28	116	10.0	11/10/2015	ND	176	87.9	200	7.82	
Surrogate: 1-Chlorooctane	79.2 9	% 35-147	,						
Surrogate: 1-Chlorooctadecane	86.5	% 28-171							

#### Cardinal Laboratories

\*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	11/09/2015	Sampling Date:	11/05/2015
Reported:	11/13/2015	Sampling Type:	Soil
Project Name:	PATTERSON B-52 #2H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	126		

#### Sample ID: SP1 @ 2 (H502958-02)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/12/2015	ND	2.06	103	2.00	13.7	
Toluene*	<0.050	0.050	11/12/2015	ND	2.27	113	2.00	12.0	
Ethylbenzene*	<0.050	0.050	11/12/2015	ND	2.06	103	2.00	10.2	
Total Xylenes*	<0.150	0.150	11/12/2015	ND	6.46	108	6.00	10.1	
Total BTEX	<0.300	0.300	11/12/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	100 %	6 73.6-14	0						
Chloride, SM4500Cl-B	mg/	kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	11/11/2015	ND	384	96.0	400	8.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/10/2015	ND	184	92.2	200	4.70	
DRO >C10-C28	<10.0	10.0	11/10/2015	ND	176	87.9	200	7.82	
Surrogate: 1-Chlorooctane	92.5 9	% 35-147							
Surrogate: 1-Chlorooctadecane	98.8 9	28-171							

#### Cardinal Laboratories

\*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	11/09/2015	Sampling Date:	11/05/2015
Reported:	11/13/2015	Sampling Type:	Soil
Project Name:	PATTERSON B-52 #2H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	126		

#### Sample ID: SP1 @ 3 (H502958-03)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/12/2015	ND	2.06	103	2.00	13.7	
Toluene*	<0.050	0.050	11/12/2015	ND	2.27	113	2.00	12.0	
Ethylbenzene*	<0.050	0.050	11/12/2015	ND	2.06	103	2.00	10.2	
Total Xylenes*	<0.150	0.150	11/12/2015	ND	6.46	108	6.00	10.1	
Total BTEX	<0.300	0.300	11/12/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	100 %	6 73.6-14	0						
Chloride, SM4500Cl-B	mg/	kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	11/11/2015	ND	384	96.0	400	8.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/10/2015	ND	184	92.2	200	4.70	
DRO >C10-C28	<10.0	10.0	11/10/2015	ND	176	87.9	200	7.82	
Surrogate: 1-Chlorooctane	86.4 9	% 35-147							
Surrogate: 1-Chlorooctadecane	93.9 9	28-171							

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	11/09/2015	Sampling Date:	11/05/2015
Reported:	11/13/2015	Sampling Type:	Soil
Project Name:	PATTERSON B-52 #2H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	126		

#### Sample ID: SP1 @ 4 (H502958-04)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/12/2015	ND	2.06	103	2.00	13.7	
Toluene*	<0.050	0.050	11/12/2015	ND	2.27	113	2.00	12.0	
Ethylbenzene*	<0.050	0.050	11/12/2015	ND	2.06	103	2.00	10.2	
Total Xylenes*	<0.150	0.150	11/12/2015	ND	6.46	108	6.00	10.1	
Total BTEX	<0.300	0.300	11/12/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	99.5 %	6 73.6-14	)						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	11/11/2015	ND	384	96.0	400	8.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/10/2015	ND	184	92.2	200	4.70	
DRO >C10-C28	<10.0	10.0	11/10/2015	ND	176	87.9	200	7.82	
Surrogate: 1-Chlorooctane	78.4 9	6 35-147							
Surrogate: 1-Chlorooctadecane	84.4 9	6 28-171							

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	11/09/2015	Sampling Date:	11/05/2015
Reported:	11/13/2015	Sampling Type:	Soil
Project Name:	PATTERSON B-52 #2H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	126		

#### Sample ID: SP2 @ 1 (H502958-05)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/12/2015	ND	2.06	103	2.00	13.7	
Toluene*	<0.050	0.050	11/12/2015	ND	2.27	113	2.00	12.0	
Ethylbenzene*	<0.050	0.050	11/12/2015	ND	2.06	103	2.00	10.2	
Total Xylenes*	<0.150	0.150	11/12/2015	ND	6.46	108	6.00	10.1	
Total BTEX	<0.300	0.300	11/12/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	97.1 %	6 73.6-14	0						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	11/11/2015	ND	384	96.0	400	8.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/10/2015	ND	184	92.2	200	4.70	
DRO >C10-C28	<10.0	10.0	11/10/2015	ND	176	87.9	200	7.82	
Surrogate: 1-Chlorooctane	93.3 %	6 35-147							
Surrogate: 1-Chlorooctadecane	101 %	6 28-171							

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Celey D. Keene, Lab Director/Quality Manager



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

Received:	11/09/2015	Sampling Date:	11/05/2015
Reported:	11/13/2015	Sampling Type:	Soil
Project Name:	PATTERSON B-52 #2H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	126		

#### Sample ID: SP2 @ 2 (H502958-06)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/12/2015	ND	2.06	103	2.00	13.7	
Toluene*	<0.050	0.050	11/12/2015	ND	2.27	113	2.00	12.0	
Ethylbenzene*	<0.050	0.050	11/12/2015	ND	2.06	103	2.00	10.2	
Total Xylenes*	<0.150	0.150	11/12/2015	ND	6.46	108	6.00	10.1	
Total BTEX	<0.300	0.300	11/12/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	101 %	6 73.6-14	0						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	11/11/2015	ND	384	96.0	400	8.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/10/2015	ND	184	92.2	200	4.70	
DRO >C10-C28	<10.0	10.0	11/10/2015	ND	176	87.9	200	7.82	
Surrogate: 1-Chlorooctane	88.5 9	% 35-147	,						
Surrogate: 1-Chlorooctadecane	95.9 9	28-171							

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	11/09/2015	Sampling Date:	11/05/2015
Reported:	11/13/2015	Sampling Type:	Soil
Project Name:	PATTERSON B-52 #2H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	126		

#### Sample ID: SP2 @ 3 (H502958-07)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/12/2015	ND	2.06	103	2.00	13.7	
Toluene*	<0.050	0.050	11/12/2015	ND	2.27	113	2.00	12.0	
Ethylbenzene*	<0.050	0.050	11/12/2015	ND	2.06	103	2.00	10.2	
Total Xylenes*	<0.150	0.150	11/12/2015	ND	6.46	108	6.00	10.1	
Total BTEX	<0.300	0.300	11/12/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	101 %	73.6-14	0						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	11/11/2015	ND	384	96.0	400	8.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/11/2015	ND	195	97.7	200	2.61	
DRO >C10-C28	<10.0	10.0	11/11/2015	ND	191	95.7	200	5.87	
Surrogate: 1-Chlorooctane	88.4 9	% 35-147							
Surrogate: 1-Chlorooctadecane	94.5 9	28-171							

#### Cardinal Laboratories

\*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	11/09/2015	Sampling Date:	11/05/2015
Reported:	11/13/2015	Sampling Type:	Soil
Project Name:	PATTERSON B-52 #2H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	126		

#### Sample ID: SP2 @ 4 (H502958-08)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/12/2015	ND	2.06	103	2.00	13.7	
Toluene*	<0.050	0.050	11/12/2015	ND	2.27	113	2.00	12.0	
Ethylbenzene*	<0.050	0.050	11/12/2015	ND	2.06	103	2.00	10.2	
Total Xylenes*	<0.150	0.150	11/12/2015	ND	6.46	108	6.00	10.1	
Total BTEX	<0.300	0.300	11/12/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	99.3 9	73.6-14	0						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/11/2015	ND	384	96.0	400	8.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/11/2015	ND	195	97.7	200	2.61	
DRO >C10-C28	<10.0	10.0	11/11/2015	ND	191	95.7	200	5.87	
Surrogate: 1-Chlorooctane	86.7 9	% 35-147							
Surrogate: 1-Chlorooctadecane	90.6 9	% 28-171							

#### Cardinal Laboratories

\*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	11/09/2015	Sampling Date:	11/05/2015
Reported:	11/13/2015	Sampling Type:	Soil
Project Name:	PATTERSON B-52 #2H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	126		

#### Sample ID: SP3 @ 1 (H502958-09)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/12/2015	ND	2.06	103	2.00	13.7	
Toluene*	<0.050	0.050	11/12/2015	ND	2.27	113	2.00	12.0	
Ethylbenzene*	<0.050	0.050	11/12/2015	ND	2.06	103	2.00	10.2	
Total Xylenes*	<0.150	0.150	11/12/2015	ND	6.46	108	6.00	10.1	
Total BTEX	<0.300	0.300	11/12/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	103 %	6 73.6-14	0						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	11/11/2015	ND	384	96.0	400	8.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/11/2015	ND	195	97.7	200	2.61	
DRO >C10-C28	<10.0	10.0	11/11/2015	ND	191	95.7	200	5.87	
Surrogate: 1-Chlorooctane	80.6 %	35-147							
Surrogate: 1-Chlorooctadecane	83.0 %	6 28-171							

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\*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	11/09/2015	Sampling Date:	11/05/2015
Reported:	11/13/2015	Sampling Type:	Soil
Project Name:	PATTERSON B-52 #2H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	126		

#### Sample ID: SP3 @ 2 (H502958-10)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/12/2015	ND	2.06	103	2.00	13.7	
Toluene*	<0.050	0.050	11/12/2015	ND	2.27	113	2.00	12.0	
Ethylbenzene*	<0.050	0.050	11/12/2015	ND	2.06	103	2.00	10.2	
Total Xylenes*	<0.150	0.150	11/12/2015	ND	6.46	108	6.00	10.1	
Total BTEX	<0.300	0.300	11/12/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	101 %	6 73.6-14	0						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/11/2015	ND	400	100	400	7.69	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/11/2015	ND	195	97.7	200	2.61	
DRO >C10-C28	10.2	10.0	11/11/2015	ND	191	95.7	200	5.87	
Surrogate: 1-Chlorooctane	89.69	% 35-147							
Surrogate: 1-Chlorooctadecane	95.4 9	28-171							

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	11/09/2015	Sampling Date:	11/05/2015
Reported:	11/13/2015	Sampling Type:	Soil
Project Name:	PATTERSON B-52 #2H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	126		

#### Sample ID: SP4 @ 1 (H502958-11)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/12/2015	ND	2.06	103	2.00	13.7	
Toluene*	<0.050	0.050	11/12/2015	ND	2.27	113	2.00	12.0	
Ethylbenzene*	<0.050	0.050	11/12/2015	ND	2.06	103	2.00	10.2	
Total Xylenes*	<0.150	0.150	11/12/2015	ND	6.46	108	6.00	10.1	
Total BTEX	<0.300	0.300	11/12/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	101 9	% 73.6-14	0						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	11/11/2015	ND	400	100	400	7.69	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/11/2015	ND	195	97.7	200	2.61	
DRO >C10-C28	10.8	10.0	11/11/2015	ND	191	95.7	200	5.87	
Surrogate: 1-Chlorooctane	88.6	% 35-147	,						
Surrogate: 1-Chlorooctadecane	92.8	% 28-171							

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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Received:	11/09/2015	Sampling Date:	11/05/2015
Reported:	11/13/2015	Sampling Type:	Soil
Project Name:	PATTERSON B-52 #2H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	126		

#### Sample ID: SP4 @ 2 (H502958-12)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/12/2015	ND	2.06	103	2.00	13.7	
Toluene*	<0.050	0.050	11/12/2015	ND	2.27	113	2.00	12.0	
Ethylbenzene*	<0.050	0.050	11/12/2015	ND	2.06	103	2.00	10.2	
Total Xylenes*	<0.150	0.150	11/12/2015	ND	6.46	108	6.00	10.1	
Total BTEX	<0.300	0.300	11/12/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.9 9	73.6-14	)						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/11/2015	ND	400	100	400	7.69	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/11/2015	ND	195	97.7	200	2.61	
DRO >C10-C28	<10.0	10.0	11/11/2015	ND	191	95.7	200	5.87	
Surrogate: 1-Chlorooctane	91.6 9	35-147							
Surrogate: 1-Chlorooctadecane	92.6 9	6 28-171							

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Celey D. Keene, Lab Director/Quality Manager



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

Received:	11/09/2015	Sampling Date:	11/05/2015
Reported:	11/13/2015	Sampling Type:	Soil
Project Name:	PATTERSON B-52 #2H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	126		

#### Sample ID: SP5 @ 1 (H502958-13)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/12/2015	ND	2.06	103	2.00	13.7	
Toluene*	<0.050	0.050	11/12/2015	ND	2.27	113	2.00	12.0	
Ethylbenzene*	<0.050	0.050	11/12/2015	ND	2.06	103	2.00	10.2	
Total Xylenes*	<0.150	0.150	11/12/2015	ND	6.46	108	6.00	10.1	
Total BTEX	<0.300	0.300	11/12/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	100 %	6 73.6-14	0						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/11/2015	ND	400	100	400	7.69	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/11/2015	ND	195	97.7	200	2.61	
DRO >C10-C28	<10.0	10.0	11/11/2015	ND	191	95.7	200	5.87	
Surrogate: 1-Chlorooctane	85.9 9	% 35-147							
Surrogate: 1-Chlorooctadecane	92.3 9	28-171							

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Celey D. Keene, Lab Director/Quality Manager



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

Received:	11/09/2015	Sampling Date:	11/05/2015
Reported:	11/13/2015	Sampling Type:	Soil
Project Name:	PATTERSON B-52 #2H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	126		

#### Sample ID: SP5 @ 2 (H502958-14)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/12/2015	ND	2.06	103	2.00	13.7	
Toluene*	<0.050	0.050	11/12/2015	ND	2.27	113	2.00	12.0	
Ethylbenzene*	<0.050	0.050	11/12/2015	ND	2.06	103	2.00	10.2	
Total Xylenes*	<0.150	0.150	11/12/2015	ND	6.46	108	6.00	10.1	
Total BTEX	<0.300	0.300	11/12/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	100 %	6 73.6-14	0						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/11/2015	ND	400	100	400	7.69	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/11/2015	ND	195	97.7	200	2.61	
DRO >C10-C28	<10.0	10.0	11/11/2015	ND	191	95.7	200	5.87	
Surrogate: 1-Chlorooctane	83.7 9	% 35-147							
Surrogate: 1-Chlorooctadecane	89.8 9	% 28-171							

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Celey D. Keene, Lab Director/Quality Manager



#### **Notes and Definitions**

- ND
   Analyte NOT DETECTED at or above the reporting limit

   RPD
   Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager

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	1000-393-2476	† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476
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	Address:	5-397-6388 Fax #: 575-39
	Attn: 10	city: Hobbs State: NM Zip: 88241
	Company:	Address: P.O. Box 805
	P.O. #:	
ANALYSIS REQUESI	BILL TO	Company Name: BBC International, Inc.
		101 East Marland, Hobbs, NM 88240 (505) 393-2326 FAX (505) 393-2476
		THE ADDING I ADDEATOBIES
CUISTONY AND ANALYSIS REQUEST		7

Page 17 of 18

Joelivered By:     Circle One)     Sample Condition     CHECKED BY:       Sampler - UPS - Bus - Other:     240     Intect     Intect       + Cardinal cannot accept verbal changes. Please fax written changes to 505-393/2476     The Start	PLEASE NOTE: Liability and client's exclusive remedy for any claim arising whether based in contract or for, shall be limited to the amount paid by the client for the angless. At claims including whether cause whatsoever shall be deemed waived unless made in writing and receive by Cardinal whitin 30 days after competition of the applicable service. In no event shall Cardinal the beformance of services heraunder by Cardinal, mean times interruptions, loss of profils incurred by the client for competition of the applicable	555e2	# CO GRO WAS SOIL OIL SLUE OTH ACID ACID THI ACID THI ACID THI ACID	AB OR (C)OMP.  AB OR (C)OMP.  NTAINERS UNDWATER TEWATER DGE ER : //BASE: COOL	Project Owner: Concho City: Project Owner: Concho City: State: Zip Phone #: Fax #:	Project Manager:         Cliff Bruitson           Address:         P.O. Box 805         State:         NM         Zip:         88241         Company:           City:         Hobbs         State:         NM         Zip:         88241         Attn:           Phone #:         575-397-6388         Fax #:         575-397-0397         Address:         O         C	ARDINAL LABORATORIES 101 East Marland, Hobbs, NM 88240 (505) 393-2326 FAX (505) 393-2476 Company Name: BBC International, Inc. Company Name: BBC International, Inc.	CHAIN-OF-CUSTODY AND ANALYSIS REQUEST
								YSIS REQUEST