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24 January 2023

Kyle Siesser  
Cottonwood Consulting  
PO Box 1653  
Durango, CO 81302  
RE: COGCC Table 915-1

Enclosed are the results of analyses for samples received by the laboratory on 01/09/23 14:35. The data to follow was performed, in whole or in part, by Green Analytical Laboratories. Any data that was performed by a subcontract laboratory is included within the GAL report, or with an additional report attached.

If you need any further assistance, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink that reads "Jeremy D. Allen".

Jeremy D Allen  
Laboratory Director

All accredited analytes contained in this report are denoted by an asterisk (\*). For a complete list of accredited analytes please do not hesitate to contact us via any of the contact information contained in this report. All of our certifications can be viewed at <http://greenanalytical.com/certifications/>

Green Analytical Laboratories is NELAP accredited through the Texas Commission on Environmental Quality. Accreditation applies to drinking water and non-potable water matrices for trace metals and a variety of inorganic parameters. Green Analytical Laboratories is also accredited through the Colorado Department of Public Health and Environment and EPA region 8 for trace metals, Cyanide, Fluoride, Nitrate, and Nitrite in drinking water. TNI Certificate Number: T104704514-23-16

Our affiliate laboratory, Cardinal Laboratories, is also NELAP accredited through the Texas Commission on Environmental Quality for a variety of organic constituents in drinking water, non-potable water and solid matrices. Cardinal is also accredited for regulated VOCs, TTHM, and HAA-5 in drinking water through the Colorado Department of Public Health and Environment and EPA region 8. TNI Certificate Number: T104704398-22-15



Cottonwood Consulting	Project: COGCC Table 915-1	
PO Box 1653	Project Name / Number: Box Elder K #1	<b>Reported:</b>
Durango CO, 81302	Project Manager: Kyle Siesser	01/24/23 14:14

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
SS01	2301062-01	Solid	01/05/23 15:15	01/09/23 14:35	

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Jeremy D Allen, Laboratory Director

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Cottonwood Consulting PO Box 1653 Durango CO, 81302	Project: COGCC Table 915-1 Project Name / Number: Box Elder K #1 Project Manager: Kyle Siesser	Reported: 01/24/23 14:14
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**SS01**

**2301062-01 (Soil)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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**General Chemistry**

Hexavalent Chromium	<0.250	0.250	0.128	mg/kg dry	25	01/20/23 09:30	3060A/3500-Cr B		KRW
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**Saturated Paste Extraction**

Calcium	67.1	0.100	0.058	mg/L	1	01/18/23 20:08	EPA200.7		AES
Conductivity	693			umho/cm@25 C	1	01/18/23 09:40	ASA#9 10-3.3		KRW
Magnesium	20.0	0.100	0.065	mg/L	1	01/18/23 20:08	EPA200.7		AES
pH	7.92			pH Units	1	01/16/23 16:00	ASA#9 10-3.2		AWG
SAR	0.81			No Unit	1	01/18/23 20:08	Calculation		AES
Sodium	29.5	1.00	0.079	mg/L	1	01/18/23 20:08	EPA200.7		AES

**Total Metals by ICP**

Barium	134	5.00	1.10	mg/kg dry	100	01/18/23 17:44	6010B		AES
Cadmium	<5.00	5.00	2.54	mg/kg dry	100	01/18/23 17:44	6010B		AES
Chromium	16.5	5.00	1.58	mg/kg dry	100	01/18/23 17:44	6010B		AES
Copper	11.7	5.00	2.83	mg/kg dry	100	01/18/23 17:44	6010B		AES
Lead	14.1	10.0	4.02	mg/kg dry	100	01/18/23 17:44	6010B		AES
Nickel	10.8	5.00	2.41	mg/kg dry	100	01/18/23 17:44	6010B		AES
Selenium	<20.0	20.0	5.39	mg/kg dry	100	01/18/23 17:44	6010B		AES
Silver	<1.00	1.00	0.518	mg/kg dry	100	01/18/23 17:44	6010B		AES
Zinc	42.2	10.0	2.18	mg/kg dry	100	01/18/23 17:44	6010B		AES

**Total Metals by ICPMS**

Arsenic	3.63	1.00	0.158	mg/kg dry	1000	01/23/23 12:45	6020A		AES
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**Hot Water Extractable**

Boron	<1.20	1.20	0.568	mg/L	4	01/18/23 19:01	EPA200.7		AES
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**Subcontracted -- Cardinal Laboratories 101 East Marland Hobbs, NM 88240**

**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0	10.0	6.25	mg/kg	1	01/12/23 17:18	8015B		MS
DRO >C10-C28*	<10.0	10.0	4.26	mg/kg	1	01/12/23 17:18	8015B		MS
EXT DRO >C28-C36	<10.0	10.0	4.26	mg/kg	1	01/12/23 17:18	8015B		MS

Surrogate: 1-Chlorooctane			91.7 %	48.2-134		01/12/23 17:18	8015B		MS
Surrogate: 1-Chlorooctadecane			102 %	49.1-148		01/12/23 17:18	8015B		MS

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Cottonwood Consulting PO Box 1653 Durango CO, 81302	Project: COGCC Table 915-1 Project Name / Number: Box Elder K #1 Project Manager: Kyle Siesser	Reported: 01/24/23 14:14
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SS01

2301062-01 (Soil)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Subcontracted -- Cardinal Laboratories 101 East Marland Hobbs, NM 88240

**VOLATILES BY GC/MS**

Benzene*	<0.0250	0.0250	0.00885	mg/kg	50	01/16/23 18:31	8260B		MS
Toluene*	<0.0250	0.0250	0.00670	mg/kg	50	01/16/23 18:31	8260B		MS
Ethylbenzene*	<0.0250	0.0250	0.00405	mg/kg	50	01/16/23 18:31	8260B		MS
m+p - Xylene*	<0.0500	0.0500	0.0186	mg/kg	50	01/16/23 18:31	8260B		MS
o-Xylene*	<0.0250	0.0250	0.00700	mg/kg	50	01/16/23 18:31	8260B		MS
Total Xylenes*	<0.0750	0.0750	0.0256	mg/kg	50	01/16/23 18:31	8260B		MS
1,3,5-Trimethylbenzene	<0.0250	0.0250	0.00450	mg/kg	50	01/16/23 18:31	8260B		MS
1,2,4-Trimethylbenzene	<0.0250	0.0250	0.00650	mg/kg	50	01/16/23 18:31	8260B		MS
Naphthalene*	<0.0250	0.0250	0.00500	mg/kg	50	01/16/23 18:31	8260B		MS
Surrogate: Dibromofluoromethane			96.8 %	84.6-114		01/16/23 18:31	8260B		MS
Surrogate: Toluene-d8			91.5 %	90.4-109		01/16/23 18:31	8260B		MS
Surrogate: 4-Bromofluorobenzene			102 %	82.5-117		01/16/23 18:31	8260B		MS

**Polynuclear Aromatic Compounds by GC/MS**

Naphthalene*	<0.015	0.040	0.015	mg/kg	40	01/17/23 17:06	8270C		MS
2-Methylnaphthalene*	<0.023	0.040	0.023	mg/kg	40	01/17/23 17:06	8270C		MS
1-Methylnaphthalene	<0.016	0.040	0.016	mg/kg	40	01/17/23 17:06	8270C		MS
Acenaphthene*	<0.024	0.040	0.024	mg/kg	40	01/17/23 17:06	8270C		MS
Fluorene*	<0.014	0.040	0.014	mg/kg	40	01/17/23 17:06	8270C		MS
Anthracene*	<0.017	0.040	0.017	mg/kg	40	01/17/23 17:06	8270C		MS
Fluoranthene*	<0.019	0.040	0.019	mg/kg	40	01/17/23 17:06	8270C		MS
Pyrene*	<0.013	0.040	0.013	mg/kg	40	01/17/23 17:06	8270C		MS
Benzo[a]anthracene*	<0.023	0.040	0.023	mg/kg	40	01/17/23 17:06	8270C		MS
Chrysene	<0.017	0.040	0.017	mg/kg	40	01/17/23 17:06	8270C		MS
Benzo[b]fluoranthene*	<0.019	0.040	0.019	mg/kg	40	01/17/23 17:06	8270C		MS
Benzo[k]fluoranthene*	<0.016	0.040	0.016	mg/kg	40	01/17/23 17:06	8270C		MS
Benzo[a]pyrene*	<0.018	0.040	0.018	mg/kg	40	01/17/23 17:06	8270C		MS
Indeno[1,2,3-cd]pyrene*	<0.017	0.040	0.017	mg/kg	40	01/17/23 17:06	8270C		MS
Dibenz[a,h]anthracene*	<0.019	0.040	0.019	mg/kg	40	01/17/23 17:06	8270C		MS
Surrogate: Nitrobenzene-d5			57.5 %	39.6-121		01/17/23 17:06	8270C		MS

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Cottonwood Consulting	Project: COGCC Table 915-1	
PO Box 1653	Project Name / Number: Box Elder K #1	<b>Reported:</b>
Durango CO, 81302	Project Manager: Kyle Siesser	01/24/23 14:14

SS01

2301062-01 (Soil)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Subcontracted -- Cardinal Laboratories 101 East Marland Hobbs, NM 88240

Polynuclear Aromatic Compounds by GC/MS

Surrogate: 2-Fluorobiphenyl	82.2 %	39.8-134				01/17/23 17:06	8270C		MS
Surrogate: Terphenyl-d14	85.0 %	33.3-136				01/17/23 17:06	8270C		MS

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Durango CO, 81302	Project Manager: Kyle Siesser	01/24/23 14:14

**General Chemistry - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B230127 - General Prep - Wet Chem</b>										
<b>Blank (B230127-BLK1)</b> Prepared: 01/18/23 Analyzed: 01/20/23										
Hexavalent Chromium	ND	0.250	mg/kg dry							
<b>LCS (B230127-BS1)</b> Prepared: 01/18/23 Analyzed: 01/20/23										
Hexavalent Chromium	2.16	0.250	mg/kg dry	2.50		86.6	85-115			

**Saturated Paste Extraction - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B230096 - Paste Extract</b>										
<b>Blank (B230096-BLK1)</b> Prepared: 01/16/23 Analyzed: 01/18/23										
Calcium	ND	0.100	mg/L							
Magnesium	ND	0.100	mg/L							
SAR	0.00		No Unit							
Sodium	ND	1.00	mg/L							
<b>Reference (B230096-SRM1)</b> Prepared: 01/16/23 Analyzed: 01/18/23										
SAR	2.74		No Unit	2.93		93.5	90-110			
<b>Batch B230097 - Paste Extract</b>										
<b>Reference (B230097-SRM1)</b> Prepared & Analyzed: 01/16/23										
pH	7.17		pH Units	6.93		103	92-108			
<b>Batch B230098 - Paste Extract</b>										
<b>Reference (B230098-SRM1)</b> Prepared: 01/16/23 Analyzed: 01/18/23										
Conductivity	3810		umho/cm@25C	8340		45.7	90-110			BS2

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Cottonwood Consulting	Project: COGCC Table 915-1	
PO Box 1653	Project Name / Number: Box Elder K #1	<b>Reported:</b>
Durango CO, 81302	Project Manager: Kyle Siesser	01/24/23 14:14

**Total Metals by ICP - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B230100 - EPA 3050**

**Blank (B230100-BLK1)**

Prepared: 01/16/23 Analyzed: 01/18/23

Barium	ND	5.00	mg/kg dry							
Cadmium	ND	5.00	mg/kg dry							
Chromium	ND	5.00	mg/kg dry							
Copper	ND	5.00	mg/kg dry							
Lead	ND	10.0	mg/kg dry							
Nickel	ND	5.00	mg/kg dry							
Selenium	ND	20.0	mg/kg dry							
Silver	ND	1.00	mg/kg dry							
Zinc	ND	10.0	mg/kg dry							

**LCS (B230100-BS1)**

Prepared: 01/16/23 Analyzed: 01/18/23

Barium	187	5.00	mg/kg dry	200		93.5	80-120			
Cadmium	176	5.00	mg/kg dry	200		87.9	80-120			
Chromium	190	5.00	mg/kg dry	200		95.1	80-120			
Copper	405	5.00	mg/kg dry	400		101	80-120			
Lead	183	10.0	mg/kg dry	200		91.6	80-120			
Nickel	182	5.00	mg/kg dry	200		90.9	80-120			
Selenium	793	20.0	mg/kg dry	800		99.1	80-120			
Silver	9.47	1.00	mg/kg dry	10.0		94.7	80-120			
Zinc	169	10.0	mg/kg dry	200		84.5	80-120			

**LCS Dup (B230100-BSD1)**

Prepared: 01/16/23 Analyzed: 01/18/23

Barium	188	5.00	mg/kg dry	200		94.0	80-120	0.520	20	
Cadmium	177	5.00	mg/kg dry	200		88.6	80-120	0.809	20	
Chromium	191	5.00	mg/kg dry	200		95.4	80-120	0.414	20	
Copper	406	5.00	mg/kg dry	400		102	80-120	0.244	20	
Lead	184	10.0	mg/kg dry	200		92.0	80-120	0.383	20	
Nickel	184	5.00	mg/kg dry	200		91.9	80-120	1.05	20	
Selenium	811	20.0	mg/kg dry	800		101	80-120	2.24	20	
Silver	9.72	1.00	mg/kg dry	10.0		97.2	80-120	2.58	20	
Zinc	171	10.0	mg/kg dry	200		85.3	80-120	1.03	20	

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Cottonwood Consulting	Project: COGCC Table 915-1	
PO Box 1653	Project Name / Number: Box Elder K #1	<b>Reported:</b>
Durango CO, 81302	Project Manager: Kyle Siesser	01/24/23 14:14

**Total Metals by ICPMS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B230101 - EPA 3050M**

**Blank (B230101-BLK1)**

Prepared: 01/16/23 Analyzed: 01/23/23

Arsenic	ND	1.00	mg/kg dry							
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**LCS (B230101-BS1)**

Prepared: 01/16/23 Analyzed: 01/23/23

Arsenic	4.97	1.00	mg/kg dry	5.00		99.5	80-120			
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**LCS Dup (B230101-BSD1)**

Prepared: 01/16/23 Analyzed: 01/23/23

Arsenic	4.90	1.00	mg/kg dry	5.00		98.1	80-120	1.43	20	
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**Hot Water Extractable - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B230085 - Hot Water Soluble Metals Extract**

**Blank (B230085-BLK1)**

Prepared: 01/13/23 Analyzed: 01/18/23

Boron	ND	1.20	mg/L							
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Durango CO, 81302	Project Manager: Kyle Siesser	01/24/23 14:14

**Petroleum Hydrocarbons by GC FID - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 3011129 - General Prep - Organics**

**Blank (3011129-BLK1)**

Prepared: 01/11/23 Analyzed: 01/12/23

Surrogate: 1-Chlorooctadecane	48.5		mg/kg	50.0		97.0	49.1-148			
Surrogate: 1-Chlorooctane	42.0		mg/kg	50.0		84.0	48.2-134			
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
GRO C6-C10	ND	10.0	mg/kg							

**LCS (3011129-BS1)**

Prepared: 01/11/23 Analyzed: 01/12/23

Surrogate: 1-Chlorooctadecane	54.0		mg/kg	50.0		108	49.1-148			
Surrogate: 1-Chlorooctane	44.2		mg/kg	50.0		88.3	48.2-134			
DRO >C10-C28	166	10.0	mg/kg	200		82.8	72.5-126			
GRO C6-C10	175	10.0	mg/kg	200		87.5	78.5-124			
Total TPH C6-C28	341	10.0	mg/kg	400		85.2	77.6-123			

**LCS Dup (3011129-BSD1)**

Prepared: 01/11/23 Analyzed: 01/12/23

Surrogate: 1-Chlorooctadecane	55.9		mg/kg	50.0		112	49.1-148			
Surrogate: 1-Chlorooctane	45.6		mg/kg	50.0		91.2	48.2-134			
DRO >C10-C28	198	10.0	mg/kg	200		99.0	72.5-126	17.8	21	
GRO C6-C10	198	10.0	mg/kg	200		99.1	78.5-124	12.4	17.7	
Total TPH C6-C28	396	10.0	mg/kg	400		99.1	77.6-123	15.1	18.5	

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Durango CO, 81302	Project Manager: Kyle Siesser	01/24/23 14:14

**VOLATILES BY GC/MS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 3011210 - Volatiles**

**Blank (3011210-BLK1)**

Prepared: 01/12/23 Analyzed: 01/16/23

1,2,4-Trimethylbenzene	ND	0.0250	mg/kg							
1,3,5-Trimethylbenzene	ND	0.0250	mg/kg							
<i>Surrogate: 4-Bromofluorobenzene</i>	1.23		mg/kg	1.25		98.4	82.5-117			
Benzene	ND	0.0250	mg/kg							
<i>Surrogate: Dibromofluoromethane</i>	1.19		mg/kg	1.25		95.0	84.6-114			
Ethylbenzene	ND	0.0250	mg/kg							
m+p - Xylene	ND	0.0500	mg/kg							
Naphthalene	ND	0.0250	mg/kg							
o-Xylene	ND	0.0250	mg/kg							
Toluene	ND	0.0250	mg/kg							
<i>Surrogate: Toluene-d8</i>	1.21		mg/kg	1.25		96.5	90.4-109			
Total Xylenes	ND	0.0750	mg/kg							

**LCS (3011210-BS1)**

Prepared: 01/12/23 Analyzed: 01/16/23

1,2,4-Trimethylbenzene	0.483	0.0250	mg/kg	0.500		96.5	62.4-140			
1,3,5-Trimethylbenzene	0.482	0.0250	mg/kg	0.500		96.4	64.4-138			
<i>Surrogate: 4-Bromofluorobenzene</i>	1.22		mg/kg	1.25		97.7	82.5-117			
Benzene	0.481	0.0250	mg/kg	0.500		96.3	73-130			
<i>Surrogate: Dibromofluoromethane</i>	1.17		mg/kg	1.25		93.4	84.6-114			
Ethylbenzene	0.472	0.0250	mg/kg	0.500		94.3	75.4-127			
m+p - Xylene	0.963	0.0500	mg/kg	1.00		96.3	71.8-133			
Naphthalene	0.334	0.0250	mg/kg	0.500		66.8	28.7-158			
o-Xylene	0.433	0.0250	mg/kg	0.500		86.5	78.6-125			
Toluene	0.483	0.0250	mg/kg	0.500		96.6	79-122			
<i>Surrogate: Toluene-d8</i>	1.23		mg/kg	1.25		98.4	90.4-109			
Total Xylenes	1.40	0.0750	mg/kg	1.50		93.1	74.6-130			

**LCS Dup (3011210-BSD1)**

Prepared: 01/12/23 Analyzed: 01/16/23

1,2,4-Trimethylbenzene	0.475	0.0250	mg/kg	0.500		95.0	62.4-140	1.57	38.2	
1,3,5-Trimethylbenzene	0.459	0.0250	mg/kg	0.500		91.8	64.4-138	4.94	39.1	
<i>Surrogate: 4-Bromofluorobenzene</i>	1.25		mg/kg	1.25		99.8	82.5-117			
Benzene	0.502	0.0250	mg/kg	0.500		100	73-130	4.11	17.1	
<i>Surrogate: Dibromofluoromethane</i>	1.24		mg/kg	1.25		99.5	84.6-114			
Ethylbenzene	0.471	0.0250	mg/kg	0.500		94.2	75.4-127	0.202	16.5	
m+p - Xylene	0.967	0.0500	mg/kg	1.00		96.7	71.8-133	0.376	19.1	
Naphthalene	0.374	0.0250	mg/kg	0.500		74.8	28.7-158	11.2	64	
o-Xylene	0.463	0.0250	mg/kg	0.500		92.5	78.6-125	6.73	13.2	
Toluene	0.474	0.0250	mg/kg	0.500		94.8	79-122	1.86	18.3	

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Cottonwood Consulting	Project: COGCC Table 915-1	
PO Box 1653	Project Name / Number: Box Elder K #1	<b>Reported:</b>
Durango CO, 81302	Project Manager: Kyle Siesser	01/24/23 14:14

**VOLATILES BY GC/MS - Quality Control  
(Continued)**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 3011210 - Volatiles (Continued)**

**LCS Dup (3011210-BSD1) (Continued)**

Prepared: 01/12/23 Analyzed: 01/16/23

Surrogate: Toluene-d8	1.21		mg/kg	1.25		96.6	90.4-109			
Total Xylenes	1.43	0.0750	mg/kg	1.50		95.3	74.6-130	2.39	16.5	

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Cottonwood Consulting	Project: COGCC Table 915-1	
PO Box 1653	Project Name / Number: Box Elder K #1	Reported:
Durango CO, 81302	Project Manager: Kyle Siesser	01/24/23 14:14

**Polynuclear Aromatic Compounds by GC/MS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 3011125 - SW846-3510**

**Blank (3011125-BLK1)**

Prepared: 01/11/23 Analyzed: 01/17/23

1-Methylnaphthalene	ND	0.040	mg/kg							
<i>Surrogate: 2-Fluorobiphenyl</i>	2.33		mg/kg	2.00		117	39.8-134			
2-Methylnaphthalene	ND	0.040	mg/kg							
Acenaphthene	ND	0.040	mg/kg							
Anthracene	ND	0.040	mg/kg							
Benzo[a]anthracene	ND	0.040	mg/kg							
Benzo[a]pyrene	ND	0.040	mg/kg							
Benzo[b]flouranthene	ND	0.040	mg/kg							
Benzo[k]flouranthene	ND	0.040	mg/kg							
Chrysene	ND	0.040	mg/kg							
Dibenz[a,h]anthracene	ND	0.040	mg/kg							
Fluoranthene	ND	0.040	mg/kg							
Fluorene	ND	0.040	mg/kg							
Indeno[1,2,3-cd]pyrene	ND	0.040	mg/kg							
Naphthalene	ND	0.040	mg/kg							
<i>Surrogate: Nitrobenzene-d5</i>	2.32		mg/kg	2.00		116	39.6-121			
Pyrene	ND	0.040	mg/kg							
<i>Surrogate: Terphenyl-d14</i>	1.81		mg/kg	2.00		90.6	33.3-136			

**LCS (3011125-BS1)**

Prepared: 01/11/23 Analyzed: 01/17/23

1-Methylnaphthalene	0.347	0.040	mg/kg	0.400		86.7	57.6-108			
<i>Surrogate: 2-Fluorobiphenyl</i>	2.57		mg/kg	2.00		128	39.8-134			
2-Methylnaphthalene	0.343	0.040	mg/kg	0.400		85.8	59-106			
Acenaphthene	0.347	0.040	mg/kg	0.400		86.8	60.9-105			
Acenaphthylene	0.339	0.040	mg/kg	0.400		84.8	57.4-107			
Anthracene	0.344	0.040	mg/kg	0.400		86.0	60.8-105			
Benzo[a]anthracene	0.347	0.040	mg/kg	0.400		86.8	56.1-121			
Benzo[a]pyrene	0.333	0.040	mg/kg	0.400		83.3	56.7-115			
Benzo[b]flouranthene	0.337	0.040	mg/kg	0.400		84.4	45.4-128			
Benzo[g,h,i]perylene	0.340	0.040	mg/kg	0.400		84.9	56.5-107			
Benzo[k]flouranthene	0.350	0.040	mg/kg	0.400		87.5	49.6-119			
Carbazole	0.350	0.040	mg/kg	0.400		87.6	59.7-107			
Chrysene	0.354	0.040	mg/kg	0.400		88.6	12.2-190			
Dibenz[a,h]anthracene	0.350	0.040	mg/kg	0.400		87.5	59.1-111			
Fluoranthene	0.357	0.040	mg/kg	0.400		89.3	60.6-111			
Fluorene	0.341	0.040	mg/kg	0.400		85.3	59.3-108			
Indeno[1,2,3-cd]pyrene	0.341	0.040	mg/kg	0.400		85.1	53.4-116			
Naphthalene	0.355	0.040	mg/kg	0.400		88.7	56.5-106			

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Jeremy D Allen, Laboratory Director

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Cottonwood Consulting	Project: COGCC Table 915-1	
PO Box 1653	Project Name / Number: Box Elder K #1	<b>Reported:</b>
Durango CO, 81302	Project Manager: Kyle Siesser	01/24/23 14:14

**Polynuclear Aromatic Compounds by GC/MS - Quality Control  
(Continued)**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 3011125 - SW846-3510 (Continued)**

**LCS (3011125-BS1) (Continued)**

Prepared: 01/11/23 Analyzed: 01/17/23

<i>Surrogate: Nitrobenzene-d5</i>	2.47		mg/kg	2.00		123	39.6-121			S-05
Phenanthrene	0.349	0.040	mg/kg	0.400		87.2	59.9-107			
Pyrene	0.339	0.040	mg/kg	0.400		84.8	51.5-122			
<i>Surrogate: Terphenyl-dl4</i>	1.78		mg/kg	2.00		89.0	33.3-136			

**LCS Dup (3011125-BSD1)**

Prepared: 01/11/23 Analyzed: 01/17/23

1-Methylnaphthalene	0.346	0.040	mg/kg	0.400		86.4	57.6-108	0.341	6.22	
<i>Surrogate: 2-Fluorobiphenyl</i>	2.53		mg/kg	2.00		126	39.8-134			
2-Methylnaphthalene	0.340	0.040	mg/kg	0.400		85.1	59-106	0.802	6.23	
Acenaphthene	0.339	0.040	mg/kg	0.400		84.7	60.9-105	2.37	8.18	
Acenaphthylene	0.335	0.040	mg/kg	0.400		83.8	57.4-107	1.11	5	
Anthracene	0.345	0.040	mg/kg	0.400		86.3	60.8-105	0.412	3.68	
Benzo[a]anthracene	0.347	0.040	mg/kg	0.400		86.9	56.1-121	0.0691	9.01	
Benzo[a]pyrene	0.325	0.040	mg/kg	0.400		81.2	56.7-115	2.54	4.92	
Benzo[b]fluoranthene	0.347	0.040	mg/kg	0.400		86.8	45.4-128	2.84	7.63	
Benzo[g,h,i]perylene	0.323	0.040	mg/kg	0.400		80.7	56.5-107	5.00	12.5	
Benzo[k]fluoranthene	0.340	0.040	mg/kg	0.400		85.0	49.6-119	2.83	10.6	
Carbazole	0.345	0.040	mg/kg	0.400		86.2	59.7-107	1.64	8.65	
Chrysene	0.348	0.040	mg/kg	0.400		87.1	12.2-190	1.64	21.8	
Dibenz[a,h]anthracene	0.310	0.040	mg/kg	0.400		77.4	59.1-111	12.3	11.6	QR-04
Fluoranthene	0.348	0.040	mg/kg	0.400		86.9	60.6-111	2.69	7.54	
Fluorene	0.338	0.040	mg/kg	0.400		84.4	59.3-108	0.960	5.49	
Indeno[1,2,3-cd]pyrene	0.323	0.040	mg/kg	0.400		80.7	53.4-116	5.39	22.3	
Naphthalene	0.352	0.040	mg/kg	0.400		87.9	56.5-106	0.824	4.56	
<i>Surrogate: Nitrobenzene-d5</i>	2.46		mg/kg	2.00		123	39.6-121			S-05
Phenanthrene	0.345	0.040	mg/kg	0.400		86.4	59.9-107	0.899	5.21	
Pyrene	0.364	0.040	mg/kg	0.400		90.9	51.5-122	7.02	10.6	
<i>Surrogate: Terphenyl-dl4</i>	1.91		mg/kg	2.00		95.4	33.3-136			

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Cottonwood Consulting  
PO Box 1653  
Durango CO, 81302

Project: COGCC Table 915-1  
Project Name / Number: Box Elder K #1  
Project Manager: Kyle Siesser

Reported:  
01/24/23 14:14

Notes and Definitions

- S-05 The surrogate recovery is outside of lab established statistical control limits but still within method limits. Data is not adversely affected.
- QR-04 The RPD for the BS/BSD was outside of historical limits.
- BS2 Laboratory control sample below laboratory acceptance criteria. Results for analyte potentially biased low.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis  
\*Results reported on as received basis unless designated as dry.
- RPD Relative Percent Difference
- LCS Laboratory Control Sample (Blank Spike)
- RL Report Limit
- MDL Method Detection Limit

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(970) 247-4220 service@greenanalytical.com or dzufelt@greenanalytical.com  
 Fax: (970) 247-4227 75 Suttle St Durango, CO 81303

**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

Company Name: Cottonwood Consulting LLC

Project Manager: Kyle Slessor

Address: PO Box 1653

City: Durango

Phone #: 970-764-7356

Additional Report To:

Project Name:

Project Number:

Sampler Name (Print): Emma Miller

FOR LAB USE ONLY

Bill to (if different):

P.O. #:

Company:

Attn:

Address:

City:

State:

Phone #:

**ANALYSIS REQUEST**

Fax or Email:

Matrix (check one)

GROUNDWATER

SURFACEWATER

WASTEWATER

PRODUCEDWATER

SOIL

OTHER :

# of containers

No preservation (general)

HNO<sub>3</sub>

HCl

H<sub>2</sub>SO<sub>4</sub>

Other:

Other:

X COGCC Table 915

Sample Name or Location

2301-00A  
01

SS01

Date Time  
1-5-23 1515

GROUNDWATER	
SURFACEWATER	
WASTEWATER	
PRODUCEDWATER	
SOIL	X
OTHER :	
No preservation (general)	3
HNO <sub>3</sub>	
HCl	
H <sub>2</sub> SO <sub>4</sub>	
Other:	
Other:	

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Relinquished By:

*Special Haters*

Date/Time

1/4/23  
1435

Received By:

*[Signature]*

Date/Time

Received By:

Report to State? (Circle)

Yes  No

Please provide Cottonwood EDD

Relinquished By:

Date/Time

Received By:

Date/Time

Received By:

Delivered By: (Circle One)

Sampler  UPS - FedEx - Kangaroo - Other:

Temperature at receipt:

4.8°C

CHECKED BY:

15W

on ice  
laser #2

\* Chain of Custody must be signed in "Relinquished By:" as an acceptance of services and all applicable charges.



SAMPLE CONDITION RECEIPT FORM

2301-058  
059  
060  
061  
062  
063  
064  
065  
066

Client Name: Cottonwood

Work Order # \_\_\_\_\_

Courier:  Fed Ex  UPS  USPS  Client

Custody Seals on Box/Cooler Present:  Yes  No      Seals Intact:  Yes  No

Thermometer Used: 2      Samples on ice, cooling process has begun:  Yes  No

Type of Ice:  Wet  Blue  None

Cooler Temp: Observed Temp: 4.8 °C      Correction Factor: 0 °C      Final Temp: 4.8 °C

\*Temp should be above freezing to 6°C

Date/Initials of person examining contents: VJW/9/23  
Labeled by initials: \_\_\_\_\_  
(if different than above)

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.
Sampler Name and Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	4.
Samples arrived within hold time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:	<input type="checkbox"/> Yes <input type="checkbox"/> No	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Dissolved Testing Needed:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	11.
Field Filtered: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Sample Labels match COC: -Includes Date/Time/ID	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12.
Matrix:	WT <u>SL</u> QT	
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	

Client Notification/Resolution:

Person Contacted: \_\_\_\_\_

Date/Time: \_\_\_\_\_

Comments/Resolution: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_