



75 Suttle Street  
Durango, CO 81303  
970.247.4220 Phone  
970.247.4227 Fax  
[www.greenanalytical.com](http://www.greenanalytical.com)

27 September 2021

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 09/03/21 11:15. The data to follow was performed, in whole or in part, by a subcontract laboratory with an additional report attached.

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

Sincerely,

A handwritten signature in black ink that reads 'Debbie Zufelt'.

Debbie Zufelt  
Reports Manager

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: T104704514-21-12

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: T104704398-21-14



Cottonwood Consulting  
PO Box 1653  
Durango CO, 81302

Project: COGCC Table 915-1  
Project Name / Number: Margaret Spaulding (OWP) 5  
Project Manager: Kyle Siesser

Reported:  
09/27/21 13:12

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
SS01	2109054-01	Solid	08/31/21 17:20	09/03/21 11:15	
SS02	2109054-02	Solid	08/31/21 17:10	09/03/21 11:15	
SS03	2109054-03	Solid	08/31/21 17:05	09/03/21 11:15	

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Cottonwood Consulting PO Box 1653 Durango CO, 81302	Project: COGCC Table 915-1 Project Name / Number: Margaret Spaulding (OWP) 5 Project Manager: Kyle Siesser	Reported: 09/27/21 13:12
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**SS01**

**2109054-01 (Soil)**

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

Hexavalent Chromium	<0.250	0.250	0.0543	mg/kg	25	09/23/21 10:00	3060A/3500-Cr D		JDA
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**Saturated Paste Extraction**

Calcium	28.1	0.200	0.116	mg/L	2	09/23/21 13:13	EPA200.7		AES
Conductivity	1130			umho/cm @ 25.0°C	1	09/22/21 14:55	ASA#9 10-3.3		VJW
Magnesium	5.51	0.200	0.131	mg/L	2	09/23/21 13:13	EPA200.7		AES
pH	8.23			pH Units	1	09/22/21 13:00	ASA#9 10-3.2		VJW
SAR	8.99			No Unit	1	09/23/21 13:13	Calculation		AES
Sodium	199	2.00	0.159	mg/L	2	09/23/21 13:13	EPA200.7		AES

**Total Metals by ICP**

Barium	416	5.00	0.390	mg/kg dry	100	09/21/21 12:39	6010B		AES
Cadmium	<5.00	5.00	1.10	mg/kg dry	100	09/21/21 12:39	6010B		AES
Chromium	16.7	5.00	0.400	mg/kg dry	100	09/21/21 12:39	6010B		AES
Copper	36.6	5.00	2.39	mg/kg dry	100	09/21/21 12:39	6010B		AES
Lead	60.0	10.0	0.906	mg/kg dry	100	09/21/21 12:39	6010B		AES
Nickel	11.6	5.00	0.874	mg/kg dry	100	09/21/21 12:39	6010B		AES
Selenium	<20.0	20.0	4.70	mg/kg dry	100	09/21/21 12:39	6010B		AES
Silver	<1.00	1.00	0.688	mg/kg dry	100	09/21/21 12:39	6010B		AES
Zinc	71.8	10.0	1.71	mg/kg dry	100	09/21/21 12:39	6010B		AES

**Total Metals by ICPMS**

Arsenic	8.26	1.00	0.0950	mg/kg dry	1000	09/17/21 13:07	6020A		AES
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**Hot Water Extractable**

Boron	<1.20	1.20	0.568	mg/L	4	09/16/21 18:07	EPA200.7		AES
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**Subcontracted -- Cardinal Laboratories 101 East Marland Hobbs, NM 88240**

**Petroleum Hydrocarbons by GC FID**

**S-06**

GRO C6-C10*	<50.0	50.0	31.2	mg/kg	5	09/10/21 15:06	8015B		MS
DRO >C10-C28*	2410	50.0	21.3	mg/kg	5	09/10/21 15:06	8015B		MS
EXT DRO >C28-C36	926	50.0	21.3	mg/kg	5	09/10/21 15:06	8015B		MS

Surrogate: 1-Chlorooctane			98.3 %	44.3-133		09/10/21 15:06	8015B		MS
Surrogate: 1-Chlorooctadecane			156 %	38.9-142		09/10/21 15:06	8015B		MS

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Cottonwood Consulting PO Box 1653 Durango CO, 81302	Project: COGCC Table 915-1 Project Name / Number: Margaret Spaulding (OWP) 5 Project Manager: Kyle Siesser	Reported: 09/27/21 13:12
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SS01

2109054-01 (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	09/10/21 06:23	8260B		MS
Toluene*	<0.0250	0.0250	0.00670	mg/kg	50	09/10/21 06:23	8260B		MS
Ethylbenzene*	<0.0250	0.0250	0.00405	mg/kg	50	09/10/21 06:23	8260B		MS
m+p - Xylene*	<0.0500	0.0500	0.0186	mg/kg	50	09/10/21 06:23	8260B		MS
o-Xylene*	<0.0250	0.0250	0.00700	mg/kg	50	09/10/21 06:23	8260B		MS
Total Xylenes*	<0.0750	0.0750	0.0250	mg/kg	50	09/10/21 06:23	8260B		MS
1,3,5-Trimethylbenzene	<0.0250	0.0250	0.00450	mg/kg	50	09/10/21 06:23	8260B		MS
1,2,4-Trimethylbenzene	<0.0250	0.0250	0.00650	mg/kg	50	09/10/21 06:23	8260B		MS
Naphthalene*	<b>0.0909</b>	0.0250	0.00500	mg/kg	50	09/10/21 06:23	8260B		MS
Surrogate: Dibromofluoromethane			104 %	84.6-114		09/10/21 06:23	8260B		MS
Surrogate: Toluene-d8			95.9 %	90.4-109		09/10/21 06:23	8260B		MS
Surrogate: 4-Bromofluorobenzene			95.5 %	82.5-117		09/10/21 06:23	8260B		MS

**Polynuclear Aromatic Compounds by GC/MS**

Naphthalene*	<0.153	0.400	0.153	mg/kg	400	09/14/21 22:44	8270C		MS
2-Methylnaphthalene*	<0.226	0.400	0.226	mg/kg	400	09/14/21 22:44	8270C		MS
1-Methylnaphthalene	<0.161	0.400	0.161	mg/kg	400	09/14/21 22:44	8270C		MS
Acenaphthylene*	<0.196	0.400	0.196	mg/kg	400	09/14/21 22:44	8270C		MS
Acenaphthene*	<0.235	0.400	0.235	mg/kg	400	09/14/21 22:44	8270C		MS
Fluorene*	<b>0.771</b>	0.400	0.142	mg/kg	400	09/14/21 22:44	8270C		MS
Phenanthrene*	<b>2.06</b>	0.400	0.214	mg/kg	400	09/14/21 22:44	8270C		MS
Anthracene*	<0.172	0.400	0.172	mg/kg	400	09/14/21 22:44	8270C		MS
Carbazole*	<0.190	0.400	0.190	mg/kg	400	09/14/21 22:44	8270C		MS
Fluoranthene*	<b>0.254</b>	0.400	0.185	mg/kg	400	09/14/21 22:44	8270C	J	MS
Pyrene*	<b>0.564</b>	0.400	0.132	mg/kg	400	09/14/21 22:44	8270C		MS
Benzo[a]anthracene*	<0.230	0.400	0.230	mg/kg	400	09/14/21 22:44	8270C		MS
Chrysene*	<b>0.800</b>	0.400	0.172	mg/kg	400	09/14/21 22:44	8270C		MS
Benzo[b]fluoranthene*	<0.192	0.400	0.192	mg/kg	400	09/14/21 22:44	8270C		MS
Benzo[k]fluoranthene*	<0.157	0.400	0.157	mg/kg	400	09/14/21 22:44	8270C		MS
Benzo[a]pyrene*	<0.182	0.400	0.182	mg/kg	400	09/14/21 22:44	8270C		MS
Indeno[1,2,3-cd]pyrene*	<0.168	0.400	0.168	mg/kg	400	09/14/21 22:44	8270C		MS

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Debbie Zufelt, Reports Manager

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Cottonwood Consulting PO Box 1653 Durango CO, 81302	Project: COGCC Table 915-1 Project Name / Number: Margaret Spaulding (OWP) 5 Project Manager: Kyle Siesser	Reported: 09/27/21 13:12
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SS01

2109054-01 (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

Dibenz[a,h]anthracene*	<0.186	0.400	0.186	mg/kg	400	09/14/21 22:44	8270C		MS
Benzo[g,h,i]perylene*	<0.186	0.400	0.186	mg/kg	400	09/14/21 22:44	8270C		MS
Surrogate: Nitrobenzene-d5			74.3 %	39.6-121		09/14/21 22:44	8270C		MS
Surrogate: 2-Fluorobiphenyl			85.3 %	39.8-134		09/14/21 22:44	8270C		MS
Surrogate: Terphenyl-d14			91.2 %	33.3-136		09/14/21 22:44	8270C		MS

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Cottonwood Consulting PO Box 1653 Durango CO, 81302	Project: COGCC Table 915-1 Project Name / Number: Margaret Spaulding (OWP) 5 Project Manager: Kyle Siesser	Reported: 09/27/21 13:12
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**SS02**

**2109054-02 (Soil)**

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

Hexavalent Chromium	<0.250	0.250	0.0543	mg/kg	25	09/23/21 10:00	3060A/3500-Cr D		JDA
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**Saturated Paste Extraction**

Calcium	256	0.200	0.116	mg/L	2	09/23/21 13:17	EPA200.7		AES
Conductivity	2030			umho/cm @ 25.0°C	1	09/22/21 14:55	ASA#9 10-3.3		VJW
Magnesium	39.4	0.200	0.131	mg/L	2	09/23/21 13:17	EPA200.7		AES
pH	7.75			pH Units	1	09/22/21 13:00	ASA#9 10-3.2		VJW
SAR	1.58			No Unit	1	09/23/21 13:17	Calculation		AES
Sodium	103	2.00	0.159	mg/L	2	09/23/21 13:17	EPA200.7		AES

**Total Metals by ICP**

Barium	139	5.00	0.390	mg/kg dry	100	09/21/21 12:44	6010B		AES
Cadmium	<5.00	5.00	1.10	mg/kg dry	100	09/21/21 12:44	6010B		AES
Chromium	14.4	5.00	0.400	mg/kg dry	100	09/21/21 12:44	6010B		AES
Copper	24.0	5.00	2.39	mg/kg dry	100	09/21/21 12:44	6010B		AES
Lead	10.4	10.0	0.906	mg/kg dry	100	09/21/21 12:44	6010B		AES
Nickel	10.4	5.00	0.874	mg/kg dry	100	09/21/21 12:44	6010B		AES
Selenium	<20.0	20.0	4.70	mg/kg dry	100	09/21/21 12:43	6010B		AES
Silver	<1.00	1.00	0.688	mg/kg dry	100	09/21/21 12:43	6010B		AES
Zinc	60.4	10.0	1.71	mg/kg dry	100	09/21/21 12:44	6010B		AES

**Total Metals by ICPMS**

Arsenic	4.61	1.00	0.0950	mg/kg dry	1000	09/17/21 13:10	6020A		AES
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**Hot Water Extractable**

Boron	1.36	1.20	0.568	mg/L	4	09/16/21 18:12	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	09/10/21 13:30	8015B		MS
DRO >C10-C28*	12.7	10.0	4.26	mg/kg	1	09/10/21 13:30	8015B		MS
EXT DRO >C28-C36	<10.0	10.0	4.26	mg/kg	1	09/10/21 13:30	8015B		MS

Surrogate: 1-Chlorooctane 123 % 44.3-133 09/10/21 13:30 8015B MS

Surrogate: 1-Chlorooctadecane 126 % 38.9-142 09/10/21 13:30 8015B MS

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Debbie Zufelt, Reports Manager

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Cottonwood Consulting	Project: COGCC Table 915-1	
PO Box 1653	Project Name / Number: Margaret Spaulding (OWP) 5	<b>Reported:</b>
Durango CO, 81302	Project Manager: Kyle Siesser	09/27/21 13:12

**SS02**

**2109054-02 (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	09/10/21 06:43	8260B		MS
Toluene*	<0.0250	0.0250	0.00670	mg/kg	50	09/10/21 06:43	8260B		MS
Ethylbenzene*	<0.0250	0.0250	0.00405	mg/kg	50	09/10/21 06:43	8260B		MS
m+p - Xylene*	<0.0500	0.0500	0.0186	mg/kg	50	09/10/21 06:43	8260B		MS
o-Xylene*	<0.0250	0.0250	0.00700	mg/kg	50	09/10/21 06:43	8260B		MS
Total Xylenes*	<0.0750	0.0750	0.0250	mg/kg	50	09/10/21 06:43	8260B		MS
1,3,5-Trimethylbenzene	<0.0250	0.0250	0.00450	mg/kg	50	09/10/21 06:43	8260B		MS
1,2,4-Trimethylbenzene	<0.0250	0.0250	0.00650	mg/kg	50	09/10/21 06:43	8260B		MS
Naphthalene*	<0.0250	0.0250	0.00500	mg/kg	50	09/10/21 06:43	8260B		MS
Surrogate: Dibromofluoromethane			103 %	84.6-114		09/10/21 06:43	8260B		MS
Surrogate: Toluene-d8			98.0 %	90.4-109		09/10/21 06:43	8260B		MS
Surrogate: 4-Bromofluorobenzene			87.7 %	82.5-117		09/10/21 06:43	8260B		MS

**Polynuclear Aromatic Compounds by GC/MS**

Naphthalene*	<0.015	0.040	0.015	mg/kg	40	09/16/21 13:15	8270C		MS
2-Methylnaphthalene*	<0.023	0.040	0.023	mg/kg	40	09/16/21 13:15	8270C		MS
1-Methylnaphthalene	<0.016	0.040	0.016	mg/kg	40	09/16/21 13:15	8270C		MS
Acenaphthylene*	<0.020	0.040	0.020	mg/kg	40	09/16/21 13:15	8270C		MS
Acenaphthene*	<0.024	0.040	0.024	mg/kg	40	09/16/21 13:15	8270C		MS
Fluorene*	<0.014	0.040	0.014	mg/kg	40	09/16/21 13:15	8270C		MS
Phenanthrene*	<0.021	0.040	0.021	mg/kg	40	09/16/21 13:15	8270C		MS
Anthracene*	<0.017	0.040	0.017	mg/kg	40	09/16/21 13:15	8270C		MS
Carbazole*	<0.019	0.040	0.019	mg/kg	40	09/16/21 13:15	8270C		MS
Fluoranthene*	<0.019	0.040	0.019	mg/kg	40	09/16/21 13:15	8270C		MS
Pyrene*	<0.013	0.040	0.013	mg/kg	40	09/16/21 13:15	8270C		MS
Benzo[a]anthracene*	<0.023	0.040	0.023	mg/kg	40	09/16/21 13:15	8270C		MS
Chrysene*	<0.017	0.040	0.017	mg/kg	40	09/16/21 13:15	8270C		MS
Benzo[b]fluoranthene*	<0.019	0.040	0.019	mg/kg	40	09/16/21 13:15	8270C		MS
Benzo[k]fluoranthene*	<0.016	0.040	0.016	mg/kg	40	09/16/21 13:15	8270C		MS
Benzo[a]pyrene*	<0.018	0.040	0.018	mg/kg	40	09/16/21 13:15	8270C		MS

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Debbie Zufelt, Reports Manager

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Cottonwood Consulting PO Box 1653 Durango CO, 81302	Project: COGCC Table 915-1 Project Name / Number: Margaret Spaulding (OWP) 5 Project Manager: Kyle Siesser	Reported: 09/27/21 13:12
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SS02

2109054-02 (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

Indeno[1,2,3-cd]pyrene*	<0.017	0.040	0.017	mg/kg	40	09/16/21 13:15	8270C		MS
Dibenz[a,h]anthracene*	<0.019	0.040	0.019	mg/kg	40	09/16/21 13:15	8270C		MS
Benzo[g,h,i]perylene*	<0.019	0.040	0.019	mg/kg	40	09/16/21 13:15	8270C		MS
Surrogate: Nitrobenzene-d5			71.2 %	39.6-121		09/16/21 13:15	8270C		MS
Surrogate: 2-Fluorobiphenyl			73.7 %	39.8-134		09/16/21 13:15	8270C		MS
Surrogate: Terphenyl-d14			74.7 %	33.3-136		09/16/21 13:15	8270C		MS

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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**SS03**

**2109054-03 (Soil)**

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

Hexavalent Chromium	<0.250	0.250	0.0543	mg/kg	25	09/23/21 10:00	3060A/3500-Cr D	M5	JDA
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**Saturated Paste Extraction**

Calcium	38.1	0.100	0.058	mg/L	1	09/23/21 13:19	EPA200.7		AES
Conductivity	306			umho/cm @ 25.0°C	1	09/22/21 14:55	ASA#9 10-3.3		VJW
Magnesium	6.39	0.100	0.065	mg/L	1	09/23/21 13:19	EPA200.7		AES
pH	7.71			pH Units	1	09/22/21 13:00	ASA#9 10-3.2		VJW
SAR	0.74			No Unit	1	09/23/21 13:19	Calculation		AES
Sodium	18.7	1.00	0.079	mg/L	1	09/23/21 13:19	EPA200.7		AES

**Total Metals by ICP**

Barium	290	5.00	0.390	mg/kg dry	100	09/21/21 12:48	6010B		AES
Cadmium	<5.00	5.00	1.10	mg/kg dry	100	09/21/21 12:48	6010B		AES
Chromium	25.7	5.00	0.400	mg/kg dry	100	09/21/21 12:48	6010B		AES
Copper	42.1	5.00	2.39	mg/kg dry	100	09/21/21 12:48	6010B		AES
Lead	<10.0	10.0	0.906	mg/kg dry	100	09/21/21 12:48	6010B		AES
Nickel	16.5	5.00	0.874	mg/kg dry	100	09/21/21 12:48	6010B		AES
Selenium	<20.0	20.0	4.70	mg/kg dry	100	09/21/21 12:48	6010B		AES
Silver	<1.00	1.00	0.688	mg/kg dry	100	09/21/21 12:48	6010B		AES
Zinc	69.4	10.0	1.71	mg/kg dry	100	09/21/21 12:48	6010B		AES

**Total Metals by ICPMS**

Arsenic	5.05	1.00	0.0950	mg/kg dry	1000	09/17/21 13:14	6020A		AES
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**Hot Water Extractable**

Boron	<1.20	1.20	0.568	mg/L	4	09/16/21 18:14	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	09/10/21 13:46	8015B		MS
DRO >C10-C28*	<10.0	10.0	4.26	mg/kg	1	09/10/21 13:46	8015B		MS
EXT DRO >C28-C36	<10.0	10.0	4.26	mg/kg	1	09/10/21 13:46	8015B		MS

Surrogate: 1-Chlorooctane			98.9 %	44.3-133		09/10/21 13:46	8015B		MS
Surrogate: 1-Chlorooctadecane			99.9 %	38.9-142		09/10/21 13:46	8015B		MS

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Cottonwood Consulting	Project: COGCC Table 915-1	
PO Box 1653	Project Name / Number: Margaret Spaulding (OWP) 5	Reported:
Durango CO, 81302	Project Manager: Kyle Siesser	09/27/21 13:12

SS03

2109054-03 (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	09/10/21 07:03	8260B		MS
Toluene*	<0.0250	0.0250	0.00670	mg/kg	50	09/10/21 07:03	8260B		MS
Ethylbenzene*	<0.0250	0.0250	0.00405	mg/kg	50	09/10/21 07:03	8260B		MS
m+p - Xylene*	<0.0500	0.0500	0.0186	mg/kg	50	09/10/21 07:03	8260B		MS
o-Xylene*	<0.0250	0.0250	0.00700	mg/kg	50	09/10/21 07:03	8260B		MS
Total Xylenes*	<0.0750	0.0750	0.0250	mg/kg	50	09/10/21 07:03	8260B		MS
1,3,5-Trimethylbenzene	<0.0250	0.0250	0.00450	mg/kg	50	09/10/21 07:03	8260B		MS
1,2,4-Trimethylbenzene	<0.0250	0.0250	0.00650	mg/kg	50	09/10/21 07:03	8260B		MS
Naphthalene*	<0.0250	0.0250	0.00500	mg/kg	50	09/10/21 07:03	8260B		MS
Surrogate: Dibromofluoromethane			103 %	84.6-114		09/10/21 07:03	8260B		MS
Surrogate: Toluene-d8			99.3 %	90.4-109		09/10/21 07:03	8260B		MS
Surrogate: 4-Bromofluorobenzene			86.4 %	82.5-117		09/10/21 07:03	8260B		MS

**Polynuclear Aromatic Compounds by GC/MS**

Naphthalene*	<0.015	0.040	0.015	mg/kg	40	09/16/21 13:45	8270C		MS
2-Methylnaphthalene*	<0.023	0.040	0.023	mg/kg	40	09/16/21 13:45	8270C		MS
1-Methylnaphthalene	<0.016	0.040	0.016	mg/kg	40	09/16/21 13:45	8270C		MS
Acenaphthylene*	<0.020	0.040	0.020	mg/kg	40	09/16/21 13:45	8270C		MS
Acenaphthene*	<0.024	0.040	0.024	mg/kg	40	09/16/21 13:45	8270C		MS
Fluorene*	<0.014	0.040	0.014	mg/kg	40	09/16/21 13:45	8270C		MS
Phenanthrene*	<0.021	0.040	0.021	mg/kg	40	09/16/21 13:45	8270C		MS
Anthracene*	<0.017	0.040	0.017	mg/kg	40	09/16/21 13:45	8270C		MS
Carbazole*	<0.019	0.040	0.019	mg/kg	40	09/16/21 13:45	8270C		MS
Fluoranthene*	<0.019	0.040	0.019	mg/kg	40	09/16/21 13:45	8270C		MS
Pyrene*	<0.013	0.040	0.013	mg/kg	40	09/16/21 13:45	8270C		MS
Benzo[a]anthracene*	<0.023	0.040	0.023	mg/kg	40	09/16/21 13:45	8270C		MS
Chrysene*	<0.017	0.040	0.017	mg/kg	40	09/16/21 13:45	8270C		MS
Benzo[b]fluoranthene*	<0.019	0.040	0.019	mg/kg	40	09/16/21 13:45	8270C		MS
Benzo[k]fluoranthene*	<0.016	0.040	0.016	mg/kg	40	09/16/21 13:45	8270C		MS
Benzo[a]pyrene*	<0.018	0.040	0.018	mg/kg	40	09/16/21 13:45	8270C		MS

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Cottonwood Consulting PO Box 1653 Durango CO, 81302	Project: COGCC Table 915-1 Project Name / Number: Margaret Spaulding (OWP) 5 Project Manager: Kyle Siesser	Reported: 09/27/21 13:12
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SS03

2109054-03 (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

Indeno[1,2,3-cd]pyrene*	<0.017	0.040	0.017	mg/kg	40	09/16/21 13:45	8270C		MS
Dibenz[a,h]anthracene*	<0.019	0.040	0.019	mg/kg	40	09/16/21 13:45	8270C		MS
Benzo[g,h,i]perylene*	<0.019	0.040	0.019	mg/kg	40	09/16/21 13:45	8270C		MS
Surrogate: Nitrobenzene-d5			72.2 %	39.6-121		09/16/21 13:45	8270C		MS
Surrogate: 2-Fluorobiphenyl			70.4 %	39.8-134		09/16/21 13:45	8270C		MS
Surrogate: Terphenyl-d14			68.8 %	33.3-136		09/16/21 13:45	8270C		MS

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Cottonwood Consulting	Project: COGCC Table 915-1	
PO Box 1653	Project Name / Number: Margaret Spaulding (OWP) 5	<b>Reported:</b>
Durango CO, 81302	Project Manager: Kyle Siesser	09/27/21 13:12

**General Chemistry - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B212204 - General Prep - Wet Chem**

<b>Blank (B212204-BLK1)</b>		Prepared: 09/17/21 Analyzed: 09/23/21								
Hexavalent Chromium	ND	0.250	mg/kg							
<b>LCS (B212204-BS1)</b>		Prepared: 09/17/21 Analyzed: 09/23/21								
Hexavalent Chromium	1.98	0.250	mg/kg	2.00		98.9	85-115			

**Saturated Paste Extraction - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B212187 - Paste Extract**

<b>Blank (B212187-BLK1)</b>		Prepared: 09/15/21 Analyzed: 09/23/21								
Calcium	ND	0.100	mg/L							
Magnesium	ND	0.100	mg/L							
Sodium	ND	1.00	mg/L							
<b>Duplicate (B212187-DUP2)</b>		<b>Source: 2109055-06</b> Prepared: 09/15/21 Analyzed: 09/23/21								
Calcium	110	0.100	mg/L		120			8.82	20	
Magnesium	12.1	0.100	mg/L		14.3			16.3	20	
SAR	1.96		No Unit		1.80			8.51	20	
Sodium	81.0	1.00	mg/L		78.5			3.15	20	
<b>Reference (B212187-SRM1)</b>		Prepared: 09/15/21 Analyzed: 09/23/21								
SAR	7.15		No Unit	7.50		95.3	90-110			

**Batch B212188 - Paste Extract**

<b>Duplicate (B212188-DUP2)</b>		<b>Source: 2109055-06</b> Prepared: 09/15/21 Analyzed: 09/22/21								
Conductivity	958		umho/cm @ 25.0°C		966			0.832	20	
<b>Reference (B212188-SRM1)</b>		Prepared: 09/15/21 Analyzed: 09/22/21								
Conductivity	7150		umho/cm @ 25.0°C	6720		106	90-110			

**Batch B212189 - Paste Extract**

<b>Duplicate (B212189-DUP2)</b>		<b>Source: 2109055-06</b> Prepared: 09/15/21 Analyzed: 09/22/21								
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Cottonwood Consulting PO Box 1653 Durango CO, 81302	Project: COGCC Table 915-1 Project Name / Number: Margaret Spaulding (OWP) 5 Project Manager: Kyle Siesser	Reported: 09/27/21 13:12
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**Saturated Paste Extraction - Quality Control  
(Continued)**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B212189 - Paste Extract (Continued)**

**Duplicate (B212189-DUP2) (Continued)**

Source: 2109055-06 Prepared: 09/15/21 Analyzed: 09/22/21

pH	8.10		pH Units		8.02			0.993	20	
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**Reference (B212189-SRM1)**

Prepared: 09/15/21 Analyzed: 09/22/21

pH	8.63		pH Units	9.14		94.4	95-105			
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Cottonwood Consulting	Project: COGCC Table 915-1	
PO Box 1653	Project Name / Number: Margaret Spaulding (OWP) 5	<b>Reported:</b>
Durango CO, 81302	Project Manager: Kyle Siesser	09/27/21 13:12

**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 B212137 - EPA 3050**

**Blank (B212137-BLK1)**

Prepared: 09/10/21 Analyzed: 09/17/21

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 (B212137-BS1)**

Prepared: 09/10/21 Analyzed: 09/17/21

Barium	168	5.00	mg/kg dry	200		84.1	80-120			
Cadmium	167	5.00	mg/kg dry	200		83.4	80-120			
Chromium	170	5.00	mg/kg dry	200		85.2	80-120			
Copper	357	5.00	mg/kg dry	400		89.2	80-120			
Lead	163	10.0	mg/kg dry	200		81.6	80-120			
Nickel	167	5.00	mg/kg dry	200		83.6	80-120			
Selenium	672	20.0	mg/kg dry	800		84.0	80-120			
Silver	8.53	1.00	mg/kg dry	10.0		85.3	80-120			
Zinc	164	10.0	mg/kg dry	200		81.9	80-120			

**LCS Dup (B212137-BSD1)**

Prepared: 09/10/21 Analyzed: 09/17/21

Barium	169	5.00	mg/kg dry	200		84.7	80-120	0.643	20	
Cadmium	160	5.00	mg/kg dry	200		80.1	80-120	4.09	20	
Chromium	171	5.00	mg/kg dry	200		85.7	80-120	0.598	20	
Copper	359	5.00	mg/kg dry	400		89.7	80-120	0.582	20	
Lead	161	10.0	mg/kg dry	200		80.6	80-120	1.27	20	
Nickel	166	5.00	mg/kg dry	200		83.1	80-120	0.635	20	
Selenium	673	20.0	mg/kg dry	800		84.1	80-120	0.115	20	
Silver	8.70	1.00	mg/kg dry	10.0		87.0	80-120	2.00	20	
Zinc	161	10.0	mg/kg dry	200		80.7	80-120	1.46	20	

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Cottonwood Consulting PO Box 1653 Durango CO, 81302	Project: COGCC Table 915-1 Project Name / Number: Margaret Spaulding (OWP) 5 Project Manager: Kyle Siesser	Reported: 09/27/21 13:12
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**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 B212141 - EPA 3050M**

**Blank (B212141-BLK1)**

Prepared: 09/10/21 Analyzed: 09/17/21

Arsenic	ND	0.100	mg/kg dry							
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**LCS (B212141-BS1)**

Prepared: 09/10/21 Analyzed: 09/17/21

Arsenic	4.53	0.100	mg/kg dry	5.00		90.5	80-120			
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**LCS Dup (B212141-BSD1)**

Prepared: 09/10/21 Analyzed: 09/17/21

Arsenic	4.77	0.100	mg/kg dry	5.00		95.4	80-120	5.30	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 B212178 - Hot Water Soluble Metals Extract**

**Blank (B212178-BLK1)**

Prepared: 09/15/21 Analyzed: 09/16/21

Boron	ND	1.20	mg/L							
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**Duplicate (B212178-DUP1)**

Source: 2109051-01 Prepared: 09/15/21 Analyzed: 09/16/21

Boron	ND	1.20	mg/L		ND				200	
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Cottonwood Consulting	Project: COGCC Table 915-1	
PO Box 1653	Project Name / Number: Margaret Spaulding (OWP) 5	<b>Reported:</b>
Durango CO, 81302	Project Manager: Kyle Siesser	09/27/21 13:12

**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 1091001 - General Prep - Organics**

**Blank (1091001-BLK1)**

Prepared & Analyzed: 09/10/21

Surrogate: 1-Chlorooctadecane	56.5		mg/kg	50.0		113	38.9-142			
Surrogate: 1-Chlorooctane	55.3		mg/kg	50.0		111	44.3-133			
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 (1091001-BS1)**

Prepared & Analyzed: 09/10/21

Surrogate: 1-Chlorooctadecane	63.6		mg/kg	50.0		127	38.9-142			
Surrogate: 1-Chlorooctane	63.2		mg/kg	50.0		126	44.3-133			
DRO >C10-C28	234	10.0	mg/kg	200		117	79.3-136			
GRO C6-C10	235	10.0	mg/kg	200		118	83.4-129			
Total TPH C6-C28	469	10.0	mg/kg	400		117	85.3-130			

**LCS Dup (1091001-BSD1)**

Prepared & Analyzed: 09/10/21

Surrogate: 1-Chlorooctadecane	57.5		mg/kg	50.0		115	38.9-142			
Surrogate: 1-Chlorooctane	57.2		mg/kg	50.0		114	44.3-133			
DRO >C10-C28	211	10.0	mg/kg	200		106	79.3-136	10.1	12.1	
GRO C6-C10	219	10.0	mg/kg	200		109	83.4-129	7.35	12.6	
Total TPH C6-C28	430	10.0	mg/kg	400		108	85.3-130	8.72	11.6	

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Cottonwood Consulting	Project: COGCC Table 915-1	
PO Box 1653	Project Name / Number: Margaret Spaulding (OWP) 5	Reported:
Durango CO, 81302	Project Manager: Kyle Siesser	09/27/21 13:12

**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 1090814 - Volatiles**

**Blank (1090814-BLK1)**

Prepared: 09/08/21 Analyzed: 09/10/21

1,2,4-Trimethylbenzene	ND	0.0250	mg/kg							
1,3,5-Trimethylbenzene	ND	0.0250	mg/kg							
<i>Surrogate: 4-Bromofluorobenzene</i>	1.11		mg/kg	1.25		88.8	82.5-117			
Benzene	ND	0.0250	mg/kg							
<i>Surrogate: Dibromofluoromethane</i>	1.23		mg/kg	1.25		98.6	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>	1.22		mg/kg	1.25		97.3	90.4-109			
Total Xylenes	ND	0.0750	mg/kg							

**LCS (1090814-BS1)**

Prepared: 09/08/21 Analyzed: 09/10/21

1,2,4-Trimethylbenzene	0.462	0.0250	mg/kg	0.500		92.4	62.4-140			
1,3,5-Trimethylbenzene	0.469	0.0250	mg/kg	0.500		93.7	64.4-138			
<i>Surrogate: 4-Bromofluorobenzene</i>	1.18		mg/kg	1.25		94.4	82.5-117			
Benzene	0.499	0.0250	mg/kg	0.500		99.7	73-130			
<i>Surrogate: Dibromofluoromethane</i>	1.16		mg/kg	1.25		92.6	84.6-114			
Ethylbenzene	0.475	0.0250	mg/kg	0.500		95.1	75.4-127			
m+p - Xylene	0.974	0.0500	mg/kg	1.00		97.4	71.8-133			
Naphthalene	0.329	0.0250	mg/kg	0.500		65.8	28.7-158			
o-Xylene	0.458	0.0250	mg/kg	0.500		91.6	78.6-125			
Toluene	0.499	0.0250	mg/kg	0.500		99.9	79-122			
<i>Surrogate: Toluene-d8</i>	1.21		mg/kg	1.25		97.1	90.4-109			
Total Xylenes	1.43	0.0750	mg/kg	1.50		95.5	74.6-130			

**LCS Dup (1090814-BSD1)**

Prepared: 09/08/21 Analyzed: 09/09/21

1,2,4-Trimethylbenzene	0.506	0.0250	mg/kg	0.500		101	62.4-140	9.11	38.2	
1,3,5-Trimethylbenzene	0.505	0.0250	mg/kg	0.500		101	64.4-138	7.56	39.1	
<i>Surrogate: 4-Bromofluorobenzene</i>	1.24		mg/kg	1.25		99.4	82.5-117			
Benzene	0.514	0.0250	mg/kg	0.500		103	73-130	3.04	17.1	
<i>Surrogate: Dibromofluoromethane</i>	1.19		mg/kg	1.25		95.0	84.6-114			
Ethylbenzene	0.508	0.0250	mg/kg	0.500		102	75.4-127	6.57	16.5	
m+p - Xylene	1.03	0.0500	mg/kg	1.00		103	71.8-133	5.55	19.1	
Naphthalene	0.392	0.0250	mg/kg	0.500		78.5	28.7-158	17.6	64	
o-Xylene	0.508	0.0250	mg/kg	0.500		102	78.6-125	10.3	13.2	
Toluene	0.505	0.0250	mg/kg	0.500		101	79-122	1.02	18.3	

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Cottonwood Consulting	Project: COGCC Table 915-1	
PO Box 1653	Project Name / Number: Margaret Spaulding (OWP) 5	<b>Reported:</b>
Durango CO, 81302	Project Manager: Kyle Siesser	09/27/21 13:12

**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 1090814 - Volatiles (Continued)**

**LCS Dup (1090814-BSD1) (Continued)**

Prepared: 09/08/21 Analyzed: 09/09/21

Surrogate: Toluene-d8	1.24		mg/kg	1.25		99.1	90.4-109			
Total Xylenes	1.54	0.0750	mg/kg	1.50		102	74.6-130	7.10	16.5	

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Cottonwood Consulting	Project: COGCC Table 915-1	
PO Box 1653	Project Name / Number: Margaret Spaulding (OWP) 5	Reported:
Durango CO, 81302	Project Manager: Kyle Siesser	09/27/21 13:12

**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 1090817 - SW846-3510**

**Blank (1090817-BLK1)**

Prepared: 09/08/21 Analyzed: 09/14/21

1-Methylnaphthalene	ND	0.040	mg/kg							
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>1.34</i>		mg/kg	<i>2.00</i>		<i>67.2</i>	<i>39.8-134</i>			
2-Methylnaphthalene	ND	0.040	mg/kg							
Acenaphthene	ND	0.040	mg/kg							
Acenaphthylene	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[g,h,i]perylene	ND	0.040	mg/kg							
Benzo[k]flouranthene	ND	0.040	mg/kg							
Carbazole	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>	<i>1.21</i>		mg/kg	<i>2.00</i>		<i>60.5</i>	<i>39.6-121</i>			
Phenanthrene	ND	0.040	mg/kg							
Pyrene	ND	0.040	mg/kg							
<i>Surrogate: Terphenyl-d14</i>	<i>1.43</i>		mg/kg	<i>2.00</i>		<i>71.7</i>	<i>33.3-136</i>			

**LCS (1090817-BS1)**

Prepared: 09/08/21 Analyzed: 09/14/21

1-Methylnaphthalene	0.250	0.040	mg/kg	0.400		62.4	57.6-108			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>1.20</i>		mg/kg	<i>2.00</i>		<i>59.9</i>	<i>39.8-134</i>			
2-Methylnaphthalene	0.254	0.040	mg/kg	0.400		63.6	59-106			
Acenaphthene	0.275	0.040	mg/kg	0.400		68.8	60.9-105			
Acenaphthylene	0.262	0.040	mg/kg	0.400		65.5	57.4-107			
Anthracene	0.268	0.040	mg/kg	0.400		67.0	60.8-105			
Benzo[a]anthracene	0.271	0.040	mg/kg	0.400		67.7	56.1-121			
Benzo[a]pyrene	0.230	0.040	mg/kg	0.400		57.4	56.7-115			
Benzo[b]flouranthene	0.272	0.040	mg/kg	0.400		68.0	45.4-128			
Benzo[g,h,i]perylene	0.255	0.040	mg/kg	0.400		63.7	56.5-107			
Benzo[k]flouranthene	0.274	0.040	mg/kg	0.400		68.6	49.6-119			
Carbazole	0.270	0.040	mg/kg	0.400		67.6	59.7-107			
Chrysene	0.268	0.040	mg/kg	0.400		66.9	12.2-190			
Dibenz[a,h]anthracene	0.245	0.040	mg/kg	0.400		61.3	59.1-111			
Fluoranthene	0.268	0.040	mg/kg	0.400		67.1	60.6-111			

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Cottonwood Consulting	Project: COGCC Table 915-1	
PO Box 1653	Project Name / Number: Margaret Spaulding (OWP) 5	Reported:
Durango CO, 81302	Project Manager: Kyle Siesser	09/27/21 13:12

**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 1090817 - SW846-3510 (Continued)**

**LCS (1090817-BS1) (Continued)**

Prepared: 09/08/21 Analyzed: 09/14/21

Fluorene	0.266	0.040	mg/kg	0.400		66.5	59.3-108			
Indeno[1,2,3-cd]pyrene	0.258	0.040	mg/kg	0.400		64.4	53.4-116			
Naphthalene	0.250	0.040	mg/kg	0.400		62.5	56.5-106			
<i>Surrogate: Nitrobenzene-d5</i>	<i>1.16</i>		mg/kg	<i>2.00</i>		<i>57.8</i>	<i>39.6-121</i>			
Phenanthrene	0.270	0.040	mg/kg	0.400		67.5	59.9-107			
Pyrene	0.279	0.040	mg/kg	0.400		69.8	51.5-122			
<i>Surrogate: Terphenyl-d14</i>	<i>1.32</i>		mg/kg	<i>2.00</i>		<i>66.1</i>	<i>33.3-136</i>			

**LCS Dup (1090817-BS1)**

Prepared: 09/08/21 Analyzed: 09/14/21

1-Methylnaphthalene	0.242	0.040	mg/kg	0.400		60.5	57.6-108	3.13	6.22	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>1.28</i>		mg/kg	<i>2.00</i>		<i>63.9</i>	<i>39.8-134</i>			
2-Methylnaphthalene	0.262	0.040	mg/kg	0.400		65.4	59-106	2.81	6.23	
Acenaphthene	0.267	0.040	mg/kg	0.400		66.7	60.9-105	3.05	8.18	
Acenaphthylene	0.265	0.040	mg/kg	0.400		66.2	57.4-107	1.04	5	
Anthracene	0.255	0.040	mg/kg	0.400		63.7	60.8-105	5.04	3.68	QR-04
Benzo[a]anthracene	0.282	0.040	mg/kg	0.400		70.5	56.1-121	4.08	9.01	
Benzo[a]pyrene	0.236	0.040	mg/kg	0.400		59.0	56.7-115	2.79	4.92	
Benzo[b]fluoranthene	0.284	0.040	mg/kg	0.400		71.0	45.4-128	4.44	7.63	
Benzo[g,h,i]perylene	0.257	0.040	mg/kg	0.400		64.2	56.5-107	0.751	12.5	
Benzo[k]fluoranthene	0.257	0.040	mg/kg	0.400		64.2	49.6-119	6.64	10.6	
Carbazole	0.275	0.040	mg/kg	0.400		68.7	59.7-107	1.69	8.65	
Chrysene	0.273	0.040	mg/kg	0.400		68.1	12.2-190	1.88	21.8	
Dibenz[a,h]anthracene	0.247	0.040	mg/kg	0.400		61.6	59.1-111	0.500	11.6	
Fluoranthene	0.256	0.040	mg/kg	0.400		63.9	60.6-111	4.84	7.54	
Fluorene	0.267	0.040	mg/kg	0.400		66.8	59.3-108	0.499	5.49	
Indeno[1,2,3-cd]pyrene	0.260	0.040	mg/kg	0.400		65.1	53.4-116	0.996	22.3	
Naphthalene	0.249	0.040	mg/kg	0.400		62.3	56.5-106	0.341	4.56	
<i>Surrogate: Nitrobenzene-d5</i>	<i>1.13</i>		mg/kg	<i>2.00</i>		<i>56.3</i>	<i>39.6-121</i>			
Phenanthrene	0.258	0.040	mg/kg	0.400		64.4	59.9-107	4.69	5.21	
Pyrene	0.260	0.040	mg/kg	0.400		64.9	51.5-122	7.23	10.6	
<i>Surrogate: Terphenyl-d14</i>	<i>1.27</i>		mg/kg	<i>2.00</i>		<i>63.5</i>	<i>33.3-136</i>			

**Batch 1090904 - SW846-3510**

**Blank (1090904-BLK1)**

Prepared: 09/09/21 Analyzed: 09/16/21

1-Methylnaphthalene	ND	0.040	mg/kg							
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>1.53</i>		mg/kg	<i>2.00</i>		<i>76.7</i>	<i>39.8-134</i>			
2-Methylnaphthalene	ND	0.040	mg/kg							
Acenaphthene	ND	0.040	mg/kg							

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Cottonwood Consulting	Project: COGCC Table 915-1	
PO Box 1653	Project Name / Number: Margaret Spaulding (OWP) 5	Reported:
Durango CO, 81302	Project Manager: Kyle Siesser	09/27/21 13:12

**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 1090904 - SW846-3510 (Continued)**

**Blank (1090904-BLK1) (Continued)**

Prepared: 09/09/21 Analyzed: 09/16/21

Acenaphthylene	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[g,h,i]perylene	ND	0.040	mg/kg							
Benzo[k]flouranthene	ND	0.040	mg/kg							
Carbazole	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>	1.48		mg/kg	2.00		74.2	39.6-121			
Phenanthrene	ND	0.040	mg/kg							
Pyrene	ND	0.040	mg/kg							
<i>Surrogate: Terphenyl-dl4</i>	1.57		mg/kg	2.00		78.3	33.3-136			

**LCS (1090904-BS1)**

Prepared: 09/09/21 Analyzed: 09/16/21

1-Methylnaphthalene	0.301	0.040	mg/kg	0.400		75.2	57.6-108			
<i>Surrogate: 2-Fluorobiphenyl</i>	1.59		mg/kg	2.00		79.6	39.8-134			
2-Methylnaphthalene	0.319	0.040	mg/kg	0.400		79.9	59-106			
Acenaphthene	0.326	0.040	mg/kg	0.400		81.6	60.9-105			
Acenaphthylene	0.328	0.040	mg/kg	0.400		82.1	57.4-107			
Anthracene	0.313	0.040	mg/kg	0.400		78.1	60.8-105			
Benzo[a]anthracene	0.327	0.040	mg/kg	0.400		81.8	56.1-121			
Benzo[a]pyrene	0.283	0.040	mg/kg	0.400		70.8	56.7-115			
Benzo[b]flouranthene	0.327	0.040	mg/kg	0.400		81.8	45.4-128			
Benzo[g,h,i]perylene	0.313	0.040	mg/kg	0.400		78.3	56.5-107			
Benzo[k]flouranthene	0.340	0.040	mg/kg	0.400		85.0	49.6-119			
Carbazole	0.332	0.040	mg/kg	0.400		82.9	59.7-107			
Chrysene	0.317	0.040	mg/kg	0.400		79.3	12.2-190			
Dibenz[a,h]anthracene	0.305	0.040	mg/kg	0.400		76.2	59.1-111			
Fluoranthene	0.309	0.040	mg/kg	0.400		77.2	60.6-111			
Fluorene	0.307	0.040	mg/kg	0.400		76.8	59.3-108			
Indeno[1,2,3-cd]pyrene	0.311	0.040	mg/kg	0.400		77.8	53.4-116			
Naphthalene	0.308	0.040	mg/kg	0.400		76.9	56.5-106			
<i>Surrogate: Nitrobenzene-d5</i>	1.37		mg/kg	2.00		68.5	39.6-121			

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Debbie Zufelt, Reports Manager

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Cottonwood Consulting	Project: COGCC Table 915-1	
PO Box 1653	Project Name / Number: Margaret Spaulding (OWP) 5	<b>Reported:</b>
Durango CO, 81302	Project Manager: Kyle Siesser	09/27/21 13:12

**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 1090904 - SW846-3510 (Continued)**

**LCS (1090904-BS1) (Continued)**

Prepared: 09/09/21 Analyzed: 09/16/21

Phenanthrene	0.320	0.040	mg/kg	0.400		79.9	59.9-107			
Pyrene	0.305	0.040	mg/kg	0.400		76.3	51.5-122			
<i>Surrogate: Terphenyl-d4</i>	<i>1.56</i>		mg/kg	<i>2.00</i>		<i>78.2</i>	<i>33.3-136</i>			

**LCS Dup (1090904-BSD1)**

Prepared: 09/09/21 Analyzed: 09/16/21

1-Methylnaphthalene	0.302	0.040	mg/kg	0.400		75.4	57.6-108	0.236	6.22	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>1.58</i>		mg/kg	<i>2.00</i>		<i>79.0</i>	<i>39.8-134</i>			
2-Methylnaphthalene	0.325	0.040	mg/kg	0.400		81.2	59-106	1.64	6.23	
Acenaphthene	0.318	0.040	mg/kg	0.400		79.6	60.9-105	2.50	8.18	
Acenaphthylene	0.321	0.040	mg/kg	0.400		80.2	57.4-107	2.29	5	
Anthracene	0.309	0.040	mg/kg	0.400		77.3	60.8-105	1.04	3.68	
Benzo[a]anthracene	0.314	0.040	mg/kg	0.400		78.6	56.1-121	3.90	9.01	
Benzo[a]pyrene	0.282	0.040	mg/kg	0.400		70.4	56.7-115	0.584	4.92	
Benzo[b]flouranthene	0.347	0.040	mg/kg	0.400		86.8	45.4-128	5.95	7.63	
Benzo[g,h,i]perylene	0.304	0.040	mg/kg	0.400		76.0	56.5-107	2.97	12.5	
Benzo[k]flouranthene	0.316	0.040	mg/kg	0.400		79.1	49.6-119	7.21	10.6	
Carbazole	0.324	0.040	mg/kg	0.400		81.0	59.7-107	2.36	8.65	
Chrysene	0.311	0.040	mg/kg	0.400		77.9	12.2-190	1.85	21.8	
Dibenz[a,h]anthracene	0.298	0.040	mg/kg	0.400		74.5	59.1-111	2.34	11.6	
Fluoranthene	0.304	0.040	mg/kg	0.400		76.0	60.6-111	1.65	7.54	
Fluorene	0.323	0.040	mg/kg	0.400		80.6	59.3-108	4.89	5.49	
Indeno[1,2,3-cd]pyrene	0.311	0.040	mg/kg	0.400		77.8	53.4-116	0.0353	22.3	
Naphthalene	0.310	0.040	mg/kg	0.400		77.4	56.5-106	0.667	4.56	
<i>Surrogate: Nitrobenzene-d5</i>	<i>1.47</i>		mg/kg	<i>2.00</i>		<i>73.5</i>	<i>39.6-121</i>			
Phenanthrene	0.311	0.040	mg/kg	0.400		77.7	59.9-107	2.83	5.21	
Pyrene	0.318	0.040	mg/kg	0.400		79.4	51.5-122	4.02	10.6	
<i>Surrogate: Terphenyl-d4</i>	<i>1.67</i>		mg/kg	<i>2.00</i>		<i>83.7</i>	<i>33.3-136</i>			

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Cottonwood Consulting  
PO Box 1653  
Durango CO, 81302

Project: COGCC Table 915-1  
Project Name / Number: Margaret Spaulding (OWP) 5  
Project Manager: Kyle Siesser

Reported:  
09/27/21 13:12

Notes and Definitions

- S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
- QR-04 The RPD for the BS/BSD was outside of historical limits.
- M5 Sample was chosen for matrix spike. Spike recovery did not meet laboratory acceptance criteria, possible matrix interference in sample.
- J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
- 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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