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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'. The script is cursive and fluid, with the first name 'Debbie' and last name 'Zufelt' clearly legible.

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



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Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: Margaret Spaulding (OWP) 11
Project Manager: Kyle Siesser

Reported:
09/27/21 13:41

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
SS01	2109057-01	Solid	08/31/21 16:20	09/03/21 11:15	
SS02	2109057-02	Solid	08/31/21 16:15	09/03/21 11:15	
SS03	2109057-03	Solid	08/31/21 16:00	09/03/21 11:15	

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Debbie Zufelt, Reports Manager

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Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: Margaret Spaulding (OWP) 11
Project Manager: Kyle Siesser

Reported:
09/27/21 13:41

SS01

2109057-01 (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	139	0.200	0.116	mg/L	2	09/23/21 13:42	EPA200.7		AES
Conductivity	1260			umho/cm @ 25.0°C	1	09/22/21 14:55	ASA#9 10-3.3		VJW
Magnesium	22.2	0.200	0.131	mg/L	2	09/23/21 13:42	EPA200.7		AES
pH	8.34			pH Units	1	09/22/21 13:00	ASA#9 10-3.2		VJW
SAR	1.80			No Unit	1	09/23/21 13:42	Calculation		AES
Sodium	86.6	2.00	0.159	mg/L	2	09/23/21 13:42	EPA200.7		AES

Total Metals by ICP

Barium	257	5.00	0.390	mg/kg dry	100	09/21/21 13:28	6010B		AES
Cadmium	<5.00	5.00	1.10	mg/kg dry	100	09/21/21 13:28	6010B	SD2	AES
Chromium	23.3	5.00	0.400	mg/kg dry	100	09/21/21 13:28	6010B	SD2	AES
Copper	25.6	5.00	2.39	mg/kg dry	100	09/21/21 13:28	6010B		AES
Lead	101	10.0	0.906	mg/kg dry	100	09/21/21 13:28	6010B		AES
Nickel	11.2	5.00	0.874	mg/kg dry	100	09/21/21 13:28	6010B	SD2	AES
Selenium	<20.0	20.0	4.70	mg/kg dry	100	09/21/21 13:28	6010B		AES
Silver	<1.00	1.00	0.688	mg/kg dry	100	09/21/21 13:28	6010B		AES
Zinc	52.2	10.0	1.71	mg/kg dry	100	09/21/21 13:28	6010B	SD2	AES

Total Metals by ICPMS

Arsenic	5.40	1.00	0.0950	mg/kg dry	1000	09/17/21 13:44	6020A		AES
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Hot Water Extractable

Boron	<1.20	1.20	0.568	mg/L	4	09/16/21 18:28	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 14:50	8015B		MS
DRO >C10-C28*	232	10.0	4.26	mg/kg	1	09/10/21 14:50	8015B		MS
EXT DRO >C28-C36	91.8	10.0	4.26	mg/kg	1	09/10/21 14:50	8015B		MS

Surrogate: 1-Chlorooctane 102 % 44.3-133 09/10/21 14:50 8015B MS

Surrogate: 1-Chlorooctadecane 108 % 38.9-142 09/10/21 14:50 8015B MS

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Debbie Zufelt, Reports Manager

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Project: COGCC Table 915-1
Project Name / Number: Margaret Spaulding (OWP) 11
Project Manager: Kyle Siesser

Reported:
09/27/21 13:41

SS01

2109057-01 (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 05:23	8260B		MS
Toluene*	<0.0250	0.0250	0.00670	mg/kg	50	09/10/21 05:23	8260B		MS
Ethylbenzene*	<0.0250	0.0250	0.00405	mg/kg	50	09/10/21 05:23	8260B		MS
m+p - Xylene*	<0.0500	0.0500	0.0186	mg/kg	50	09/10/21 05:23	8260B		MS
o-Xylene*	<0.0250	0.0250	0.00700	mg/kg	50	09/10/21 05:23	8260B		MS
Total Xylenes*	<0.0750	0.0750	0.0250	mg/kg	50	09/10/21 05:23	8260B		MS
1,3,5-Trimethylbenzene	<0.0250	0.0250	0.00450	mg/kg	50	09/10/21 05:23	8260B		MS
1,2,4-Trimethylbenzene	<0.0250	0.0250	0.00650	mg/kg	50	09/10/21 05:23	8260B		MS
Naphthalene*	0.0295	0.0250	0.00500	mg/kg	50	09/10/21 05:23	8260B		MS

Surrogate: Dibromofluoromethane 103 % 84.6-114 09/10/21 05:23 8260B MS

Surrogate: Toluene-d8 92.8 % 90.4-109 09/10/21 05:23 8260B MS

Surrogate: 4-Bromofluorobenzene 101 % 82.5-117 09/10/21 05:23 8260B MS

Polynuclear Aromatic Compounds by GC/MS

Naphthalene*	0.018	0.040	0.015	mg/kg	40	09/15/21 15:32	8270C	J	MS
2-Methylnaphthalene*	0.068	0.040	0.023	mg/kg	40	09/15/21 15:32	8270C		MS
1-Methylnaphthalene	0.073	0.040	0.016	mg/kg	40	09/15/21 15:32	8270C		MS
Acenaphthylene*	<0.020	0.040	0.020	mg/kg	40	09/15/21 15:32	8270C		MS
Acenaphthene*	<0.024	0.040	0.024	mg/kg	40	09/15/21 15:32	8270C		MS
Fluorene*	<0.014	0.040	0.014	mg/kg	40	09/15/21 15:32	8270C		MS
Phenanthrene*	0.049	0.040	0.021	mg/kg	40	09/15/21 15:32	8270C		MS
Anthracene*	<0.017	0.040	0.017	mg/kg	40	09/15/21 15:32	8270C		MS
Carbazole*	<0.019	0.040	0.019	mg/kg	40	09/15/21 15:32	8270C		MS
Fluoranthene*	<0.019	0.040	0.019	mg/kg	40	09/15/21 15:32	8270C		MS
Pyrene*	0.063	0.040	0.013	mg/kg	40	09/15/21 15:32	8270C		MS
Benzo[a]anthracene*	<0.023	0.040	0.023	mg/kg	40	09/15/21 15:32	8270C		MS
Chrysene*	0.089	0.040	0.017	mg/kg	40	09/15/21 15:32	8270C		MS
Benzo[b]fluoranthene*	<0.019	0.040	0.019	mg/kg	40	09/15/21 15:32	8270C		MS
Benzo[k]fluoranthene*	<0.016	0.040	0.016	mg/kg	40	09/15/21 15:32	8270C		MS
Benzo[a]pyrene*	0.106	0.040	0.018	mg/kg	40	09/15/21 15:32	8270C		MS
Indeno[1,2,3-cd]pyrene*	<0.017	0.040	0.017	mg/kg	40	09/15/21 15:32	8270C		MS

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Debbie Zufelt

Debbie Zufelt, Reports Manager

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Project: COGCC Table 915-1
Project Name / Number: Margaret Spaulding (OWP) 11
Project Manager: Kyle Siesser

Reported:
09/27/21 13:41

SS01

2109057-01 (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*	<0.019	0.040	0.019	mg/kg	40	09/15/21 15:32	8270C		MS
Benzo[g,h,i]perylene*	<0.019	0.040	0.019	mg/kg	40	09/15/21 15:32	8270C		MS
Surrogate: Nitrobenzene-d5			53.4 %	39.6-121		09/15/21 15:32	8270C		MS
Surrogate: 2-Fluorobiphenyl			71.5 %	39.8-134		09/15/21 15:32	8270C		MS
Surrogate: Terphenyl-d14			76.3 %	33.3-136		09/15/21 15:32	8270C		MS

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Project: COGCC Table 915-1
Project Name / Number: Margaret Spaulding (OWP) 11
Project Manager: Kyle Siesser

Reported:
09/27/21 13:41

SS02**2109057-02 (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	33.5	0.100	0.058	mg/L	1	09/23/21 13:46	EPA200.7		AES
Conductivity	757			umho/cm @ 25.0°C	1	09/22/21 14:55	ASA#9 10-3.3		VJW
Magnesium	6.99	0.100	0.065	mg/L	1	09/23/21 13:46	EPA200.7		AES
pH	8.10			pH Units	1	09/22/21 13:00	ASA#9 10-3.2		VJW
SAR	4.97			No Unit	1	09/23/21 13:46	Calculation		AES
Sodium	121	1.00	0.079	mg/L	1	09/23/21 13:46	EPA200.7		AES

Total Metals by ICP

Barium	143	5.00	0.390	mg/kg dry	100	09/21/21 13:44	6010B		AES
Cadmium	<5.00	5.00	1.10	mg/kg dry	100	09/21/21 13:44	6010B		AES
Chromium	18.8	5.00	0.400	mg/kg dry	100	09/21/21 13:44	6010B		AES
Copper	25.5	5.00	2.39	mg/kg dry	100	09/21/21 13:44	6010B		AES
Lead	18.1	10.0	0.906	mg/kg dry	100	09/21/21 13:44	6010B		AES
Nickel	14.2	5.00	0.874	mg/kg dry	100	09/21/21 13:44	6010B		AES
Selenium	<20.0	20.0	4.70	mg/kg dry	100	09/21/21 13:43	6010B		AES
Silver	<1.00	1.00	0.688	mg/kg dry	100	09/21/21 13:43	6010B		AES
Zinc	47.6	10.0	1.71	mg/kg dry	100	09/21/21 13:44	6010B		AES

Total Metals by ICPMS

Arsenic	6.23	1.00	0.0950	mg/kg dry	1000	09/17/21 13:58	6020A		AES
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Hot Water Extractable

Boron	<1.20	1.20	0.568	mg/L	4	09/16/21 18:30	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 12:58	8015B		MS
DRO >C10-C28*	11.5	10.0	4.26	mg/kg	1	09/10/21 12:58	8015B		MS
EXT DRO >C28-C36	<10.0	10.0	4.26	mg/kg	1	09/10/21 12:58	8015B		MS

Surrogate: 1-Chlorooctane 98.4 % 44.3-133 09/10/21 12:58 8015B MS

Surrogate: 1-Chlorooctadecane 102 % 38.9-142 09/10/21 12:58 8015B MS

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Debbie Zufelt, Reports Manager

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Project: COGCC Table 915-1
Project Name / Number: Margaret Spaulding (OWP) 11
Project Manager: Kyle Siesser

Reported:
09/27/21 13:41

SS02

2109057-02 (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 05:43	8260B		MS
Toluene*	<0.0250	0.0250	0.00670	mg/kg	50	09/10/21 05:43	8260B		MS
Ethylbenzene*	<0.0250	0.0250	0.00405	mg/kg	50	09/10/21 05:43	8260B		MS
m+p - Xylene*	<0.0500	0.0500	0.0186	mg/kg	50	09/10/21 05:43	8260B		MS
o-Xylene*	<0.0250	0.0250	0.00700	mg/kg	50	09/10/21 05:43	8260B		MS
Total Xylenes*	<0.0750	0.0750	0.0250	mg/kg	50	09/10/21 05:43	8260B		MS
1,3,5-Trimethylbenzene	<0.0250	0.0250	0.00450	mg/kg	50	09/10/21 05:43	8260B		MS
1,2,4-Trimethylbenzene	<0.0250	0.0250	0.00650	mg/kg	50	09/10/21 05:43	8260B		MS
Naphthalene*	<0.0250	0.0250	0.00500	mg/kg	50	09/10/21 05:43	8260B		MS

Surrogate: Dibromofluoromethane 101 % 84.6-114 09/10/21 05:43 8260B MS

Surrogate: Toluene-d8 97.2 % 90.4-109 09/10/21 05:43 8260B MS

Surrogate: 4-Bromofluorobenzene 87.9 % 82.5-117 09/10/21 05:43 8260B MS

Polynuclear Aromatic Compounds by GC/MS

Naphthalene*	<0.015	0.040	0.015	mg/kg	40	09/14/21 21:45	8270C		MS
2-Methylnaphthalene*	<0.023	0.040	0.023	mg/kg	40	09/14/21 21:45	8270C		MS
1-Methylnaphthalene	<0.016	0.040	0.016	mg/kg	40	09/14/21 21:45	8270C		MS
Acenaphthylene*	<0.020	0.040	0.020	mg/kg	40	09/14/21 21:45	8270C		MS
Acenaphthene*	<0.024	0.040	0.024	mg/kg	40	09/14/21 21:45	8270C		MS
Fluorene*	<0.014	0.040	0.014	mg/kg	40	09/14/21 21:45	8270C		MS
Phenanthrene*	<0.021	0.040	0.021	mg/kg	40	09/14/21 21:45	8270C		MS
Anthracene*	<0.017	0.040	0.017	mg/kg	40	09/14/21 21:45	8270C		MS
Carbazole*	<0.019	0.040	0.019	mg/kg	40	09/14/21 21:45	8270C		MS
Fluoranthene*	<0.019	0.040	0.019	mg/kg	40	09/14/21 21:45	8270C		MS
Pyrene*	<0.013	0.040	0.013	mg/kg	40	09/14/21 21:45	8270C		MS
Benzo[a]anthracene*	<0.023	0.040	0.023	mg/kg	40	09/14/21 21:45	8270C		MS
Chrysene*	<0.017	0.040	0.017	mg/kg	40	09/14/21 21:45	8270C		MS
Benzo[b]fluoranthene*	<0.019	0.040	0.019	mg/kg	40	09/14/21 21:45	8270C		MS
Benzo[k]fluoranthene*	<0.016	0.040	0.016	mg/kg	40	09/14/21 21:45	8270C		MS
Benzo[a]pyrene*	<0.018	0.040	0.018	mg/kg	40	09/14/21 21:45	8270C		MS

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Debbie Zufelt

Debbie Zufelt, Reports Manager

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Project: COGCC Table 915-1
Project Name / Number: Margaret Spaulding (OWP) 11
Project Manager: Kyle Siesser

Reported:
09/27/21 13:41

SS02

2109057-02 (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	09/14/21 21:45	8270C		MS
Dibenz[a,h]anthracene*	<0.019	0.040	0.019	mg/kg	40	09/14/21 21:45	8270C		MS
Benzo[g,h,i]perylene*	<0.019	0.040	0.019	mg/kg	40	09/14/21 21:45	8270C		MS
Surrogate: Nitrobenzene-d5			66.9 %	39.6-121		09/14/21 21:45	8270C		MS
Surrogate: 2-Fluorobiphenyl			71.7 %	39.8-134		09/14/21 21:45	8270C		MS
Surrogate: Terphenyl-d14			75.2 %	33.3-136		09/14/21 21:45	8270C		MS

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Project: COGCC Table 915-1
Project Name / Number: Margaret Spaulding (OWP) 11
Project Manager: Kyle Siesser

Reported:
09/27/21 13:41

SS03

2109057-03 (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		JDA
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Saturated Paste Extraction

Calcium	70.4	0.100	0.058	mg/L	1	09/23/21 13:48	EPA200.7		AES
Conductivity	655			umho/cm @ 25.0°C	1	09/22/21 14:55	ASA#9 10-3.3		VJW
Magnesium	27.0	0.100	0.065	mg/L	1	09/23/21 13:48	EPA200.7		AES
pH	7.87			pH Units	1	09/22/21 13:00	ASA#9 10-3.2		VJW
SAR	0.66			No Unit	1	09/23/21 13:48	Calculation		AES
Sodium	25.6	1.00	0.079	mg/L	1	09/23/21 13:48	EPA200.7		AES

Total Metals by ICP

Barium	237	5.00	0.390	mg/kg dry	100	09/21/21 13:47	6010B		AES
Cadmium	<5.00	5.00	1.10	mg/kg dry	100	09/21/21 13:47	6010B		AES
Chromium	24.0	5.00	0.400	mg/kg dry	100	09/21/21 13:47	6010B		AES
Copper	20.2	5.00	2.39	mg/kg dry	100	09/21/21 13:47	6010B		AES
Lead	14.6	10.0	0.906	mg/kg dry	100	09/21/21 13:47	6010B		AES
Nickel	15.0	5.00	0.874	mg/kg dry	100	09/21/21 13:47	6010B		AES
Selenium	<20.0	20.0	4.70	mg/kg dry	100	09/21/21 13:47	6010B		AES
Silver	<1.00	1.00	0.688	mg/kg dry	100	09/21/21 13:47	6010B		AES
Zinc	37.2	10.0	1.71	mg/kg dry	100	09/21/21 13:47	6010B		AES

Total Metals by ICPMS

Arsenic	6.28	1.00	0.0950	mg/kg dry	1000	09/17/21 14:08	6020A		AES
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Hot Water Extractable

Boron	<1.20	1.20	0.568	mg/L	4	09/16/21 18:35	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 13:14	8015B		MS
DRO >C10-C28*	115	10.0	4.26	mg/kg	1	09/10/21 13:14	8015B		MS
EXT DRO >C28-C36	<10.0	10.0	4.26	mg/kg	1	09/10/21 13:14	8015B		MS

Surrogate: 1-Chlorooctane 89.5 % 44.3-133 09/10/21 13:14 8015B MS

Surrogate: 1-Chlorooctadecane 92.7 % 38.9-142 09/10/21 13:14 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) 11
Project Manager: Kyle Siesser

Reported:
09/27/21 13:41

SS03

2109057-03 (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	09/13/21 12:24	8260B		MS
Toluene*	<0.0250	0.0250	0.00670	mg/kg	50	09/13/21 12:24	8260B		MS
Ethylbenzene*	<0.0250	0.0250	0.00405	mg/kg	50	09/13/21 12:24	8260B		MS
m+p - Xylene*	<0.0500	0.0500	0.0186	mg/kg	50	09/13/21 12:24	8260B		MS
o-Xylene*	<0.0250	0.0250	0.00700	mg/kg	50	09/13/21 12:24	8260B		MS
Total Xylenes*	<0.0750	0.0750	0.0250	mg/kg	50	09/13/21 12:24	8260B		MS
1,3,5-Trimethylbenzene	<0.0250	0.0250	0.00450	mg/kg	50	09/13/21 12:24	8260B		MS
1,2,4-Trimethylbenzene	<0.0250	0.0250	0.00650	mg/kg	50	09/13/21 12:24	8260B		MS
Naphthalene*	0.0436	0.0250	0.00500	mg/kg	50	09/13/21 12:24	8260B		MS

Surrogate: Dibromofluoromethane 105 % 84.6-114 09/13/21 12:24 8260B MS

Surrogate: Toluene-d8 89.4 % 90.4-109 09/13/21 12:24 8260B S-04 MS

Surrogate: 4-Bromofluorobenzene 100 % 82.5-117 09/13/21 12:24 8260B MS

Polynuclear Aromatic Compounds by GC/MS

Naphthalene*	<0.015	0.040	0.015	mg/kg	40	09/14/21 22:14	8270C		MS
2-Methylnaphthalene*	0.034	0.040	0.023	mg/kg	40	09/14/21 22:14	8270C	J	MS
1-Methylnaphthalene	0.107	0.040	0.016	mg/kg	40	09/14/21 22:14	8270C		MS
Acenaphthylene*	<0.020	0.040	0.020	mg/kg	40	09/14/21 22:14	8270C		MS
Acenaphthene*	<0.024	0.040	0.024	mg/kg	40	09/14/21 22:14	8270C		MS
Fluorene*	0.098	0.040	0.014	mg/kg	40	09/14/21 22:14	8270C		MS
Phenanthrene*	0.226	0.040	0.021	mg/kg	40	09/14/21 22:14	8270C		MS
Anthracene*	<0.017	0.040	0.017	mg/kg	40	09/14/21 22:14	8270C		MS
Carbazole*	<0.019	0.040	0.019	mg/kg	40	09/14/21 22:14	8270C		MS
Fluoranthene*	<0.019	0.040	0.019	mg/kg	40	09/14/21 22:14	8270C		MS
Pyrene*	0.018	0.040	0.013	mg/kg	40	09/14/21 22:14	8270C	J	MS
Benzo[a]anthracene*	<0.023	0.040	0.023	mg/kg	40	09/14/21 22:14	8270C		MS
Chrysene*	<0.017	0.040	0.017	mg/kg	40	09/14/21 22:14	8270C		MS
Benzo[b]fluoranthene*	<0.019	0.040	0.019	mg/kg	40	09/14/21 22:14	8270C		MS
Benzo[k]fluoranthene*	<0.016	0.040	0.016	mg/kg	40	09/14/21 22:14	8270C		MS
Benzo[a]pyrene*	<0.018	0.040	0.018	mg/kg	40	09/14/21 22:14	8270C		MS
Indeno[1,2,3-cd]pyrene*	<0.017	0.040	0.017	mg/kg	40	09/14/21 22:14	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) 11
Project Manager: Kyle Siesser

Reported:
09/27/21 13:41

SS03

2109057-03 (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

Dibenz[a,h]anthracene*	<0.019	0.040	0.019	mg/kg	40	09/14/21 22:14	8270C		MS
Benzo[g,h,i]perylene*	<0.019	0.040	0.019	mg/kg	40	09/14/21 22:14	8270C		MS
Surrogate: Nitrobenzene-d5			65.0 %	39.6-121		09/14/21 22:14	8270C		MS
Surrogate: 2-Fluorobiphenyl			73.7 %	39.8-134		09/14/21 22:14	8270C		MS
Surrogate: Terphenyl-d14			73.5 %	33.3-136		09/14/21 22:14	8270C		MS

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Project: COGCC Table 915-1
Project Name / Number: Margaret Spaulding (OWP) 11
Project Manager: Kyle Siesser

Reported:
09/27/21 13:41

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B212204 - General Prep - Wet Chem										
Blank (B212204-BLK1)				Prepared: 09/17/21 Analyzed: 09/23/21						
Hexavalent Chromium	ND	0.250	mg/kg							
LCS (B212204-BS1)				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
Batch B212187 - Paste Extract										
Blank (B212187-BLK1)				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							
Duplicate (B212187-DUP2)				Source: 2109055-06 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	
Reference (B212187-SRM1)				Prepared: 09/15/21 Analyzed: 09/23/21						
SAR	7.15		No Unit	7.50		95.3	90-110			
Batch B212188 - Paste Extract										
Duplicate (B212188-DUP2)				Source: 2109055-06 Prepared: 09/15/21 Analyzed: 09/22/21						
Conductivity	958		umho/cm @ 25.0°C		966			0.832	20	
Reference (B212188-SRM1)				Prepared: 09/15/21 Analyzed: 09/22/21						
Conductivity	7150		umho/cm @ 25.0°C	6720		106	90-110			
Batch B212189 - Paste Extract										
Duplicate (B212189-DUP2)				Source: 2109055-06 Prepared: 09/15/21 Analyzed: 09/22/21						

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Project: COGCC Table 915-1
Project Name / Number: Margaret Spaulding (OWP) 11
Project Manager: Kyle Siesser

Reported:
09/27/21 13:41

**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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Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: Margaret Spaulding (OWP) 11
Project Manager: Kyle Siesser

Reported:
09/27/21 13:41

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 B212138 - EPA 3050

Blank (B212138-BLK1)

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

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 (B212138-BS1)

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

Barium	174	5.00	mg/kg dry	200	87.1	80-120
Cadmium	161	5.00	mg/kg dry	200	80.4	80-120
Chromium	177	5.00	mg/kg dry	200	88.4	80-120
Copper	368	5.00	mg/kg dry	400	92.0	80-120
Lead	166	10.0	mg/kg dry	200	83.1	80-120
Nickel	167	5.00	mg/kg dry	200	83.3	80-120
Selenium	739	20.0	mg/kg dry	800	92.3	80-120
Silver	8.96	1.00	mg/kg dry	10.0	89.6	80-120
Zinc	163	10.0	mg/kg dry	200	81.6	80-120

LCS Dup (B212138-BSD1)

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

Barium	176	5.00	mg/kg dry	200	87.9	80-120	0.947	20
Cadmium	163	5.00	mg/kg dry	200	81.4	80-120	1.27	20
Chromium	178	5.00	mg/kg dry	200	89.1	80-120	0.754	20
Copper	373	5.00	mg/kg dry	400	93.2	80-120	1.30	20
Lead	168	10.0	mg/kg dry	200	84.0	80-120	1.09	20
Nickel	169	5.00	mg/kg dry	200	84.7	80-120	1.72	20
Selenium	745	20.0	mg/kg dry	800	93.2	80-120	0.892	20
Silver	9.52	1.00	mg/kg dry	10.0	95.2	80-120	6.12	20
Zinc	166	10.0	mg/kg dry	200	82.8	80-120	1.50	20

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Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: Margaret Spaulding (OWP) 11
Project Manager: Kyle Siesser

Reported:
09/27/21 13:41

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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Batch B212142 - EPA 3050M

Blank (B212142-BLK1)

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

Arsenic	ND	0.100	mg/kg dry							
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LCS (B212142-BS1)

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

Arsenic	5.10	0.100	mg/kg dry	5.00		102	80-120			
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LCS Dup (B212142-BSD1)

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

Arsenic	4.63	0.100	mg/kg dry	5.00		92.7	80-120	9.66	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
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: Margaret Spaulding (OWP) 11
Project Manager: Kyle Siesser

Reported:
09/27/21 13:41

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	

Green Analytical Laboratories

Debbie Zufelt

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Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: Margaret Spaulding (OWP) 11
Project Manager: Kyle Siesser

Reported:
09/27/21 13:41

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						
Surrogate: 4-Bromofluorobenzene	1.11		mg/kg	1.25		88.8	82.5-117		
Benzene	ND	0.0250	mg/kg						
Surrogate: Dibromofluoromethane	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						
Surrogate: Toluene-d8	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		
Surrogate: 4-Bromofluorobenzene	1.18		mg/kg	1.25		94.4	82.5-117		
Benzene	0.499	0.0250	mg/kg	0.500		99.7	73-130		
Surrogate: Dibromofluoromethane	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		
Surrogate: Toluene-d8	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
Surrogate: 4-Bromofluorobenzene	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
Surrogate: Dibromofluoromethane	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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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) 11
Project Manager: Kyle Siesser

Reported:
09/27/21 13:41

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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Debbie Zufelt, Reports Manager

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Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: Margaret Spaulding (OWP) 11
Project Manager: Kyle Siesser

Reported:
09/27/21 13:41

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							
Surrogate: 2-Fluorobiphenyl	1.34		mg/kg	2.00		67.2	39.8-134			
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]fluoranthene	ND	0.040	mg/kg							
Benzo[g,h,i]perylene	ND	0.040	mg/kg							
Benzo[k]fluoranthene	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							
Surrogate: Nitrobenzene-d5	1.21		mg/kg	2.00		60.5	39.6-121			
Phenanthrene	ND	0.040	mg/kg							
Pyrene	ND	0.040	mg/kg							
Surrogate: Terphenyl-d14	1.43		mg/kg	2.00		71.7	33.3-136			

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			
Surrogate: 2-Fluorobiphenyl	1.20		mg/kg	2.00		59.9	39.8-134			
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]fluoranthene	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]fluoranthene	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
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: Margaret Spaulding (OWP) 11
Project Manager: Kyle Siesser

Reported:
09/27/21 13:41

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			
Surrogate: Nitrobenzene-d5	1.16		mg/kg	2.00		57.8	39.6-121			
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			
Surrogate: Terphenyl-d14	1.32		mg/kg	2.00		66.1	33.3-136			

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	
Surrogate: 2-Fluorobiphenyl	1.28		mg/kg	2.00		63.9	39.8-134			
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	
Surrogate: Nitrobenzene-d5	1.13		mg/kg	2.00		56.3	39.6-121			
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	
Surrogate: Terphenyl-d14	1.27		mg/kg	2.00		63.5	33.3-136			

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Debbie Zufelt

Debbie Zufelt, Reports Manager

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Project: COGCC Table 915-1
Project Name / Number: Margaret Spaulding (OWP) 11
Project Manager: Kyle Siesser

Reported:
09/27/21 13:41

Notes and Definitions

SD2 Serial Dilution RPD exceeded the laboratory control limit. All other QC for analyte acceptable.

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

QR-04 The RPD for the BS/BSD was outside of historical limits.

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