



75 Suttle Street
Durango, CO 81303
970.247.4220 Phone
970.247.4227 Fax
www.greenanalytical.com

08 September 2021

Jake Harter
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 08/20/21 15:15. 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: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
SS01	2108209-01	Solid	08/19/21 08:35	08/20/21 15:15	
SS02	2108209-02	Solid	08/19/21 08:45	08/20/21 15:15	
SS03	2108209-03	Solid	08/19/21 09:00	08/20/21 15:15	
SS04	2108209-04	Solid	08/19/21 09:10	08/20/21 15:15	
SS05	2108209-05	Solid	08/19/21 10:00	08/20/21 15:15	
SS06	2108209-06	Solid	08/19/21 10:45	08/20/21 15:15	
SS07	2108209-07	Solid	08/19/21 10:55	08/20/21 15:15	
SS08	2108209-08	Solid	08/19/21 11:05	08/20/21 15:15	
SS09	2108209-09	Solid	08/19/21 11:20	08/20/21 15:15	
SS10	2108209-10	Solid	08/19/21 11:25	08/20/21 15:15	
SS11	2108209-11	Solid	08/19/21 11:30	08/20/21 15:15	
SS12	2108209-12	Solid	08/19/21 13:45	08/20/21 15:15	

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS01**2108209-01 (Soil)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

Saturated Paste Extraction

Calcium	112	0.100	0.058	mg/L	1	08/31/21 12:44	EPA200.7		AES
Conductivity	1060			umho/cm @ 25.0°C	1	08/30/21 14:31	ASA#9 10-3.3		JDA
Magnesium	11.9	0.100	0.065	mg/L	1	08/31/21 12:44	EPA200.7		AES
pH	7.63			pH Units	1	08/30/21 14:33	ASA#9 10-3.2		JDA
SAR	1.99			No Unit	1	08/31/21 12:44	Calculation		AES
Sodium	82.7	1.00	0.079	mg/L	1	08/31/21 12:44	EPA200.7		AES

Total Metals by ICP

Barium	178	5.00	0.390	mg/kg dry	100	09/01/21 15:57	6010B		AES
Cadmium	<5.00	5.00	1.10	mg/kg dry	100	09/01/21 15:57	6010B		AES
Chromium	25.7	5.00	0.400	mg/kg dry	100	09/01/21 15:57	6010B		AES
Copper	28.7	5.00	2.39	mg/kg dry	100	09/01/21 15:57	6010B		AES
Lead	<10.0	10.0	0.906	mg/kg dry	100	09/01/21 15:57	6010B		AES
Nickel	16.3	5.00	0.874	mg/kg dry	100	09/01/21 15:57	6010B		AES
Selenium	<20.0	20.0	4.70	mg/kg dry	100	09/01/21 15:57	6010B		AES
Silver	<1.00	1.00	0.688	mg/kg dry	100	09/01/21 15:57	6010B		AES
Zinc	69.1	10.0	1.71	mg/kg dry	100	09/01/21 15:57	6010B		AES

Total Metals by ICPMS

Arsenic	4.23	1.00	0.0950	mg/kg dry	1000	09/02/21 12:51	6020A		AES
---------	------	------	--------	-----------	------	----------------	-------	--	-----

Hot Water Extractable

Boron	<1.20	1.20	0.568	mg/L	4	08/30/21 12:29	EPA200.7		AES
-------	-------	------	-------	------	---	----------------	----------	--	-----

Subcontracted -- Cardinal Laboratories 101 East Marland Hobbs, NM 88240**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	17.9	10.0	6.25	mg/kg	1	08/28/21 08:27	8015B		CK
DRO >C10-C28*	41.9	10.0	4.26	mg/kg	1	08/28/21 08:27	8015B		CK
EXT DRO >C28-C36	<10.0	10.0	4.26	mg/kg	1	08/28/21 08:27	8015B		CK

Surrogate: 1-Chlorooctane	76.6 %	44.3-133	08/28/21 08:27	8015B	CK
Surrogate: 1-Chlorooctadecane	68.0 %	38.9-142	08/28/21 08:27	8015B	CK

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS01

2108209-01 (Soil)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

Subcontracted -- Cardinal Laboratories 101 East Marland Hobbs, NM 88240

VOLATILES BY GC/MS

Benzene*	<0.0250	0.0250	0.00885	mg/kg	50	08/26/21 00:09	8260B		MS
Toluene*	0.0329	0.0250	0.00670	mg/kg	50	08/26/21 00:09	8260B		MS
Ethylbenzene*	0.0804	0.0250	0.00405	mg/kg	50	08/26/21 00:09	8260B		MS
m+p - Xylene*	0.380	0.0500	0.0186	mg/kg	50	08/26/21 00:09	8260B		MS
o-Xylene*	0.199	0.0250	0.00700	mg/kg	50	08/26/21 00:09	8260B		MS
Total Xylenes*	0.578	0.0750	0.0250	mg/kg	50	08/26/21 00:09	8260B		MS
1,3,5-Trimethylbenzene	0.177	0.0250	0.00450	mg/kg	50	08/26/21 00:09	8260B		MS
1,2,4-Trimethylbenzene	0.822	0.0250	0.00650	mg/kg	50	08/26/21 00:09	8260B	QM-07	MS
Naphthalene*	0.279	0.0250	0.00500	mg/kg	50	08/26/21 00:09	8260B		MS

Surrogate: Dibromofluoromethane 108 % 84.6-114 08/26/21 00:09 8260B MS

Surrogate: Toluene-d8 97.3 % 90.4-109 08/26/21 00:09 8260B MS

Surrogate: 4-Bromofluorobenzene 108 % 82.5-117 08/26/21 00:09 8260B MS

Polynuclear Aromatic Compounds by GC/MS

Naphthalene*	0.173	0.040	0.015	mg/kg	40	09/02/21 17:22	8270C	QM-07	MS
2-Methylnaphthalene*	0.905	0.040	0.023	mg/kg	40	09/02/21 17:22	8270C	QM-07	MS
1-Methylnaphthalene	0.715	0.040	0.016	mg/kg	40	09/02/21 17:22	8270C	QM-07	MS
Acenaphthylene*	<0.020	0.040	0.020	mg/kg	40	09/02/21 17:22	8270C		MS
Acenaphthene*	<0.024	0.040	0.024	mg/kg	40	09/02/21 17:22	8270C		MS
Fluorene*	0.144	0.040	0.014	mg/kg	40	09/02/21 17:22	8270C	QM-07	MS
Phenanthrene*	0.332	0.040	0.021	mg/kg	40	09/02/21 17:22	8270C	QM-07	MS
Anthracene*	<0.017	0.040	0.017	mg/kg	40	09/02/21 17:22	8270C		MS
Carbazole*	<0.019	0.040	0.019	mg/kg	40	09/02/21 17:22	8270C		MS
Fluoranthene*	<0.019	0.040	0.019	mg/kg	40	09/02/21 17:22	8270C		MS
Pyrene*	0.047	0.040	0.013	mg/kg	40	09/02/21 17:22	8270C		MS
Benzo[a]anthracene*	<0.023	0.040	0.023	mg/kg	40	09/02/21 17:22	8270C		MS
Chrysene*	0.061	0.040	0.017	mg/kg	40	09/02/21 17:22	8270C		MS
Benzo[b]fluoranthene*	<0.019	0.040	0.019	mg/kg	40	09/02/21 17:22	8270C		MS
Benzo[k]fluoranthene*	<0.016	0.040	0.016	mg/kg	40	09/02/21 17:22	8270C		MS
Benzo[a]pyrene*	<0.018	0.040	0.018	mg/kg	40	09/02/21 17:22	8270C		MS
Indeno[1,2,3-cd]pyrene*	<0.017	0.040	0.017	mg/kg	40	09/02/21 17:22	8270C		MS

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS01

2108209-01 (Soil)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

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	09/02/21 17:22	8270C		MS
Benzo[g,h,i]perylene*	<0.019	0.040	0.019	mg/kg	40	09/02/21 17:22	8270C		MS
Surrogate: Nitrobenzene-d5			86.4 %	39.6-121		09/02/21 17:22	8270C		MS
Surrogate: 2-Fluorobiphenyl			82.5 %	39.8-134		09/02/21 17:22	8270C		MS
Surrogate: Terphenyl-d14			88.1 %	33.3-136		09/02/21 17:22	8270C		MS

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS02**2108209-02 (Soil)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

Saturated Paste Extraction

Calcium	67.0	0.100	0.058	mg/L	1	08/31/21 12:52	EPA200.7		AES
Conductivity	430			umho/cm @ 25.0°C	1	08/30/21 14:31	ASA#9 10-3.3		JDA
Magnesium	9.61	0.100	0.065	mg/L	1	08/31/21 12:52	EPA200.7		AES
pH	7.47			pH Units	1	08/30/21 14:33	ASA#9 10-3.2		JDA
SAR	0.28			No Unit	1	08/31/21 12:52	Calculation		AES
Sodium	9.39	1.00	0.079	mg/L	1	08/31/21 12:52	EPA200.7		AES

Total Metals by ICP

Barium	211	5.00	0.390	mg/kg dry	100	09/01/21 16:09	6010B		AES
Cadmium	<5.00	5.00	1.10	mg/kg dry	100	09/01/21 16:09	6010B		AES
Chromium	24.2	5.00	0.400	mg/kg dry	100	09/01/21 16:09	6010B		AES
Copper	27.4	5.00	2.39	mg/kg dry	100	09/01/21 16:09	6010B		AES
Lead	<10.0	10.0	0.906	mg/kg dry	100	09/01/21 16:09	6010B		AES
Nickel	19.1	5.00	0.874	mg/kg dry	100	09/01/21 16:09	6010B		AES
Selenium	<20.0	20.0	4.70	mg/kg dry	100	09/01/21 16:09	6010B		AES
Silver	<1.00	1.00	0.688	mg/kg dry	100	09/01/21 16:09	6010B		AES
Zinc	71.6	10.0	1.71	mg/kg dry	100	09/01/21 16:09	6010B		AES

Total Metals by ICPMS

Arsenic	6.55	1.00	0.0950	mg/kg dry	1000	09/02/21 12:55	6020A		AES
---------	------	------	--------	-----------	------	----------------	-------	--	-----

Hot Water Extractable

Boron	<1.20	1.20	0.568	mg/L	4	08/30/21 12:37	EPA200.7		AES
-------	-------	------	-------	------	---	----------------	----------	--	-----

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	08/28/21 08:48	8015B		CK
DRO >C10-C28*	<10.0	10.0	4.26	mg/kg	1	08/28/21 08:48	8015B		CK
EXT DRO >C28-C36	<10.0	10.0	4.26	mg/kg	1	08/28/21 08:48	8015B		CK

Surrogate: 1-Chlorooctane	79.0 %	44.3-133	08/28/21 08:48	8015B	CK
Surrogate: 1-Chlorooctadecane	71.5 %	38.9-142	08/28/21 08:48	8015B	CK

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS02

2108209-02 (Soil)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

Subcontracted -- Cardinal Laboratories 101 East Marland Hobbs, NM 88240

VOLATILES BY GC/MS

Benzene*	<0.0250	0.0250	0.00885	mg/kg	50	08/26/21 00:29	8260B		MS
Toluene*	<0.0250	0.0250	0.00670	mg/kg	50	08/26/21 00:29	8260B		MS
Ethylbenzene*	<0.0250	0.0250	0.00405	mg/kg	50	08/26/21 00:29	8260B		MS
m+p - Xylene*	<0.0500	0.0500	0.0186	mg/kg	50	08/26/21 00:29	8260B		MS
o-Xylene*	<0.0250	0.0250	0.00700	mg/kg	50	08/26/21 00:29	8260B		MS
Total Xylenes*	<0.0750	0.0750	0.0250	mg/kg	50	08/26/21 00:29	8260B		MS
1,3,5-Trimethylbenzene	<0.0250	0.0250	0.00450	mg/kg	50	08/26/21 00:29	8260B		MS
1,2,4-Trimethylbenzene	<0.0250	0.0250	0.00650	mg/kg	50	08/26/21 00:29	8260B		MS
Naphthalene*	<0.0250	0.0250	0.00500	mg/kg	50	08/26/21 00:29	8260B		MS
Surrogate: Dibromofluoromethane			107 %	84.6-114		08/26/21 00:29	8260B		MS
Surrogate: Toluene-d8			104 %	90.4-109		08/26/21 00:29	8260B		MS
Surrogate: 4-Bromofluorobenzene			90.7 %	82.5-117		08/26/21 00:29	8260B		MS

Polynuclear Aromatic Compounds by GC/MS

Naphthalene*	<0.015	0.040	0.015	mg/kg	40	09/02/21 17:51	8270C		MS
2-Methylnaphthalene*	<0.023	0.040	0.023	mg/kg	40	09/02/21 17:51	8270C		MS
1-Methylnaphthalene	<0.016	0.040	0.016	mg/kg	40	09/02/21 17:51	8270C		MS
Acenaphthylene*	<0.020	0.040	0.020	mg/kg	40	09/02/21 17:51	8270C		MS
Acenaphthene*	<0.024	0.040	0.024	mg/kg	40	09/02/21 17:51	8270C		MS
Fluorene*	<0.014	0.040	0.014	mg/kg	40	09/02/21 17:51	8270C		MS
Phenanthrene*	<0.021	0.040	0.021	mg/kg	40	09/02/21 17:51	8270C		MS
Anthracene*	<0.017	0.040	0.017	mg/kg	40	09/02/21 17:51	8270C		MS
Carbazole*	<0.019	0.040	0.019	mg/kg	40	09/02/21 17:51	8270C		MS
Fluoranthene*	<0.019	0.040	0.019	mg/kg	40	09/02/21 17:51	8270C		MS
Pyrene*	<0.013	0.040	0.013	mg/kg	40	09/02/21 17:51	8270C		MS
Benzo[a]anthracene*	<0.023	0.040	0.023	mg/kg	40	09/02/21 17:51	8270C		MS
Chrysene*	<0.017	0.040	0.017	mg/kg	40	09/02/21 17:51	8270C		MS
Benzo[b]fluoranthene*	<0.019	0.040	0.019	mg/kg	40	09/02/21 17:51	8270C		MS
Benzo[k]fluoranthene*	<0.016	0.040	0.016	mg/kg	40	09/02/21 17:51	8270C		MS
Benzo[a]pyrene*	<0.018	0.040	0.018	mg/kg	40	09/02/21 17:51	8270C		MS

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS02

2108209-02 (Soil)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

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	09/02/21 17:51	8270C		MS
Dibenz[a,h]anthracene*	<0.019	0.040	0.019	mg/kg	40	09/02/21 17:51	8270C		MS
Benzo[g,h,i]perylene*	<0.019	0.040	0.019	mg/kg	40	09/02/21 17:51	8270C		MS
Surrogate: Nitrobenzene-d5			39.9 %	39.6-121		09/02/21 17:51	8270C		MS
Surrogate: 2-Fluorobiphenyl			36.8 %	39.8-134		09/02/21 17:51	8270C	S-04	MS
Surrogate: Terphenyl-d14			39.3 %	33.3-136		09/02/21 17:51	8270C		MS

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS03**2108209-03 (Soil)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

Saturated Paste Extraction

Calcium	77.8	0.100	0.058	mg/L	1	08/31/21 12:54	EPA200.7		AES
Conductivity	550			umho/cm @ 25.0°C	1	08/30/21 14:31	ASA#9 10-3.3		JDA
Magnesium	10.5	0.100	0.065	mg/L	1	08/31/21 12:54	EPA200.7		AES
pH	6.72			pH Units	1	08/30/21 14:33	ASA#9 10-3.2		JDA
SAR	0.18			No Unit	1	08/31/21 12:54	Calculation		AES
Sodium	6.25	1.00	0.079	mg/L	1	08/31/21 12:54	EPA200.7		AES

Total Metals by ICP

Barium	177	5.00	0.390	mg/kg dry	100	09/01/21 16:13	6010B		AES
Cadmium	<5.00	5.00	1.10	mg/kg dry	100	09/01/21 16:13	6010B		AES
Chromium	20.1	5.00	0.400	mg/kg dry	100	09/01/21 16:13	6010B		AES
Copper	27.1	5.00	2.39	mg/kg dry	100	09/01/21 16:13	6010B		AES
Lead	<10.0	10.0	0.906	mg/kg dry	100	09/01/21 16:13	6010B		AES
Nickel	12.6	5.00	0.874	mg/kg dry	100	09/01/21 16:13	6010B		AES
Selenium	<20.0	20.0	4.70	mg/kg dry	100	09/01/21 16:13	6010B		AES
Silver	<1.00	1.00	0.688	mg/kg dry	100	09/01/21 16:13	6010B		AES
Zinc	120	10.0	1.71	mg/kg dry	100	09/01/21 16:13	6010B		AES

Total Metals by ICPMS

Arsenic	3.78	1.00	0.0950	mg/kg dry	1000	09/02/21 13:05	6020A		AES
---------	------	------	--------	-----------	------	----------------	-------	--	-----

Hot Water Extractable

Boron	<1.20	1.20	0.568	mg/L	4	08/30/21 12:41	EPA200.7		AES
-------	-------	------	-------	------	---	----------------	----------	--	-----

Subcontracted -- Cardinal Laboratories 101 East Marland Hobbs, NM 88240**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	1130	100	62.5	mg/kg	10	08/28/21 09:09	8015B		CK
DRO >C10-C28*	3660	100	42.6	mg/kg	10	08/28/21 09:09	8015B		CK
EXT DRO >C28-C36	496	100	42.6	mg/kg	10	08/28/21 09:09	8015B		CK

Surrogate: 1-Chlorooctane	103 %	44.3-133	08/28/21 09:09	8015B	CK
Surrogate: 1-Chlorooctadecane	127 %	38.9-142	08/28/21 09:09	8015B	CK

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS03

2108209-03 (Soil)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

Subcontracted -- Cardinal Laboratories 101 East Marland Hobbs, NM 88240

VOLATILES BY GC/MS

Benzene*	<0.250	0.250	0.0885	mg/kg	500	08/26/21 00:49	8260B		MS
Toluene*	<0.250	0.250	0.0670	mg/kg	500	08/26/21 00:49	8260B		MS
Ethylbenzene*	4.12	0.250	0.0405	mg/kg	500	08/26/21 00:49	8260B		MS
m+p - Xylene*	<0.500	0.500	0.186	mg/kg	500	08/26/21 00:49	8260B		MS
o-Xylene*	<0.250	0.250	0.0700	mg/kg	500	08/26/21 00:49	8260B		MS
Total Xylenes*	<0.750	0.750	0.250	mg/kg	500	08/26/21 00:49	8260B		MS
1,3,5-Trimethylbenzene	<0.250	0.250	0.0450	mg/kg	500	08/26/21 00:49	8260B		MS
1,2,4-Trimethylbenzene	0.278	0.250	0.0650	mg/kg	500	08/26/21 00:49	8260B		MS
Naphthalene*	10.9	0.250	0.0500	mg/kg	500	08/26/21 00:49	8260B		MS

Surrogate: Dibromofluoromethane	104 %	84.6-114			08/26/21 00:49	8260B			MS
Surrogate: Toluene-d8	104 %	90.4-109			08/26/21 00:49	8260B			MS
Surrogate: 4-Bromofluorobenzene	177 %	82.5-117			08/26/21 00:49	8260B		S-04	MS

Polynuclear Aromatic Compounds by GC/MS

Naphthalene*	12.8	4.00	1.53	mg/kg	4000	09/02/21 21:43	8270C		MS
2-Methylnaphthalene*	34.7	4.00	2.26	mg/kg	4000	09/02/21 21:43	8270C		MS
1-Methylnaphthalene	29.4	4.00	1.61	mg/kg	4000	09/02/21 21:43	8270C		MS
Acenaphthylene*	<1.96	4.00	1.96	mg/kg	4000	09/02/21 21:43	8270C		MS
Acenaphthene*	<2.35	4.00	2.35	mg/kg	4000	09/02/21 21:43	8270C		MS
Fluorene*	5.40	4.00	1.42	mg/kg	4000	09/02/21 21:43	8270C		MS
Phenanthrene*	10.9	4.00	2.14	mg/kg	4000	09/02/21 21:43	8270C		MS
Anthracene*	<1.72	4.00	1.72	mg/kg	4000	09/02/21 21:43	8270C		MS
Carbazole*	<1.90	4.00	1.90	mg/kg	4000	09/02/21 21:43	8270C		MS
Fluoranthene*	<1.85	4.00	1.85	mg/kg	4000	09/02/21 21:43	8270C		MS
Pyrene*	1.80	4.00	1.32	mg/kg	4000	09/02/21 21:43	8270C	J	MS
Benzo[a]anthracene*	<2.30	4.00	2.30	mg/kg	4000	09/02/21 21:43	8270C		MS
Chrysene*	<1.72	4.00	1.72	mg/kg	4000	09/02/21 21:43	8270C		MS
Benzo[b]fluoranthene*	<1.92	4.00	1.92	mg/kg	4000	09/02/21 21:43	8270C		MS
Benzo[k]fluoranthene*	<1.57	4.00	1.57	mg/kg	4000	09/02/21 21:43	8270C		MS
Benzo[a]pyrene*	<1.82	4.00	1.82	mg/kg	4000	09/02/21 21:43	8270C		MS
Indeno[1,2,3-cd]pyrene*	<1.68	4.00	1.68	mg/kg	4000	09/02/21 21:43	8270C		MS

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS03

2108209-03 (Soil)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

Subcontracted -- Cardinal Laboratories 101 East Marland Hobbs, NM 88240

Polynuclear Aromatic Compounds by GC/MS

Dibenz[a,h]anthracene*	<1.86	4.00	1.86	mg/kg	4000	09/02/21 21:43	8270C		MS
Benzo[g,h,i]perylene*	<1.86	4.00	1.86	mg/kg	4000	09/02/21 21:43	8270C		MS
Surrogate: Nitrobenzene-d5			345 %	39.6-121		09/02/21 21:43	8270C	S-06	MS
Surrogate: 2-Fluorobiphenyl			90.8 %	39.8-134		09/02/21 21:43	8270C		MS
Surrogate: Terphenyl-d14			99.7 %	33.3-136		09/02/21 21:43	8270C		MS

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS04**2108209-04 (Soil)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

Saturated Paste Extraction

Calcium	60.0	0.100	0.058	mg/L	1	08/31/21 13:00	EPA200.7		AES
Conductivity	575			umho/cm @ 25.0°C	1	08/30/21 14:31	ASA#9 10-3.3		JDA
Magnesium	12.1	0.100	0.065	mg/L	1	08/31/21 13:00	EPA200.7		AES
pH	6.79			pH Units	1	08/30/21 14:33	ASA#9 10-3.2		JDA
SAR	1.06			No Unit	1	08/31/21 13:00	Calculation		AES
Sodium	34.5	1.00	0.079	mg/L	1	08/31/21 13:00	EPA200.7		AES

Total Metals by ICP

Barium	79.9	5.00	0.390	mg/kg dry	100	09/01/21 17:56	6010B		AES
Cadmium	<5.00	5.00	1.10	mg/kg dry	100	09/01/21 17:56	6010B		AES
Chromium	8.09	5.00	0.400	mg/kg dry	100	09/01/21 17:56	6010B		AES
Copper	11.2	5.00	2.39	mg/kg dry	100	09/01/21 17:56	6010B		AES
Lead	<10.0	10.0	0.906	mg/kg dry	100	09/01/21 17:56	6010B		AES
Nickel	6.38	5.00	0.874	mg/kg dry	100	09/01/21 17:56	6010B		AES
Selenium	<20.0	20.0	4.70	mg/kg dry	100	09/01/21 17:56	6010B		AES
Silver	<1.00	1.00	0.688	mg/kg dry	100	09/01/21 17:56	6010B		AES
Zinc	21.9	10.0	1.71	mg/kg dry	100	09/01/21 17:56	6010B		AES

Total Metals by ICPMS

Arsenic	1.71	1.00	0.0950	mg/kg dry	1000	09/02/21 13:08	6020A		AES
---------	------	------	--------	-----------	------	----------------	-------	--	-----

Hot Water Extractable

Boron	<1.20	1.20	0.568	mg/L	4	08/30/21 12:43	EPA200.7		AES
-------	-------	------	-------	------	---	----------------	----------	--	-----

Subcontracted -- Cardinal Laboratories 101 East Marland Hobbs, NM 88240**Petroleum Hydrocarbons by GC FID****S-06**

GRO C6-C10*	2250	100	62.5	mg/kg	10	08/28/21 09:30	8015B		CK
DRO >C10-C28*	10300	100	42.6	mg/kg	10	08/28/21 09:30	8015B		CK
EXT DRO >C28-C36	2040	100	42.6	mg/kg	10	08/28/21 09:30	8015B		CK

Surrogate: 1-Chlorooctane	135 %	44.3-133				08/28/21 09:30	8015B		CK
Surrogate: 1-Chlorooctadecane	219 %	38.9-142				08/28/21 09:30	8015B		CK

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS04

2108209-04 (Soil)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

Subcontracted -- Cardinal Laboratories 101 East Marland Hobbs, NM 88240

VOLATILES BY GC/MS

Benzene*	0.227	0.0250	0.00885	mg/kg	50	08/26/21 01:08	8260B		MS
Toluene*	0.0323	0.0250	0.00670	mg/kg	50	08/26/21 01:08	8260B		MS
Ethylbenzene*	5.81	0.500	0.0810	mg/kg	1000	08/26/21 08:16	8260B		MS
m+p - Xylene*	0.583	0.0500	0.0186	mg/kg	50	08/26/21 01:08	8260B		MS
o-Xylene*	0.204	0.0250	0.00700	mg/kg	50	08/26/21 01:08	8260B		MS
Total Xylenes*	0.787	0.0750	0.0250	mg/kg	50	08/26/21 01:08	8260B		MS
1,3,5-Trimethylbenzene	0.810	0.0250	0.00450	mg/kg	50	08/26/21 01:08	8260B		MS
1,2,4-Trimethylbenzene	25.8	0.500	0.130	mg/kg	1000	08/26/21 08:16	8260B		MS
Naphthalene*	8.46	0.0250	0.00500	mg/kg	50	08/26/21 01:08	8260B		MS

Surrogate: Dibromofluoromethane 95.7 % 84.6-114 08/26/21 01:08 8260B MS

Surrogate: Toluene-d8 155 % 90.4-109 08/26/21 01:08 8260B S-04 MS

Surrogate: 4-Bromofluorobenzene 320 % 82.5-117 08/26/21 01:08 8260B S-04 MS

Polynuclear Aromatic Compounds by GC/MS

Naphthalene*	8.74	4.00	1.53	mg/kg	4000	09/02/21 22:12	8270C		MS
2-Methylnaphthalene*	29.4	4.00	2.26	mg/kg	4000	09/02/21 22:12	8270C		MS
1-Methylnaphthalene	25.7	4.00	1.61	mg/kg	4000	09/02/21 22:12	8270C		MS
Acenaphthylene*	<1.96	4.00	1.96	mg/kg	4000	09/02/21 22:12	8270C		MS
Acenaphthene*	<2.35	4.00	2.35	mg/kg	4000	09/02/21 22:12	8270C		MS
Fluorene*	5.08	4.00	1.42	mg/kg	4000	09/02/21 22:12	8270C		MS
Phenanthrene*	9.96	4.00	2.14	mg/kg	4000	09/02/21 22:12	8270C		MS
Anthracene*	<1.72	4.00	1.72	mg/kg	4000	09/02/21 22:12	8270C		MS
Carbazole*	<1.90	4.00	1.90	mg/kg	4000	09/02/21 22:12	8270C		MS
Fluoranthene*	<1.85	4.00	1.85	mg/kg	4000	09/02/21 22:12	8270C		MS
Pyrene*	<1.32	4.00	1.32	mg/kg	4000	09/02/21 22:12	8270C		MS
Benzo[a]anthracene*	<2.30	4.00	2.30	mg/kg	4000	09/02/21 22:12	8270C		MS
Chrysene*	<1.72	4.00	1.72	mg/kg	4000	09/02/21 22:12	8270C		MS
Benzo[b]fluoranthene*	<1.92	4.00	1.92	mg/kg	4000	09/02/21 22:12	8270C		MS
Benzo[k]fluoranthene*	<1.57	4.00	1.57	mg/kg	4000	09/02/21 22:12	8270C		MS
Benzo[a]pyrene*	<1.82	4.00	1.82	mg/kg	4000	09/02/21 22:12	8270C		MS
Indeno[1,2,3-cd]pyrene*	<1.68	4.00	1.68	mg/kg	4000	09/02/21 22:12	8270C		MS

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS04

2108209-04 (Soil)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

Subcontracted -- Cardinal Laboratories 101 East Marland Hobbs, NM 88240

Polynuclear Aromatic Compounds by GC/MS

Dibenz[a,h]anthracene*	<1.86	4.00	1.86	mg/kg	4000	09/02/21 22:12	8270C		MS
Benzo[g,h,i]perylene*	<1.86	4.00	1.86	mg/kg	4000	09/02/21 22:12	8270C		MS
Surrogate: Nitrobenzene-d5			73.1 %	39.6-121		09/02/21 22:12	8270C		MS
Surrogate: 2-Fluorobiphenyl			103 %	39.8-134		09/02/21 22:12	8270C		MS
Surrogate: Terphenyl-d14			111 %	33.3-136		09/02/21 22:12	8270C		MS

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS05**2108209-05 (Soil)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

Saturated Paste Extraction

Calcium	141	0.100	0.058	mg/L	1	08/31/21 13:02	EPA200.7		AES
Conductivity	990			umho/cm @ 25.0°C	1	08/30/21 14:31	ASA#9 10-3.3		JDA
Magnesium	12.0	0.100	0.065	mg/L	1	08/31/21 13:02	EPA200.7		AES
pH	6.88			pH Units	1	08/30/21 14:33	ASA#9 10-3.2		JDA
SAR	1.22			No Unit	1	08/31/21 13:02	Calculation		AES
Sodium	56.4	1.00	0.079	mg/L	1	08/31/21 13:02	EPA200.7		AES

Total Metals by ICP

Barium	178	5.00	0.390	mg/kg dry	100	09/01/21 18:06	6010B		AES
Cadmium	<5.00	5.00	1.10	mg/kg dry	100	09/01/21 18:06	6010B		AES
Chromium	25.1	5.00	0.400	mg/kg dry	100	09/01/21 18:06	6010B		AES
Copper	22.0	5.00	2.39	mg/kg dry	100	09/01/21 18:06	6010B		AES
Lead	<10.0	10.0	0.906	mg/kg dry	100	09/01/21 18:06	6010B		AES
Nickel	15.0	5.00	0.874	mg/kg dry	100	09/01/21 18:06	6010B		AES
Selenium	<20.0	20.0	4.70	mg/kg dry	100	09/01/21 18:05	6010B		AES
Silver	<1.00	1.00	0.688	mg/kg dry	100	09/01/21 18:05	6010B		AES
Zinc	73.5	10.0	1.71	mg/kg dry	100	09/01/21 18:06	6010B		AES

Total Metals by ICPMS

Arsenic	3.13	1.00	0.0950	mg/kg dry	1000	09/02/21 13:18	6020A		AES
---------	------	------	--------	-----------	------	----------------	-------	--	-----

Hot Water Extractable

Boron	<1.20	1.20	0.568	mg/L	4	08/30/21 12:45	EPA200.7		AES
-------	-------	------	-------	------	---	----------------	----------	--	-----

Subcontracted -- Cardinal Laboratories 101 East Marland Hobbs, NM 88240**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	242	50.0	31.2	mg/kg	5	08/28/21 09:52	8015B		CK
DRO >C10-C28*	1660	50.0	21.3	mg/kg	5	08/28/21 09:52	8015B		CK
EXT DRO >C28-C36	400	50.0	21.3	mg/kg	5	08/28/21 09:52	8015B		CK

Surrogate: 1-Chlorooctane	89.4 %	44.3-133	08/28/21 09:52	8015B	CK
Surrogate: 1-Chlorooctadecane	99.4 %	38.9-142	08/28/21 09:52	8015B	CK

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS05

2108209-05 (Soil)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

Subcontracted -- Cardinal Laboratories 101 East Marland Hobbs, NM 88240

VOLATILES BY GC/MS

Benzene*	<0.0250	0.0250	0.00885	mg/kg	50	08/26/21 08:35	8260B		MS
Toluene*	<0.0250	0.0250	0.00670	mg/kg	50	08/26/21 08:35	8260B		MS
Ethylbenzene*	0.629	0.0250	0.00405	mg/kg	50	08/26/21 08:35	8260B		MS
m+p - Xylene*	<0.0500	0.0500	0.0186	mg/kg	50	08/26/21 08:35	8260B		MS
o-Xylene*	0.120	0.0250	0.00700	mg/kg	50	08/26/21 08:35	8260B		MS
Total Xylenes*	0.164	0.0750	0.0250	mg/kg	50	08/26/21 08:35	8260B		MS
1,3,5-Trimethylbenzene	<0.0250	0.0250	0.00450	mg/kg	50	08/26/21 08:35	8260B		MS
1,2,4-Trimethylbenzene	0.0543	0.0250	0.00650	mg/kg	50	08/26/21 08:35	8260B		MS
Naphthalene*	2.33	0.0250	0.00500	mg/kg	50	08/26/21 08:35	8260B		MS

Surrogate: Dibromofluoromethane 99.5 % 84.6-114 08/26/21 08:35 8260B MS

Surrogate: Toluene-d8 107 % 90.4-109 08/26/21 08:35 8260B MS

Surrogate: 4-Bromofluorobenzene 219 % 82.5-117 08/26/21 08:35 8260B S-04 MS

Polynuclear Aromatic Compounds by GC/MS

Naphthalene*	2.16	0.400	0.153	mg/kg	400	09/02/21 19:18	8270C		MS
2-Methylnaphthalene*	9.81	0.400	0.226	mg/kg	400	09/02/21 19:18	8270C		MS
1-Methylnaphthalene	8.68	0.400	0.161	mg/kg	400	09/02/21 19:18	8270C		MS
Acenaphthylene*	<0.196	0.400	0.196	mg/kg	400	09/02/21 19:18	8270C		MS
Acenaphthene*	0.370	0.400	0.235	mg/kg	400	09/02/21 19:18	8270C	J	MS
Fluorene*	1.75	0.400	0.142	mg/kg	400	09/02/21 19:18	8270C		MS
Phenanthrene*	3.79	0.400	0.214	mg/kg	400	09/02/21 19:18	8270C		MS
Anthracene*	<0.172	0.400	0.172	mg/kg	400	09/02/21 19:18	8270C		MS
Carbazole*	<0.190	0.400	0.190	mg/kg	400	09/02/21 19:18	8270C		MS
Fluoranthene*	0.202	0.400	0.185	mg/kg	400	09/02/21 19:18	8270C	J	MS
Pyrene*	0.441	0.400	0.132	mg/kg	400	09/02/21 19:18	8270C		MS
Benzo[a]anthracene*	<0.230	0.400	0.230	mg/kg	400	09/02/21 19:18	8270C		MS
Chrysene*	0.729	0.400	0.172	mg/kg	400	09/02/21 19:18	8270C		MS
Benzo[b]fluoranthene*	<0.192	0.400	0.192	mg/kg	400	09/02/21 19:18	8270C		MS
Benzo[k]fluoranthene*	<0.157	0.400	0.157	mg/kg	400	09/02/21 19:18	8270C		MS
Benzo[a]pyrene*	<0.182	0.400	0.182	mg/kg	400	09/02/21 19:18	8270C		MS
Indeno[1,2,3-cd]pyrene*	<0.168	0.400	0.168	mg/kg	400	09/02/21 19:18	8270C		MS

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS05

2108209-05 (Soil)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

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	09/02/21 19:18	8270C		MS
Benzo[g,h,i]perylene*	<0.186	0.400	0.186	mg/kg	400	09/02/21 19:18	8270C		MS
Surrogate: Nitrobenzene-d5			120 %	39.6-121		09/02/21 19:18	8270C		MS
Surrogate: 2-Fluorobiphenyl			85.1 %	39.8-134		09/02/21 19:18	8270C		MS
Surrogate: Terphenyl-d14			92.3 %	33.3-136		09/02/21 19:18	8270C		MS

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS06**2108209-06 (Soil)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

Saturated Paste Extraction

Calcium	91.2	0.100	0.058	mg/L	1	08/31/21 13:04	EPA200.7		AES
Conductivity	604			umho/cm @ 25.0°C	1	08/30/21 14:31	ASA#9 10-3.3		JDA
Magnesium	11.7	0.100	0.065	mg/L	1	08/31/21 13:04	EPA200.7		AES
pH	7.45			pH Units	1	08/30/21 14:33	ASA#9 10-3.2		JDA
SAR	0.54			No Unit	1	08/31/21 13:04	Calculation		AES
Sodium	20.7	1.00	0.079	mg/L	1	08/31/21 13:04	EPA200.7		AES

Total Metals by ICP

Barium	182	5.00	0.390	mg/kg dry	100	09/01/21 18:09	6010B		AES
Cadmium	<5.00	5.00	1.10	mg/kg dry	100	09/01/21 18:09	6010B		AES
Chromium	94.9	5.00	0.400	mg/kg dry	100	09/01/21 18:09	6010B		AES
Copper	38.7	5.00	2.39	mg/kg dry	100	09/01/21 18:09	6010B		AES
Lead	<10.0	10.0	0.906	mg/kg dry	100	09/01/21 18:09	6010B		AES
Nickel	46.3	5.00	0.874	mg/kg dry	100	09/01/21 18:09	6010B		AES
Selenium	<20.0	20.0	4.70	mg/kg dry	100	09/01/21 18:09	6010B		AES
Silver	<1.00	1.00	0.688	mg/kg dry	100	09/01/21 18:09	6010B		AES
Zinc	79.3	10.0	1.71	mg/kg dry	100	09/01/21 18:09	6010B		AES

Total Metals by ICPMS

Arsenic	2.95	1.00	0.0950	mg/kg dry	1000	09/02/21 13:22	6020A		AES
---------	------	------	--------	-----------	------	----------------	-------	--	-----

Hot Water Extractable

Boron	<1.20	1.20	0.568	mg/L	4	08/30/21 12:47	EPA200.7		AES
-------	-------	------	-------	------	---	----------------	----------	--	-----

Subcontracted -- Cardinal Laboratories 101 East Marland Hobbs, NM 88240**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<50.0	50.0	31.2	mg/kg	5	08/28/21 10:13	8015B		CK
DRO >C10-C28*	143	50.0	21.3	mg/kg	5	08/28/21 10:13	8015B		CK
EXT DRO >C28-C36	235	50.0	21.3	mg/kg	5	08/28/21 10:13	8015B		CK

Surrogate: 1-Chlorooctane	75.5 %	44.3-133	08/28/21 10:13	8015B	CK
Surrogate: 1-Chlorooctadecane	70.9 %	38.9-142	08/28/21 10:13	8015B	CK

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS06

2108209-06 (Soil)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

Subcontracted -- Cardinal Laboratories 101 East Marland Hobbs, NM 88240

VOLATILES BY GC/MS

Benzene*	<0.0250	0.0250	0.00885	mg/kg	50	08/26/21 01:48	8260B		MS
Toluene*	<0.0250	0.0250	0.00670	mg/kg	50	08/26/21 01:48	8260B		MS
Ethylbenzene*	<0.0250	0.0250	0.00405	mg/kg	50	08/26/21 01:48	8260B		MS
m+p - Xylene*	<0.0500	0.0500	0.0186	mg/kg	50	08/26/21 01:48	8260B		MS
o-Xylene*	<0.0250	0.0250	0.00700	mg/kg	50	08/26/21 01:48	8260B		MS
Total Xylenes*	<0.0750	0.0750	0.0250	mg/kg	50	08/26/21 01:48	8260B		MS
1,3,5-Trimethylbenzene	<0.0250	0.0250	0.00450	mg/kg	50	08/26/21 01:48	8260B		MS
1,2,4-Trimethylbenzene	<0.0250	0.0250	0.00650	mg/kg	50	08/26/21 01:48	8260B		MS
Naphthalene*	0.0411	0.0250	0.00500	mg/kg	50	08/26/21 01:48	8260B		MS

Surrogate: Dibromofluoromethane 99.3 % 84.6-114 08/26/21 01:48 8260B MS

Surrogate: Toluene-d8 100 % 90.4-109 08/26/21 01:48 8260B MS

Surrogate: 4-Bromofluorobenzene 106 % 82.5-117 08/26/21 01:48 8260B MS

Polynuclear Aromatic Compounds by GC/MS

Naphthalene*	<0.153	0.400	0.153	mg/kg	400	09/07/21 11:54	8270C		MS
2-Methylnaphthalene*	<0.226	0.400	0.226	mg/kg	400	09/07/21 11:54	8270C		MS
1-Methylnaphthalene	<0.161	0.400	0.161	mg/kg	400	09/07/21 11:54	8270C		MS
Acenaphthylene*	<0.196	0.400	0.196	mg/kg	400	09/07/21 11:54	8270C		MS
Acenaphthene*	<0.235	0.400	0.235	mg/kg	400	09/07/21 11:54	8270C		MS
Fluorene*	<0.142	0.400	0.142	mg/kg	400	09/07/21 11:54	8270C		MS
Phenanthrene*	<0.214	0.400	0.214	mg/kg	400	09/07/21 11:54	8270C		MS
Anthracene*	<0.172	0.400	0.172	mg/kg	400	09/07/21 11:54	8270C		MS
Carbazole*	<0.190	0.400	0.190	mg/kg	400	09/07/21 11:54	8270C		MS
Fluoranthene*	<0.185	0.400	0.185	mg/kg	400	09/07/21 11:54	8270C		MS
Pyrene*	<0.132	0.400	0.132	mg/kg	400	09/07/21 11:54	8270C		MS
Benzo[a]anthracene*	<0.230	0.400	0.230	mg/kg	400	09/07/21 11:54	8270C		MS
Chrysene*	<0.172	0.400	0.172	mg/kg	400	09/07/21 11:54	8270C		MS
Benzo[b]fluoranthene*	<0.192	0.400	0.192	mg/kg	400	09/07/21 11:54	8270C		MS
Benzo[k]fluoranthene*	<0.157	0.400	0.157	mg/kg	400	09/07/21 11:54	8270C		MS
Benzo[a]pyrene*	<0.182	0.400	0.182	mg/kg	400	09/07/21 11:54	8270C		MS
Indeno[1,2,3-cd]pyrene*	<0.168	0.400	0.168	mg/kg	400	09/07/21 11:54	8270C		MS

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS06

2108209-06 (Soil)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

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	09/07/21 11:54	8270C		MS
Benzo[g,h,i]perylene*	0.249	0.400	0.186	mg/kg	400	09/07/21 11:54	8270C	J	MS
Surrogate: Nitrobenzene-d5			92.4 %	39.6-121		09/07/21 11:54	8270C		MS
Surrogate: 2-Fluorobiphenyl			87.1 %	39.8-134		09/07/21 11:54	8270C		MS
Surrogate: Terphenyl-d14			95.4 %	33.3-136		09/07/21 11:54	8270C		MS

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS07

2108209-07 (Soil)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

Saturated Paste Extraction

Calcium	65.6	0.100	0.058	mg/L	1	08/31/21 13:06	EPA200.7		AES
Conductivity	450			umho/cm @ 25.0°C	1	08/30/21 14:31	ASA#9 10-3.3		JDA
Magnesium	7.37	0.100	0.065	mg/L	1	08/31/21 13:06	EPA200.7		AES
pH	7.39			pH Units	1	08/30/21 14:33	ASA#9 10-3.2		JDA
SAR	0.64			No Unit	1	08/31/21 13:06	Calculation		AES
Sodium	20.6	1.00	0.079	mg/L	1	08/31/21 13:06	EPA200.7		AES

Total Metals by ICP

Barium	73.1	5.00	0.390	mg/kg dry	100	09/01/21 18:13	6010B		AES
Cadmium	<5.00	5.00	1.10	mg/kg dry	100	09/01/21 18:13	6010B		AES
Chromium	88.4	5.00	0.400	mg/kg dry	100	09/01/21 18:13	6010B		AES
Copper	25.5	5.00	2.39	mg/kg dry	100	09/01/21 18:13	6010B		AES
Lead	<10.0	10.0	0.906	mg/kg dry	100	09/01/21 18:13	6010B		AES
Nickel	39.7	5.00	0.874	mg/kg dry	100	09/01/21 18:13	6010B		AES
Selenium	<20.0	20.0	4.70	mg/kg dry	100	09/01/21 18:13	6010B		AES
Silver	<1.00	1.00	0.688	mg/kg dry	100	09/01/21 18:13	6010B		AES
Zinc	32.2	10.0	1.71	mg/kg dry	100	09/01/21 18:13	6010B		AES

Total Metals by ICPMS

Arsenic	1.54	1.00	0.0950	mg/kg dry	1000	09/02/21 13:25	6020A		AES
---------	------	------	--------	-----------	------	----------------	-------	--	-----

Hot Water Extractable

Boron	<1.20	1.20	0.568	mg/L	4	08/30/21 12:50	EPA200.7		AES
-------	-------	------	-------	------	---	----------------	----------	--	-----

Subcontracted -- Cardinal Laboratories 101 East Marland Hobbs, NM 88240

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<50.0	50.0	31.2	mg/kg	5	08/28/21 10:35	8015B		CK
DRO >C10-C28*	832	50.0	21.3	mg/kg	5	08/28/21 10:35	8015B		CK
EXT DRO >C28-C36	755	50.0	21.3	mg/kg	5	08/28/21 10:35	8015B		CK

Surrogate: 1-Chlorooctane	88.7 %	44.3-133	08/28/21 10:35	8015B	CK
Surrogate: 1-Chlorooctadecane	100 %	38.9-142	08/28/21 10:35	8015B	CK

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS07

2108209-07 (Soil)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

Subcontracted -- Cardinal Laboratories 101 East Marland Hobbs, NM 88240

VOLATILES BY GC/MS

Benzene*	<0.0250	0.0250	0.00885	mg/kg	50	08/26/21 02:07	8260B		MS
Toluene*	<0.0250	0.0250	0.00670	mg/kg	50	08/26/21 02:07	8260B		MS
Ethylbenzene*	<0.0250	0.0250	0.00405	mg/kg	50	08/26/21 02:07	8260B		MS
m+p - Xylene*	<0.0500	0.0500	0.0186	mg/kg	50	08/26/21 02:07	8260B		MS
o-Xylene*	<0.0250	0.0250	0.00700	mg/kg	50	08/26/21 02:07	8260B		MS
Total Xylenes*	<0.0750	0.0750	0.0250	mg/kg	50	08/26/21 02:07	8260B		MS
1,3,5-Trimethylbenzene	<0.0250	0.0250	0.00450	mg/kg	50	08/26/21 02:07	8260B		MS
1,2,4-Trimethylbenzene	<0.0250	0.0250	0.00650	mg/kg	50	08/26/21 02:07	8260B		MS
Naphthalene*	<0.0250	0.0250	0.00500	mg/kg	50	08/26/21 02:07	8260B		MS

Surrogate: Dibromofluoromethane 99.9 % 84.6-114 08/26/21 02:07 8260B MS

Surrogate: Toluene-d8 99.3 % 90.4-109 08/26/21 02:07 8260B MS

Surrogate: 4-Bromofluorobenzene 99.5 % 82.5-117 08/26/21 02:07 8260B MS

Polynuclear Aromatic Compounds by GC/MS

Naphthalene*	<0.153	0.400	0.153	mg/kg	400	09/07/21 12:23	8270C		MS
2-Methylnaphthalene*	<0.226	0.400	0.226	mg/kg	400	09/07/21 12:23	8270C		MS
1-Methylnaphthalene	<0.161	0.400	0.161	mg/kg	400	09/07/21 12:23	8270C		MS
Acenaphthylene*	<0.196	0.400	0.196	mg/kg	400	09/07/21 12:23	8270C		MS
Acenaphthene*	<0.235	0.400	0.235	mg/kg	400	09/07/21 12:23	8270C		MS
Fluorene*	<0.142	0.400	0.142	mg/kg	400	09/07/21 12:23	8270C		MS
Phenanthrene*	<0.214	0.400	0.214	mg/kg	400	09/07/21 12:23	8270C		MS
Anthracene*	<0.172	0.400	0.172	mg/kg	400	09/07/21 12:23	8270C		MS
Carbazole*	<0.190	0.400	0.190	mg/kg	400	09/07/21 12:23	8270C		MS
Fluoranthene*	<0.185	0.400	0.185	mg/kg	400	09/07/21 12:23	8270C		MS
Pyrene*	<0.132	0.400	0.132	mg/kg	400	09/07/21 12:23	8270C		MS
Benzo[a]anthracene*	<0.230	0.400	0.230	mg/kg	400	09/07/21 12:23	8270C		MS
Chrysene*	<0.172	0.400	0.172	mg/kg	400	09/07/21 12:23	8270C		MS
Benzo[b]fluoranthene*	<0.192	0.400	0.192	mg/kg	400	09/07/21 12:23	8270C		MS
Benzo[k]fluoranthene*	<0.157	0.400	0.157	mg/kg	400	09/07/21 12:23	8270C		MS
Benzo[a]pyrene*	<0.182	0.400	0.182	mg/kg	400	09/07/21 12:23	8270C		MS

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS07

2108209-07 (Soil)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

Subcontracted -- Cardinal Laboratories 101 East Marland Hobbs, NM 88240

Polynuclear Aromatic Compounds by GC/MS

Indeno[1,2,3-cd]pyrene*	<0.168	0.400	0.168	mg/kg	400	09/07/21 12:23	8270C		MS
Dibenz[a,h]anthracene*	<0.186	0.400	0.186	mg/kg	400	09/07/21 12:23	8270C		MS
Benzo[g,h,i]perylene*	0.198	0.400	0.186	mg/kg	400	09/07/21 12:23	8270C	J	MS
Surrogate: Nitrobenzene-d5			61.9 %	39.6-121		09/07/21 12:23	8270C		MS
Surrogate: 2-Fluorobiphenyl			58.2 %	39.8-134		09/07/21 12:23	8270C		MS
Surrogate: Terphenyl-d14			66.6 %	33.3-136		09/07/21 12:23	8270C		MS

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS08**2108209-08 (Soil)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

Saturated Paste Extraction

Calcium	75.1	0.100	0.058	mg/L	1	08/31/21 13:08	EPA200.7		AES
Conductivity	530			umho/cm @ 25.0°C	1	08/30/21 14:31	ASA#9 10-3.3		JDA
Magnesium	9.97	0.100	0.065	mg/L	1	08/31/21 13:08	EPA200.7		AES
pH	7.56			pH Units	1	08/30/21 14:33	ASA#9 10-3.2		JDA
SAR	0.49			No Unit	1	08/31/21 13:08	Calculation		AES
Sodium	17.1	1.00	0.079	mg/L	1	08/31/21 13:08	EPA200.7		AES

Total Metals by ICP

Barium	719	5.00	0.390	mg/kg dry	100	09/01/21 18:17	6010B		AES
Cadmium	<5.00	5.00	1.10	mg/kg dry	100	09/01/21 18:17	6010B		AES
Chromium	50.2	5.00	0.400	mg/kg dry	100	09/01/21 18:17	6010B		AES
Copper	64.3	5.00	2.39	mg/kg dry	100	09/01/21 18:17	6010B		AES
Lead	10.2	10.0	0.906	mg/kg dry	100	09/01/21 18:17	6010B		AES
Nickel	25.5	5.00	0.874	mg/kg dry	100	09/01/21 18:17	6010B		AES
Selenium	<20.0	20.0	4.70	mg/kg dry	100	09/01/21 18:17	6010B		AES
Silver	<1.00	1.00	0.688	mg/kg dry	100	09/01/21 18:17	6010B		AES
Zinc	104	10.0	1.71	mg/kg dry	100	09/01/21 18:17	6010B		AES

Total Metals by ICPMS

Arsenic	5.09	1.00	0.0950	mg/kg dry	1000	09/02/21 13:29	6020A		AES
---------	------	------	--------	-----------	------	----------------	-------	--	-----

Hot Water Extractable

Boron	<1.20	1.20	0.568	mg/L	4	08/30/21 12:54	EPA200.7		AES
-------	-------	------	-------	------	---	----------------	----------	--	-----

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	08/29/21 13:15	8015B		CK
DRO >C10-C28*	15.5	10.0	4.26	mg/kg	1	08/29/21 13:15	8015B		CK
EXT DRO >C28-C36	<10.0	10.0	4.26	mg/kg	1	08/29/21 13:15	8015B		CK

Surrogate: 1-Chlorooctane	76.7 %	44.3-133	08/29/21 13:15	8015B	CK
Surrogate: 1-Chlorooctadecane	72.4 %	38.9-142	08/29/21 13:15	8015B	CK

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS08

2108209-08 (Soil)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

Subcontracted -- Cardinal Laboratories 101 East Marland Hobbs, NM 88240

VOLATILES BY GC/MS

Benzene*	<0.0250	0.0250	0.00885	mg/kg	50	08/26/21 02:27	8260B		MS
Toluene*	<0.0250	0.0250	0.00670	mg/kg	50	08/26/21 02:27	8260B		MS
Ethylbenzene*	<0.0250	0.0250	0.00405	mg/kg	50	08/26/21 02:27	8260B		MS
m+p - Xylene*	<0.0500	0.0500	0.0186	mg/kg	50	08/26/21 02:27	8260B		MS
o-Xylene*	<0.0250	0.0250	0.00700	mg/kg	50	08/26/21 02:27	8260B		MS
Total Xylenes*	<0.0750	0.0750	0.0250	mg/kg	50	08/26/21 02:27	8260B		MS
1,3,5-Trimethylbenzene	<0.0250	0.0250	0.00450	mg/kg	50	08/26/21 02:27	8260B		MS
1,2,4-Trimethylbenzene	<0.0250	0.0250	0.00650	mg/kg	50	08/26/21 02:27	8260B		MS
Naphthalene*	<0.0250	0.0250	0.00500	mg/kg	50	08/26/21 02:27	8260B		MS

Surrogate: Dibromofluoromethane 99.1 % 84.6-114 08/26/21 02:27 8260B MS

Surrogate: Toluene-d8 101 % 90.4-109 08/26/21 02:27 8260B MS

Surrogate: 4-Bromofluorobenzene 99.2 % 82.5-117 08/26/21 02:27 8260B MS

Polynuclear Aromatic Compounds by GC/MS

Naphthalene*	0.019	0.040	0.015	mg/kg	40	09/07/21 12:52	8270C	J	MS
2-Methylnaphthalene*	0.066	0.040	0.023	mg/kg	40	09/07/21 12:52	8270C		MS
1-Methylnaphthalene	0.068	0.040	0.016	mg/kg	40	09/07/21 12:52	8270C		MS
Acenaphthylene*	<0.020	0.040	0.020	mg/kg	40	09/07/21 12:52	8270C		MS
Acenaphthene*	<0.024	0.040	0.024	mg/kg	40	09/07/21 12:52	8270C		MS
Fluorene*	0.014	0.040	0.014	mg/kg	40	09/07/21 12:52	8270C	J	MS
Phenanthrene*	0.045	0.040	0.021	mg/kg	40	09/07/21 12:52	8270C		MS
Anthracene*	<0.017	0.040	0.017	mg/kg	40	09/07/21 12:52	8270C		MS
Carbazole*	<0.019	0.040	0.019	mg/kg	40	09/07/21 12:52	8270C		MS
Fluoranthene*	<0.019	0.040	0.019	mg/kg	40	09/07/21 12:52	8270C		MS
Pyrene*	<0.013	0.040	0.013	mg/kg	40	09/07/21 12:52	8270C		MS
Benzo[a]anthracene*	<0.023	0.040	0.023	mg/kg	40	09/07/21 12:52	8270C		MS
Chrysene*	<0.017	0.040	0.017	mg/kg	40	09/07/21 12:52	8270C		MS
Benzo[b]fluoranthene*	<0.019	0.040	0.019	mg/kg	40	09/07/21 12:52	8270C		MS
Benzo[k]fluoranthene*	<0.016	0.040	0.016	mg/kg	40	09/07/21 12:52	8270C		MS
Benzo[a]pyrene*	<0.018	0.040	0.018	mg/kg	40	09/07/21 12:52	8270C		MS
Indeno[1,2,3-cd]pyrene*	<0.017	0.040	0.017	mg/kg	40	09/07/21 12:52	8270C		MS

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS08

2108209-08 (Soil)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

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	09/07/21 12:52	8270C		MS
Benzo[g,h,i]perylene*	<0.019	0.040	0.019	mg/kg	40	09/07/21 12:52	8270C		MS
Surrogate: Nitrobenzene-d5			50.1 %	39.6-121		09/07/21 12:52	8270C		MS
Surrogate: 2-Fluorobiphenyl			49.4 %	39.8-134		09/07/21 12:52	8270C		MS
Surrogate: Terphenyl-d14			56.2 %	33.3-136		09/07/21 12:52	8270C		MS

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS09**2108209-09 (Soil)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

Saturated Paste Extraction

Calcium	173	0.100	0.058	mg/L	1	08/31/21 13:10	EPA200.7		AES
Conductivity	1150			umho/cm @ 25.0°C	1	08/30/21 14:31	ASA#9 10-3.3		JDA
Magnesium	24.2	0.100	0.065	mg/L	1	08/31/21 13:10	EPA200.7		AES
pH	6.74			pH Units	1	08/30/21 14:33	ASA#9 10-3.2		JDA
SAR	0.65			No Unit	1	08/31/21 13:10	Calculation		AES
Sodium	34.4	1.00	0.079	mg/L	1	08/31/21 13:10	EPA200.7		AES

Total Metals by ICP

Barium	121	5.00	0.390	mg/kg dry	100	09/01/21 18:21	6010B		AES
Cadmium	<5.00	5.00	1.10	mg/kg dry	100	09/01/21 18:21	6010B		AES
Chromium	30.8	5.00	0.400	mg/kg dry	100	09/01/21 18:21	6010B		AES
Copper	28.6	5.00	2.39	mg/kg dry	100	09/01/21 18:21	6010B		AES
Lead	<10.0	10.0	0.906	mg/kg dry	100	09/01/21 18:21	6010B		AES
Nickel	15.8	5.00	0.874	mg/kg dry	100	09/01/21 18:21	6010B		AES
Selenium	<20.0	20.0	4.70	mg/kg dry	100	09/01/21 18:21	6010B		AES
Silver	<1.00	1.00	0.688	mg/kg dry	100	09/01/21 18:21	6010B		AES
Zinc	46.5	10.0	1.71	mg/kg dry	100	09/01/21 18:21	6010B		AES

Total Metals by ICPMS

Arsenic	4.72	1.00	0.0950	mg/kg dry	1000	09/02/21 13:32	6020A		AES
---------	------	------	--------	-----------	------	----------------	-------	--	-----

Hot Water Extractable

Boron	<1.20	1.20	0.568	mg/L	4	08/30/21 13:00	EPA200.7		AES
-------	-------	------	-------	------	---	----------------	----------	--	-----

Subcontracted -- Cardinal Laboratories 101 East Marland Hobbs, NM 88240**Petroleum Hydrocarbons by GC FID****S-06**

GRO C6-C10*	65.1	50.0	31.2	mg/kg	5	08/29/21 20:47	8015B		CK
DRO >C10-C28*	6960	50.0	21.3	mg/kg	5	08/29/21 20:47	8015B		CK
EXT DRO >C28-C36	3090	50.0	21.3	mg/kg	5	08/29/21 20:47	8015B		CK

Surrogate: 1-Chlorooctane	72.7 %	44.3-133	08/29/21 20:47	8015B	CK
Surrogate: 1-Chlorooctadecane	228 %	38.9-142	08/29/21 20:47	8015B	CK

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS09

2108209-09 (Soil)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

Subcontracted -- Cardinal Laboratories 101 East Marland Hobbs, NM 88240

VOLATILES BY GC/MS

Benzene*	<0.0250	0.0250	0.00885	mg/kg	50	08/26/21 02:47	8260B		MS
Toluene*	<0.0250	0.0250	0.00670	mg/kg	50	08/26/21 02:47	8260B		MS
Ethylbenzene*	<0.0250	0.0250	0.00405	mg/kg	50	08/26/21 02:47	8260B		MS
m+p - Xylene*	<0.0500	0.0500	0.0186	mg/kg	50	08/26/21 02:47	8260B		MS
o-Xylene*	<0.0250	0.0250	0.00700	mg/kg	50	08/26/21 02:47	8260B		MS
Total Xylenes*	<0.0750	0.0750	0.0250	mg/kg	50	08/26/21 02:47	8260B		MS
1,3,5-Trimethylbenzene	0.186	0.0250	0.00450	mg/kg	50	08/26/21 02:47	8260B		MS
1,2,4-Trimethylbenzene	0.0341	0.0250	0.00650	mg/kg	50	08/26/21 02:47	8260B		MS
Naphthalene*	0.0835	0.0250	0.00500	mg/kg	50	08/26/21 02:47	8260B		MS

Surrogate: Dibromofluoromethane 98.4 % 84.6-114 08/26/21 02:47 8260B MS

Surrogate: Toluene-d8 100 % 90.4-109 08/26/21 02:47 8260B MS

Surrogate: 4-Bromofluorobenzene 135 % 82.5-117 08/26/21 02:47 8260B S-04 MS

Polynuclear Aromatic Compounds by GC/MS

Naphthalene*	<0.153	0.400	0.153	mg/kg	400	09/07/21 13:21	8270C		MS
2-Methylnaphthalene*	<0.226	0.400	0.226	mg/kg	400	09/07/21 13:21	8270C		MS
1-Methylnaphthalene	0.239	0.400	0.161	mg/kg	400	09/07/21 13:21	8270C	J	MS
Acenaphthylene*	<0.196	0.400	0.196	mg/kg	400	09/07/21 13:21	8270C		MS
Acenaphthene*	<0.235	0.400	0.235	mg/kg	400	09/07/21 13:21	8270C		MS
Fluorene*	<0.142	0.400	0.142	mg/kg	400	09/07/21 13:21	8270C		MS
Phenanthrene*	0.377	0.400	0.214	mg/kg	400	09/07/21 13:21	8270C	J	MS
Anthracene*	<0.172	0.400	0.172	mg/kg	400	09/07/21 13:21	8270C		MS
Carbazole*	<0.190	0.400	0.190	mg/kg	400	09/07/21 13:21	8270C		MS
Fluoranthene*	<0.185	0.400	0.185	mg/kg	400	09/07/21 13:21	8270C		MS
Pyrene*	1.17	0.400	0.132	mg/kg	400	09/07/21 13:21	8270C		MS
Benzo[a]anthracene*	<0.230	0.400	0.230	mg/kg	400	09/07/21 13:21	8270C		MS
Chrysene*	1.96	0.400	0.172	mg/kg	400	09/07/21 13:21	8270C		MS
Benzo[b]fluoranthene*	0.693	0.400	0.192	mg/kg	400	09/07/21 13:21	8270C		MS
Benzo[k]fluoranthene*	<0.157	0.400	0.157	mg/kg	400	09/07/21 13:21	8270C		MS
Benzo[a]pyrene*	<0.182	0.400	0.182	mg/kg	400	09/07/21 13:21	8270C		MS
Indeno[1,2,3-cd]pyrene*	<0.168	0.400	0.168	mg/kg	400	09/07/21 13:21	8270C		MS

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS09

2108209-09 (Soil)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

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	09/07/21 13:21	8270C		MS
Benzo[g,h,i]perylene*	0.590	0.400	0.186	mg/kg	400	09/07/21 13:21	8270C		MS
Surrogate: Nitrobenzene-d5			82.1 %	39.6-121		09/07/21 13:21	8270C		MS
Surrogate: 2-Fluorobiphenyl			74.2 %	39.8-134		09/07/21 13:21	8270C		MS
Surrogate: Terphenyl-d14			99.4 %	33.3-136		09/07/21 13:21	8270C		MS

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS10**2108209-10 (Soil)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

Saturated Paste Extraction

Calcium	201	0.500	0.289	mg/L	5	08/31/21 13:12	EPA200.7		AES
Conductivity	1520			umho/cm @ 25.0°C	1	08/30/21 14:31	ASA#9 10-3.3		JDA
Magnesium	18.3	0.500	0.327	mg/L	5	08/31/21 13:12	EPA200.7		AES
pH	6.47			pH Units	1	08/30/21 14:33	ASA#9 10-3.2		JDA
SAR	1.69			No Unit	1	08/31/21 13:12	Calculation		AES
Sodium	93.2	5.00	0.396	mg/L	5	08/31/21 13:12	EPA200.7		AES

Total Metals by ICP

Barium	158	5.00	0.390	mg/kg dry	100	09/01/21 18:25	6010B		AES
Cadmium	<5.00	5.00	1.10	mg/kg dry	100	09/01/21 18:25	6010B		AES
Chromium	98.5	5.00	0.400	mg/kg dry	100	09/01/21 18:25	6010B		AES
Copper	111	5.00	2.39	mg/kg dry	100	09/01/21 18:25	6010B		AES
Lead	23.0	10.0	0.906	mg/kg dry	100	09/01/21 18:25	6010B		AES
Nickel	47.0	5.00	0.874	mg/kg dry	100	09/01/21 18:25	6010B		AES
Selenium	<20.0	20.0	4.70	mg/kg dry	100	09/01/21 18:25	6010B		AES
Silver	<1.00	1.00	0.688	mg/kg dry	100	09/01/21 18:25	6010B		AES
Zinc	240	10.0	1.71	mg/kg dry	100	09/01/21 18:25	6010B		AES

Total Metals by ICPMS

Arsenic	10.3	1.00	0.0950	mg/kg dry	1000	09/02/21 13:35	6020A		AES
---------	------	------	--------	-----------	------	----------------	-------	--	-----

Hot Water Extractable

Boron	<1.20	1.20	0.568	mg/L	4	08/30/21 13:04	EPA200.7		AES
-------	-------	------	-------	------	---	----------------	----------	--	-----

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	08/29/21 22:39	8015B		CK
DRO >C10-C28*	9460	50.0	21.3	mg/kg	5	08/29/21 22:39	8015B		CK
EXT DRO >C28-C36	5140	50.0	21.3	mg/kg	5	08/29/21 22:39	8015B		CK

Surrogate: 1-Chlorooctane	75.4 %	44.3-133	08/29/21 22:39	8015B	CK
Surrogate: 1-Chlorooctadecane	302 %	38.9-142	08/29/21 22:39	8015B	CK

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS10

2108209-10 (Soil)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

Subcontracted -- Cardinal Laboratories 101 East Marland Hobbs, NM 88240

VOLATILES BY GC/MS

Benzene*	<0.0250	0.0250	0.00885	mg/kg	50	08/26/21 03:07	8260B		MS
Toluene*	<0.0250	0.0250	0.00670	mg/kg	50	08/26/21 03:07	8260B		MS
Ethylbenzene*	<0.0250	0.0250	0.00405	mg/kg	50	08/26/21 03:07	8260B		MS
m+p - Xylene*	<0.0500	0.0500	0.0186	mg/kg	50	08/26/21 03:07	8260B		MS
o-Xylene*	<0.0250	0.0250	0.00700	mg/kg	50	08/26/21 03:07	8260B		MS
Total Xylenes*	<0.0750	0.0750	0.0250	mg/kg	50	08/26/21 03:07	8260B		MS
1,3,5-Trimethylbenzene	<0.0250	0.0250	0.00450	mg/kg	50	08/26/21 03:07	8260B		MS
1,2,4-Trimethylbenzene	<0.0250	0.0250	0.00650	mg/kg	50	08/26/21 03:07	8260B		MS
Naphthalene*	0.0395	0.0250	0.00500	mg/kg	50	08/26/21 03:07	8260B		MS

Surrogate: Dibromofluoromethane 101 % 84.6-114 08/26/21 03:07 8260B MS

Surrogate: Toluene-d8 97.9 % 90.4-109 08/26/21 03:07 8260B MS

Surrogate: 4-Bromofluorobenzene 115 % 82.5-117 08/26/21 03:07 8260B MS

Polynuclear Aromatic Compounds by GC/MS

Naphthalene*	<0.153	0.400	0.153	mg/kg	400	09/07/21 13:49	8270C		MS
2-Methylnaphthalene*	<0.226	0.400	0.226	mg/kg	400	09/07/21 13:49	8270C		MS
1-Methylnaphthalene	0.415	0.400	0.161	mg/kg	400	09/07/21 13:49	8270C		MS
Acenaphthylene*	<0.196	0.400	0.196	mg/kg	400	09/07/21 13:49	8270C		MS
Acenaphthene*	<0.235	0.400	0.235	mg/kg	400	09/07/21 13:49	8270C		MS
Fluorene*	<0.142	0.400	0.142	mg/kg	400	09/07/21 13:49	8270C		MS
Phenanthrene*	0.871	0.400	0.214	mg/kg	400	09/07/21 13:49	8270C		MS
Anthracene*	<0.172	0.400	0.172	mg/kg	400	09/07/21 13:49	8270C		MS
Carbazole*	<0.190	0.400	0.190	mg/kg	400	09/07/21 13:49	8270C		MS
Fluoranthene*	<0.185	0.400	0.185	mg/kg	400	09/07/21 13:49	8270C		MS
Pyrene*	1.99	0.400	0.132	mg/kg	400	09/07/21 13:49	8270C		MS
Benzo[a]anthracene*	<0.230	0.400	0.230	mg/kg	400	09/07/21 13:49	8270C		MS
Chrysene*	2.98	0.400	0.172	mg/kg	400	09/07/21 13:49	8270C		MS
Benzo[b]fluoranthene*	<0.192	0.400	0.192	mg/kg	400	09/07/21 13:49	8270C		MS
Benzo[k]fluoranthene*	<0.157	0.400	0.157	mg/kg	400	09/07/21 13:49	8270C		MS
Benzo[a]pyrene*	<0.182	0.400	0.182	mg/kg	400	09/07/21 13:49	8270C		MS
Indeno[1,2,3-cd]pyrene*	<0.168	0.400	0.168	mg/kg	400	09/07/21 13:49	8270C		MS

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS10

2108209-10 (Soil)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

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	09/07/21 13:49	8270C		MS
Benzo[g,h,i]perylene*	0.871	0.400	0.186	mg/kg	400	09/07/21 13:49	8270C		MS
Surrogate: Nitrobenzene-d5			92.5 %	39.6-121		09/07/21 13:49	8270C		MS
Surrogate: 2-Fluorobiphenyl			80.7 %	39.8-134		09/07/21 13:49	8270C		MS
Surrogate: Terphenyl-d14			85.7 %	33.3-136		09/07/21 13:49	8270C		MS

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS11

2108209-11 (Soil)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

Saturated Paste Extraction

Calcium	115	0.100	0.058	mg/L	1	08/31/21 13:14	EPA200.7		AES
Conductivity	455			umho/cm @ 25.0°C	1	08/30/21 14:31	ASA#9 10-3.3		JDA
Magnesium	9.68	0.100	0.065	mg/L	1	08/31/21 13:14	EPA200.7		AES
pH	6.85			pH Units	1	08/30/21 14:33	ASA#9 10-3.2		JDA
SAR	0.26			No Unit	1	08/31/21 13:14	Calculation		AES
Sodium	11.0	1.00	0.079	mg/L	1	08/31/21 13:14	EPA200.7		AES

Total Metals by ICP

Barium	103	5.00	0.390	mg/kg dry	100	09/01/21 18:32	6010B		AES
Cadmium	<5.00	5.00	1.10	mg/kg dry	100	09/01/21 18:32	6010B		AES
Chromium	45.9	5.00	0.400	mg/kg dry	100	09/01/21 18:32	6010B		AES
Copper	292	5.00	2.39	mg/kg dry	100	09/01/21 18:32	6010B		AES
Lead	30.5	10.0	0.906	mg/kg dry	100	09/02/21 15:18	6010B		AES
Nickel	22.5	5.00	0.874	mg/kg dry	100	09/01/21 18:32	6010B		AES
Selenium	<20.0	20.0	4.70	mg/kg dry	100	09/01/21 18:32	6010B		AES
Silver	<1.00	1.00	0.688	mg/kg dry	100	09/01/21 18:32	6010B		AES
Zinc	288	10.0	1.71	mg/kg dry	100	09/02/21 15:18	6010B		AES

Total Metals by ICPMS

Arsenic	9.32	1.00	0.0950	mg/kg dry	1000	09/02/21 13:39	6020A		AES
---------	------	------	--------	-----------	------	----------------	-------	--	-----

Hot Water Extractable

Boron	<1.20	1.20	0.568	mg/L	4	08/30/21 13:05	EPA200.7		AES
-------	-------	------	-------	------	---	----------------	----------	--	-----

Subcontracted -- Cardinal Laboratories 101 East Marland Hobbs, NM 88240

Petroleum Hydrocarbons by GC FID

S-06

GRO C6-C10*	83.9	50.0	31.2	mg/kg	5	08/29/21 21:44	8015B		CK
DRO >C10-C28*	8240	50.0	21.3	mg/kg	5	08/29/21 21:44	8015B		CK
EXT DRO >C28-C36	3380	50.0	21.3	mg/kg	5	08/29/21 21:44	8015B		CK

Surrogate: 1-Chlorooctane	76.2 %	44.3-133	08/29/21 21:44	8015B	CK
Surrogate: 1-Chlorooctadecane	316 %	38.9-142	08/29/21 21:44	8015B	CK

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS11

2108209-11 (Soil)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

Subcontracted -- Cardinal Laboratories 101 East Marland Hobbs, NM 88240

VOLATILES BY GC/MS

Benzene*	<0.0250	0.0250	0.00885	mg/kg	50	08/26/21 03:27	8260B		MS
Toluene*	<0.0250	0.0250	0.00670	mg/kg	50	08/26/21 03:27	8260B		MS
Ethylbenzene*	<0.0250	0.0250	0.00405	mg/kg	50	08/26/21 03:27	8260B		MS
m+p - Xylene*	<0.0500	0.0500	0.0186	mg/kg	50	08/26/21 03:27	8260B		MS
o-Xylene*	<0.0250	0.0250	0.00700	mg/kg	50	08/26/21 03:27	8260B		MS
Total Xylenes*	<0.0750	0.0750	0.0250	mg/kg	50	08/26/21 03:27	8260B		MS
1,3,5-Trimethylbenzene	0.187	0.0250	0.00450	mg/kg	50	08/26/21 03:27	8260B		MS
1,2,4-Trimethylbenzene	<0.0250	0.0250	0.00650	mg/kg	50	08/26/21 03:27	8260B		MS
Naphthalene*	0.215	0.0250	0.00500	mg/kg	50	08/26/21 03:27	8260B		MS

Surrogate: Dibromofluoromethane 98.9 % 84.6-114 08/26/21 03:27 8260B MS

Surrogate: Toluene-d8 98.9 % 90.4-109 08/26/21 03:27 8260B MS

Surrogate: 4-Bromofluorobenzene 144 % 82.5-117 08/26/21 03:27 8260B S-04 MS

Polynuclear Aromatic Compounds by GC/MS

Naphthalene*	<0.153	0.400	0.153	mg/kg	400	09/07/21 14:18	8270C		MS
2-Methylnaphthalene*	<0.226	0.400	0.226	mg/kg	400	09/07/21 14:18	8270C		MS
1-Methylnaphthalene	1.26	0.400	0.161	mg/kg	400	09/07/21 14:18	8270C		MS
Acenaphthylene*	<0.196	0.400	0.196	mg/kg	400	09/07/21 14:18	8270C		MS
Acenaphthene*	<0.235	0.400	0.235	mg/kg	400	09/07/21 14:18	8270C		MS
Fluorene*	1.37	0.400	0.142	mg/kg	400	09/07/21 14:18	8270C		MS
Phenanthrene*	2.75	0.400	0.214	mg/kg	400	09/07/21 14:18	8270C		MS
Anthracene*	<0.172	0.400	0.172	mg/kg	400	09/07/21 14:18	8270C		MS
Carbazole*	<0.190	0.400	0.190	mg/kg	400	09/07/21 14:18	8270C		MS
Fluoranthene*	0.917	0.400	0.185	mg/kg	400	09/07/21 14:18	8270C		MS
Pyrene*	2.69	0.400	0.132	mg/kg	400	09/07/21 14:18	8270C		MS
Benzo[a]anthracene*	<0.230	0.400	0.230	mg/kg	400	09/07/21 14:18	8270C		MS
Chrysene*	4.05	0.400	0.172	mg/kg	400	09/07/21 14:18	8270C		MS
Benzo[b]fluoranthene*	0.988	0.400	0.192	mg/kg	400	09/07/21 14:18	8270C		MS
Benzo[k]fluoranthene*	<0.157	0.400	0.157	mg/kg	400	09/07/21 14:18	8270C		MS
Benzo[a]pyrene*	<0.182	0.400	0.182	mg/kg	400	09/07/21 14:18	8270C		MS
Indeno[1,2,3-cd]pyrene*	<0.168	0.400	0.168	mg/kg	400	09/07/21 14:18	8270C		MS

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS11

2108209-11 (Soil)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

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	09/07/21 14:18	8270C		MS
Benzo[g,h,i]perylene*	<0.186	0.400	0.186	mg/kg	400	09/07/21 14:18	8270C		MS
Surrogate: Nitrobenzene-d5			69.8 %	39.6-121		09/07/21 14:18	8270C		MS
Surrogate: 2-Fluorobiphenyl			72.8 %	39.8-134		09/07/21 14:18	8270C		MS
Surrogate: Terphenyl-d14			83.3 %	33.3-136		09/07/21 14:18	8270C		MS

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS12**2108209-12 (Soil)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

Saturated Paste Extraction

Calcium	127	0.100	0.058	mg/L	1	08/31/21 13:16	EPA200.7		AES
Conductivity	860			umho/cm @ 25.0°C	1	08/30/21 14:31	ASA#9 10-3.3		JDA
Magnesium	16.6	0.100	0.065	mg/L	1	08/31/21 13:16	EPA200.7		AES
pH	7.46			pH Units	1	08/30/21 14:33	ASA#9 10-3.2		JDA
SAR	0.21			No Unit	1	08/31/21 13:16	Calculation		AES
Sodium	9.57	1.00	0.079	mg/L	1	08/31/21 13:16	EPA200.7		AES

Total Metals by ICP

Barium	954	5.00	0.390	mg/kg dry	100	09/01/21 18:36	6010B		AES
Cadmium	<5.00	5.00	1.10	mg/kg dry	100	09/01/21 18:36	6010B		AES
Chromium	32.4	5.00	0.400	mg/kg dry	100	09/01/21 18:36	6010B		AES
Copper	13.9	5.00	2.39	mg/kg dry	100	09/01/21 18:36	6010B		AES
Lead	<10.0	10.0	0.906	mg/kg dry	100	09/02/21 15:21	6010B		AES
Nickel	18.1	5.00	0.874	mg/kg dry	100	09/01/21 18:36	6010B		AES
Selenium	<20.0	20.0	4.70	mg/kg dry	100	09/01/21 18:36	6010B		AES
Silver	<1.00	1.00	0.688	mg/kg dry	100	09/01/21 18:36	6010B		AES
Zinc	54.8	10.0	1.71	mg/kg dry	100	09/02/21 15:21	6010B		AES

Total Metals by ICPMS

Arsenic	8.15	1.00	0.0950	mg/kg dry	1000	09/02/21 13:42	6020A		AES
---------	------	------	--------	-----------	------	----------------	-------	--	-----

Hot Water Extractable

Boron	<1.20	1.20	0.568	mg/L	4	08/30/21 13:07	EPA200.7		AES
-------	-------	------	-------	------	---	----------------	----------	--	-----

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	08/29/21 13:42	8015B		CK
DRO >C10-C28*	<10.0	10.0	4.26	mg/kg	1	08/29/21 13:42	8015B		CK
EXT DRO >C28-C36	<10.0	10.0	4.26	mg/kg	1	08/29/21 13:42	8015B		CK

Surrogate: 1-Chlorooctane	73.4 %	44.3-133	08/29/21 13:42	8015B	CK
Surrogate: 1-Chlorooctadecane	68.3 %	38.9-142	08/29/21 13:42	8015B	CK

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS12

2108209-12 (Soil)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

Subcontracted -- Cardinal Laboratories 101 East Marland Hobbs, NM 88240

VOLATILES BY GC/MS

Benzene*	<0.0250	0.0250	0.00885	mg/kg	50	08/26/21 03:46	8260B		MS
Toluene*	<0.0250	0.0250	0.00670	mg/kg	50	08/26/21 03:46	8260B		MS
Ethylbenzene*	<0.0250	0.0250	0.00405	mg/kg	50	08/26/21 03:46	8260B		MS
m+p - Xylene*	<0.0500	0.0500	0.0186	mg/kg	50	08/26/21 03:46	8260B		MS
o-Xylene*	<0.0250	0.0250	0.00700	mg/kg	50	08/26/21 03:46	8260B		MS
Total Xylenes*	<0.0750	0.0750	0.0250	mg/kg	50	08/26/21 03:46	8260B		MS
1,3,5-Trimethylbenzene	<0.0250	0.0250	0.00450	mg/kg	50	08/26/21 03:46	8260B		MS
1,2,4-Trimethylbenzene	<0.0250	0.0250	0.00650	mg/kg	50	08/26/21 03:46	8260B		MS
Naphthalene*	<0.0250	0.0250	0.00500	mg/kg	50	08/26/21 03:46	8260B		MS

Surrogate: Dibromofluoromethane 99.1 % 84.6-114 08/26/21 03:46 8260B MS

Surrogate: Toluene-d8 102 % 90.4-109 08/26/21 03:46 8260B MS

Surrogate: 4-Bromofluorobenzene 99.4 % 82.5-117 08/26/21 03:46 8260B MS

Polynuclear Aromatic Compounds by GC/MS

Naphthalene*	<0.015	0.040	0.015	mg/kg	40	09/07/21 14:47	8270C		MS
2-Methylnaphthalene*	<0.023	0.040	0.023	mg/kg	40	09/07/21 14:47	8270C		MS
1-Methylnaphthalene	<0.016	0.040	0.016	mg/kg	40	09/07/21 14:47	8270C		MS
Acenaphthylene*	<0.020	0.040	0.020	mg/kg	40	09/07/21 14:47	8270C		MS
Acenaphthene*	<0.024	0.040	0.024	mg/kg	40	09/07/21 14:47	8270C		MS
Fluorene*	<0.014	0.040	0.014	mg/kg	40	09/07/21 14:47	8270C		MS
Phenanthrene*	<0.021	0.040	0.021	mg/kg	40	09/07/21 14:47	8270C		MS
Anthracene*	<0.017	0.040	0.017	mg/kg	40	09/07/21 14:47	8270C		MS
Carbazole*	<0.019	0.040	0.019	mg/kg	40	09/07/21 14:47	8270C		MS
Fluoranthene*	<0.019	0.040	0.019	mg/kg	40	09/07/21 14:47	8270C		MS
Pyrene*	<0.013	0.040	0.013	mg/kg	40	09/07/21 14:47	8270C		MS
Benzo[a]anthracene*	<0.023	0.040	0.023	mg/kg	40	09/07/21 14:47	8270C		MS
Chrysene*	0.048	0.040	0.017	mg/kg	40	09/07/21 14:47	8270C		MS
Benzo[b]fluoranthene*	<0.019	0.040	0.019	mg/kg	40	09/07/21 14:47	8270C		MS
Benzo[k]fluoranthene*	<0.016	0.040	0.016	mg/kg	40	09/07/21 14:47	8270C		MS
Benzo[a]pyrene*	<0.018	0.040	0.018	mg/kg	40	09/07/21 14:47	8270C		MS
Indeno[1,2,3-cd]pyrene*	<0.017	0.040	0.017	mg/kg	40	09/07/21 14:47	8270C		MS

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

SS12

2108209-12 (Soil)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

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	09/07/21 14:47	8270C		MS
Benzo[g,h,i]perylene*	<0.019	0.040	0.019	mg/kg	40	09/07/21 14:47	8270C		MS
Surrogate: Nitrobenzene-d5			66.1 %	39.6-121		09/07/21 14:47	8270C		MS
Surrogate: 2-Fluorobiphenyl			71.0 %	39.8-134		09/07/21 14:47	8270C		MS
Surrogate: Terphenyl-d14			74.5 %	33.3-136		09/07/21 14:47	8270C		MS

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

Saturated Paste Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B212014 - Paste Extract										
Blank (B212014-BLK1)				Prepared: 08/30/21 Analyzed: 08/31/21						
Calcium	ND	0.100	mg/L							
Magnesium	ND	0.100	mg/L							
Sodium	ND	1.00	mg/L							
Duplicate (B212014-DUP1)				Source: 2108209-01 Prepared: 08/30/21 Analyzed: 08/31/21						
Calcium	112	0.100	mg/L		112			0.738	20	
Magnesium	11.7	0.100	mg/L		11.9			2.16	20	
SAR	1.99		No Unit		1.99			0.00	20	
Sodium	82.9	1.00	mg/L		82.7			0.252	20	
Reference (B212014-SRM1)				Prepared: 08/30/21 Analyzed: 09/01/21						
SAR	7.10		No Unit	7.50		94.7	90-110			
Batch B212015 - Paste Extract										
Duplicate (B212015-DUP1)				Source: 2108209-01 Prepared & Analyzed: 08/30/21						
Conductivity	1060		umho/cm @ 25.0°C		1060			0.00	20	
Reference (B212015-SRM1)				Prepared & Analyzed: 08/30/21						
Conductivity	7380		umho/cm @ 25.0°C	6720		110	90-110			
Batch B212016 - Paste Extract										
Duplicate (B212016-DUP1)				Source: 2108209-01 Prepared & Analyzed: 08/30/21						
pH	7.57		pH Units		7.63			0.789	20	
Reference (B212016-SRM1)				Prepared & Analyzed: 08/30/21						
pH	8.61		pH Units	9.14		94.2	95-105			BS2

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

Total Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch B211995 - EPA 3050

Blank (B211995-BLK1)

Prepared: 08/27/21 Analyzed: 09/01/21

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 (B211995-BS1)

Prepared: 08/27/21 Analyzed: 09/01/21

Barium	185	5.00	mg/kg dry	200	92.3	80-120
Cadmium	171	5.00	mg/kg dry	200	85.3	80-120
Chromium	185	5.00	mg/kg dry	200	92.6	80-120
Copper	391	5.00	mg/kg dry	400	97.7	80-120
Lead	176	10.0	mg/kg dry	200	87.8	80-120
Nickel	177	5.00	mg/kg dry	200	88.5	80-120
Selenium	773	20.0	mg/kg dry	800	96.6	80-120
Silver	9.24	1.00	mg/kg dry	10.0	92.4	80-120
Zinc	163	10.0	mg/kg dry	200	81.6	80-120

LCS Dup (B211995-BSD1)

Prepared: 08/27/21 Analyzed: 09/01/21

Barium	180	5.00	mg/kg dry	200	89.9	80-120	2.64	20
Cadmium	166	5.00	mg/kg dry	200	83.2	80-120	2.50	20
Chromium	180	5.00	mg/kg dry	200	90.0	80-120	2.81	20
Copper	383	5.00	mg/kg dry	400	95.8	80-120	1.92	20
Lead	173	10.0	mg/kg dry	200	86.5	80-120	1.50	20
Nickel	174	5.00	mg/kg dry	200	87.1	80-120	1.58	20
Selenium	766	20.0	mg/kg dry	800	95.7	80-120	0.891	20
Silver	9.06	1.00	mg/kg dry	10.0	90.6	80-120	1.96	20
Zinc	163	10.0	mg/kg dry	200	81.5	80-120	0.184	20

Batch B211996 - EPA 3050

Blank (B211996-BLK1)

Prepared: 08/27/21 Analyzed: 09/01/21

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

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

**Total Metals by ICP - Quality Control
(Continued)**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch B211996 - EPA 3050 (Continued)

Blank (B211996-BLK1) (Continued)

Prepared: 08/27/21 Analyzed: 09/01/21

Selenium	ND	20.0	mg/kg dry
Silver	ND	1.00	mg/kg dry
Zinc	ND	10.0	mg/kg dry

LCS (B211996-BS1)

Prepared: 08/27/21 Analyzed: 09/01/21

Barium	175	5.00	mg/kg dry	200	87.3	80-120
Cadmium	162	5.00	mg/kg dry	200	81.2	80-120
Chromium	175	5.00	mg/kg dry	200	87.4	80-120
Copper	373	5.00	mg/kg dry	400	93.3	80-120
Lead	164	10.0	mg/kg dry	200	82.2	80-120
Nickel	167	5.00	mg/kg dry	200	83.7	80-120
Selenium	761	20.0	mg/kg dry	800	95.1	80-120
Silver	9.19	1.00	mg/kg dry	10.0	91.9	80-120
Zinc	164	10.0	mg/kg dry	200	82.1	80-120

LCS Dup (B211996-BSD1)

Prepared: 08/27/21 Analyzed: 09/01/21

Barium	169	5.00	mg/kg dry	200	84.7	80-120	2.98	20
Cadmium	165	5.00	mg/kg dry	200	82.6	80-120	1.75	20
Chromium	170	5.00	mg/kg dry	200	85.1	80-120	2.65	20
Copper	365	5.00	mg/kg dry	400	91.3	80-120	2.21	20
Lead	165	10.0	mg/kg dry	200	82.7	80-120	0.701	20
Nickel	169	5.00	mg/kg dry	200	84.4	80-120	0.846	20
Selenium	751	20.0	mg/kg dry	800	93.9	80-120	1.30	20
Silver	8.91	1.00	mg/kg dry	10.0	89.1	80-120	3.09	20
Zinc	161	10.0	mg/kg dry	200	80.4	80-120	2.08	20

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

Total Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch B211997 - EPA 3050M

Blank (B211997-BLK1)

Prepared: 08/27/21 Analyzed: 09/02/21

Arsenic	ND	0.100	mg/kg dry							
---------	----	-------	-----------	--	--	--	--	--	--	--

LCS (B211997-BS1)

Prepared: 08/27/21 Analyzed: 09/02/21

Arsenic	5.10	0.100	mg/kg dry	5.00		102	80-120			
---------	------	-------	-----------	------	--	-----	--------	--	--	--

LCS Dup (B211997-BSD1)

Prepared: 08/27/21 Analyzed: 09/02/21

Arsenic	5.18	0.100	mg/kg dry	5.00		104	80-120	1.55	20	
---------	------	-------	-----------	------	--	-----	--------	------	----	--

Hot Water Extractable - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch B211992 - Hot Water Soluble Metals Extract

Blank (B211992-BLK1)

Prepared: 08/27/21 Analyzed: 08/30/21

Boron	ND	1.20	mg/L							
-------	----	------	------	--	--	--	--	--	--	--

Duplicate (B211992-DUP1)

Source: 2108209-01 Prepared: 08/27/21 Analyzed: 08/30/21

Boron	ND	1.20	mg/L		ND				200	
-------	----	------	------	--	----	--	--	--	-----	--

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

Petroleum Hydrocarbons by GC FID - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 1082522 - General Prep - Organics

Blank (1082522-BLK1)

Prepared: 08/25/21 Analyzed: 08/28/21

Surrogate: 1-Chlorooctadecane	38.1		mg/kg	50.0		76.3	38.9-142			
Surrogate: 1-Chlorooctane	41.8		mg/kg	50.0		83.5	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 (1082522-BS1)

Prepared: 08/25/21 Analyzed: 08/28/21

Surrogate: 1-Chlorooctadecane	40.0		mg/kg	50.0		80.1	38.9-142			
Surrogate: 1-Chlorooctane	44.9		mg/kg	50.0		89.7	44.3-133			
DRO >C10-C28	200	10.0	mg/kg	200		100	79.3-136			
GRO C6-C10	184	10.0	mg/kg	200		92.0	83.4-129			
Total TPH C6-C28	384	10.0	mg/kg	400		96.0	85.3-130			

LCS Dup (1082522-BSD1)

Prepared: 08/25/21 Analyzed: 08/28/21

Surrogate: 1-Chlorooctadecane	38.9		mg/kg	50.0		77.8	38.9-142			
Surrogate: 1-Chlorooctane	41.8		mg/kg	50.0		83.6	44.3-133			
DRO >C10-C28	201	10.0	mg/kg	200		101	79.3-136	0.679	12.1	
GRO C6-C10	184	10.0	mg/kg	200		92.0	83.4-129	0.0424	12.6	
Total TPH C6-C28	385	10.0	mg/kg	400		96.3	85.3-130	0.334	11.6	

Batch 1082612 - General Prep - Organics

Blank (1082612-BLK1)

Prepared: 08/26/21 Analyzed: 08/29/21

Surrogate: 1-Chlorooctadecane	37.3		mg/kg	50.0		74.6	38.9-142			
Surrogate: 1-Chlorooctane	39.5		mg/kg	50.0		79.1	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 (1082612-BS1)

Prepared: 08/26/21 Analyzed: 08/29/21

Surrogate: 1-Chlorooctadecane	38.6		mg/kg	50.0		77.3	38.9-142			
Surrogate: 1-Chlorooctane	41.9		mg/kg	50.0		83.8	44.3-133			
DRO >C10-C28	196	10.0	mg/kg	200		98.0	79.3-136			
GRO C6-C10	212	10.0	mg/kg	200		106	83.4-129			
Total TPH C6-C28	408	10.0	mg/kg	400		102	85.3-130			

LCS Dup (1082612-BSD1)

Prepared: 08/26/21 Analyzed: 08/29/21

Surrogate: 1-Chlorooctadecane	39.9		mg/kg	50.0		79.8	38.9-142			
-------------------------------	------	--	-------	------	--	------	----------	--	--	--

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

Petroleum Hydrocarbons by GC FID - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch 1082612 - General Prep - Organics (Continued)

LCS Dup (1082612-BSD1) (Continued)

Prepared: 08/26/21 Analyzed: 08/29/21

Surrogate: 1-Chlorooctane	43.2		mg/kg	50.0		86.4	44.3-133			
DRO >C10-C28	192	10.0	mg/kg	200		96.2	79.3-136	1.82	12.1	
GRO C6-C10	216	10.0	mg/kg	200		108	83.4-129	1.71	12.6	
Total TPH C6-C28	408	10.0	mg/kg	400		102	85.3-130	0.0277	11.6	

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

VOLATILES BY GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 1082523 - Volatiles

Blank (1082523-BLK1)

Prepared & Analyzed: 08/25/21

1,2,4-Trimethylbenzene	ND	0.0250	mg/kg							
1,3,5-Trimethylbenzene	ND	0.0250	mg/kg							
Surrogate: 4-Bromofluorobenzene	1.08		mg/kg	1.25		86.6	82.5-117			
Benzene	ND	0.0250	mg/kg							
Surrogate: Dibromofluoromethane	1.36		mg/kg	1.25		109	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	1.29		mg/kg	1.25		103	90.4-109			
Total Xylenes	ND	0.0250	mg/kg							

LCS (1082523-BS1)

Prepared & Analyzed: 08/25/21

1,2,4-Trimethylbenzene	0.456	0.0250	mg/kg	0.500		91.2	62.4-140			
1,3,5-Trimethylbenzene	0.457	0.0250	mg/kg	0.500		91.4	64.4-138			
Surrogate: 4-Bromofluorobenzene	1.20		mg/kg	1.25		96.2	82.5-117			
Benzene	0.495	0.0250	mg/kg	0.500		99.1	73-130			
Surrogate: Dibromofluoromethane	1.32		mg/kg	1.25		106	84.6-114			
Ethylbenzene	0.485	0.0250	mg/kg	0.500		97.0	75.4-127			
m+p - Xylene	0.948	0.0500	mg/kg	1.00		94.8	71.8-133			
Naphthalene	0.300	0.0250	mg/kg	0.500		60.0	28.7-158			
o-Xylene	0.422	0.0250	mg/kg	0.500		84.5	78.6-125			
Toluene	0.484	0.0250	mg/kg	0.500		96.8	79-122			
Surrogate: Toluene-d8	1.25		mg/kg	1.25		100	90.4-109			
Total Xylenes	1.37	0.0250	mg/kg	1.50		91.4	74.6-130			

LCS Dup (1082523-BSD1)

Prepared & Analyzed: 08/25/21

1,2,4-Trimethylbenzene	0.475	0.0250	mg/kg	0.500		95.0	62.4-140	4.09	38.2	
1,3,5-Trimethylbenzene	0.481	0.0250	mg/kg	0.500		96.2	64.4-138	5.17	39.1	
Surrogate: 4-Bromofluorobenzene	1.20		mg/kg	1.25		95.7	82.5-117			
Benzene	0.501	0.0250	mg/kg	0.500		100	73-130	1.13	17.1	
Surrogate: Dibromofluoromethane	1.33		mg/kg	1.25		106	84.6-114			
Ethylbenzene	0.489	0.0250	mg/kg	0.500		97.8	75.4-127	0.801	16.5	
m+p - Xylene	0.982	0.0500	mg/kg	1.00		98.2	71.8-133	3.46	19.1	
Naphthalene	0.304	0.0250	mg/kg	0.500		60.8	28.7-158	1.36	64	
o-Xylene	0.440	0.0250	mg/kg	0.500		87.9	78.6-125	3.98	13.2	
Toluene	0.508	0.0250	mg/kg	0.500		102	79-122	4.97	18.3	

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

VOLATILES BY GC/MS - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch 1082523 - Volatiles (Continued)

LCS Dup (1082523-BSD1) (Continued)

Prepared & Analyzed: 08/25/21

Surrogate: Toluene-d8	1.28		mg/kg	1.25		103	90.4-109			
Total Xylenes	1.42	0.0250	mg/kg	1.50		94.8	74.6-130	3.62	16.5	

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

Polynuclear Aromatic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 1082524 - SW846-3510

Blank (1082524-BLK1)

Prepared: 08/25/21 Analyzed: 09/02/21

1-Methylnaphthalene	ND	0.040	mg/kg							
Surrogate: 2-Fluorobiphenyl	1.90		mg/kg	2.00		95.2	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	1.75		mg/kg	2.00		87.7	39.6-121			
Phenanthrene	ND	0.040	mg/kg							
Pyrene	ND	0.040	mg/kg							
Surrogate: Terphenyl-d14	1.98		mg/kg	2.00		98.8	33.3-136			

LCS (1082524-BS1)

Prepared: 08/25/21 Analyzed: 09/02/21

1-Methylnaphthalene	0.360	0.040	mg/kg	0.400		90.0	57.6-108			
Surrogate: 2-Fluorobiphenyl	1.41		mg/kg	2.00		70.6	39.8-134			
2-Methylnaphthalene	0.346	0.040	mg/kg	0.400		86.5	59-106			
Acenaphthene	0.340	0.040	mg/kg	0.400		84.9	60.9-105			
Acenaphthylene	0.345	0.040	mg/kg	0.400		86.2	57.4-107			
Anthracene	0.330	0.040	mg/kg	0.400		82.6	60.8-105			
Benzo[a]anthracene	0.335	0.040	mg/kg	0.400		83.7	56.1-121			
Benzo[a]pyrene	0.294	0.040	mg/kg	0.400		73.4	56.7-115			
Benzo[b]fluoranthene	0.337	0.040	mg/kg	0.400		84.2	45.4-128			
Benzo[g,h,i]perylene	0.308	0.040	mg/kg	0.400		77.0	56.5-107			
Benzo[k]fluoranthene	0.333	0.040	mg/kg	0.400		83.3	49.6-119			
Carbazole	0.345	0.040	mg/kg	0.400		86.1	59.7-107			
Chrysene	0.319	0.040	mg/kg	0.400		79.8	12.2-190			
Dibenz[a,h]anthracene	0.287	0.040	mg/kg	0.400		71.7	59.1-111			
Fluoranthene	0.328	0.040	mg/kg	0.400		82.1	60.6-111			

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 1082524 - SW846-3510 (Continued)

LCS (1082524-BS1) (Continued)

Prepared: 08/25/21 Analyzed: 09/02/21

Fluorene	0.345	0.040	mg/kg	0.400		86.3	59.3-108			
Indeno[1,2,3-cd]pyrene	0.305	0.040	mg/kg	0.400		76.2	53.4-116			
Naphthalene	0.348	0.040	mg/kg	0.400		87.0	56.5-106			
Surrogate: Nitrobenzene-d5	1.62		mg/kg	2.00		81.1	39.6-121			
Phenanthrene	0.333	0.040	mg/kg	0.400		83.2	59.9-107			
Pyrene	0.331	0.040	mg/kg	0.400		82.8	51.5-122			
Surrogate: Terphenyl-d14	1.50		mg/kg	2.00		75.1	33.3-136			

LCS Dup (1082524-BSD1)

Prepared: 08/25/21 Analyzed: 09/02/21

1-Methylnaphthalene	0.342	0.040	mg/kg	0.400		85.5	57.6-108	5.15	6.22	
Surrogate: 2-Fluorobiphenyl	1.43		mg/kg	2.00		71.6	39.8-134			
2-Methylnaphthalene	0.357	0.040	mg/kg	0.400		89.2	59-106	3.11	6.23	
Acenaphthene	0.357	0.040	mg/kg	0.400		89.3	60.9-105	4.99	8.18	
Acenaphthylene	0.342	0.040	mg/kg	0.400		85.6	57.4-107	0.658	5	
Anthracene	0.341	0.040	mg/kg	0.400		85.3	60.8-105	3.25	3.68	
Benzo[a]anthracene	0.332	0.040	mg/kg	0.400		83.0	56.1-121	0.759	9.01	
Benzo[a]pyrene	0.297	0.040	mg/kg	0.400		74.2	56.7-115	1.06	4.92	
Benzo[b]fluoranthene	0.351	0.040	mg/kg	0.400		87.8	45.4-128	4.21	7.63	
Benzo[g,h,i]perylene	0.288	0.040	mg/kg	0.400		72.0	56.5-107	6.75	12.5	
Benzo[k]fluoranthene	0.347	0.040	mg/kg	0.400		86.8	49.6-119	4.05	10.6	
Carbazole	0.323	0.040	mg/kg	0.400		80.7	59.7-107	6.52	8.65	
Chrysene	0.320	0.040	mg/kg	0.400		80.0	12.2-190	0.253	21.8	
Dibenz[a,h]anthracene	0.281	0.040	mg/kg	0.400		70.2	59.1-111	2.17	11.6	
Fluoranthene	0.324	0.040	mg/kg	0.400		81.0	60.6-111	1.42	7.54	
Fluorene	0.332	0.040	mg/kg	0.400		83.0	59.3-108	3.94	5.49	
Indeno[1,2,3-cd]pyrene	0.303	0.040	mg/kg	0.400		75.8	53.4-116	0.477	22.3	
Naphthalene	0.355	0.040	mg/kg	0.400		88.6	56.5-106	1.89	4.56	
Surrogate: Nitrobenzene-d5	1.62		mg/kg	2.00		81.2	39.6-121			
Phenanthrene	0.337	0.040	mg/kg	0.400		84.2	59.9-107	1.11	5.21	
Pyrene	0.334	0.040	mg/kg	0.400		83.4	51.5-122	0.815	10.6	
Surrogate: Terphenyl-d14	1.54		mg/kg	2.00		77.2	33.3-136			

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



Cottonwood Consulting
PO Box 1653
Durango CO, 81302

Project: COGCC Table 915-1
Project Name / Number: M. Spaulding Centralized Tank Battery
Project Manager: Jake Harter

Reported:
09/08/21 12:31

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.

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

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

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

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Cottonwood Consulting

Project Manager: Jacob Harter

Address: PO Box 1653

City: Durango

Phone #: (970) 946-3761

Additional Report To:

Project Name: M. Spaulding Centralized Tank Battery

Project Number:

Sampler Name (Print): Jacob Harter

FOR LAB USE ONLY

Bill to (if different):

P.O. #:

Company:

Attn:

Address:

City:

State:

Zip:

Phone #:

Fax or Email:

ANALYSIS REQUEST

Lab I.D.	Sample Name or Location	Collected		Matrix (check one)				# of containers			
		Date	Time	GROUNDWATER	SURFACEWATER	WASTEWATER	PRODUCEDWATER	SOIL	OTHER :	No preservation (general)	HNO ₃
2108-209-01	5501	8/19/21	0835					X		3	
-02	5502		0845					X		3	
-03	5503		0900					X		3	
-04	5504		0910					X		3	
-05	5505		1000					X		3	
-06	5506		1045					X		3	
-07	5507		1055					X		3	
-08	5508		1105					X		3	
-09	5509		1120					X		3	
-10	5510		1125					X		3	

PLEASE NOTE: GAL's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by GAL, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:

Date: 8/20/21
Time: 1515

Relinquished By: Jacob Harter

Received By: Brenda Stumper

Date: 8/20/21
Time: 1515

Relinquished By:

Date:

Received By:

Time:

Delivered By: (Circle One)

Temperature at receipt: 4.3°C

CHECKED BY: JSH

Sampler: UPS - FedEx - Kangaroo - Other:

ADDITIONAL REMARKS:

Report to State? (Circle)

Yes

No

on Ice Storage #3

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



service@greenanalytical.com or dzufelli@greenanalytical.com
75 Suttle St Durango, CO 81303

Page 51 of 51 2108209 GAL_WSUB FINAL 09 08 21 1231 09/08/21 12:32:05