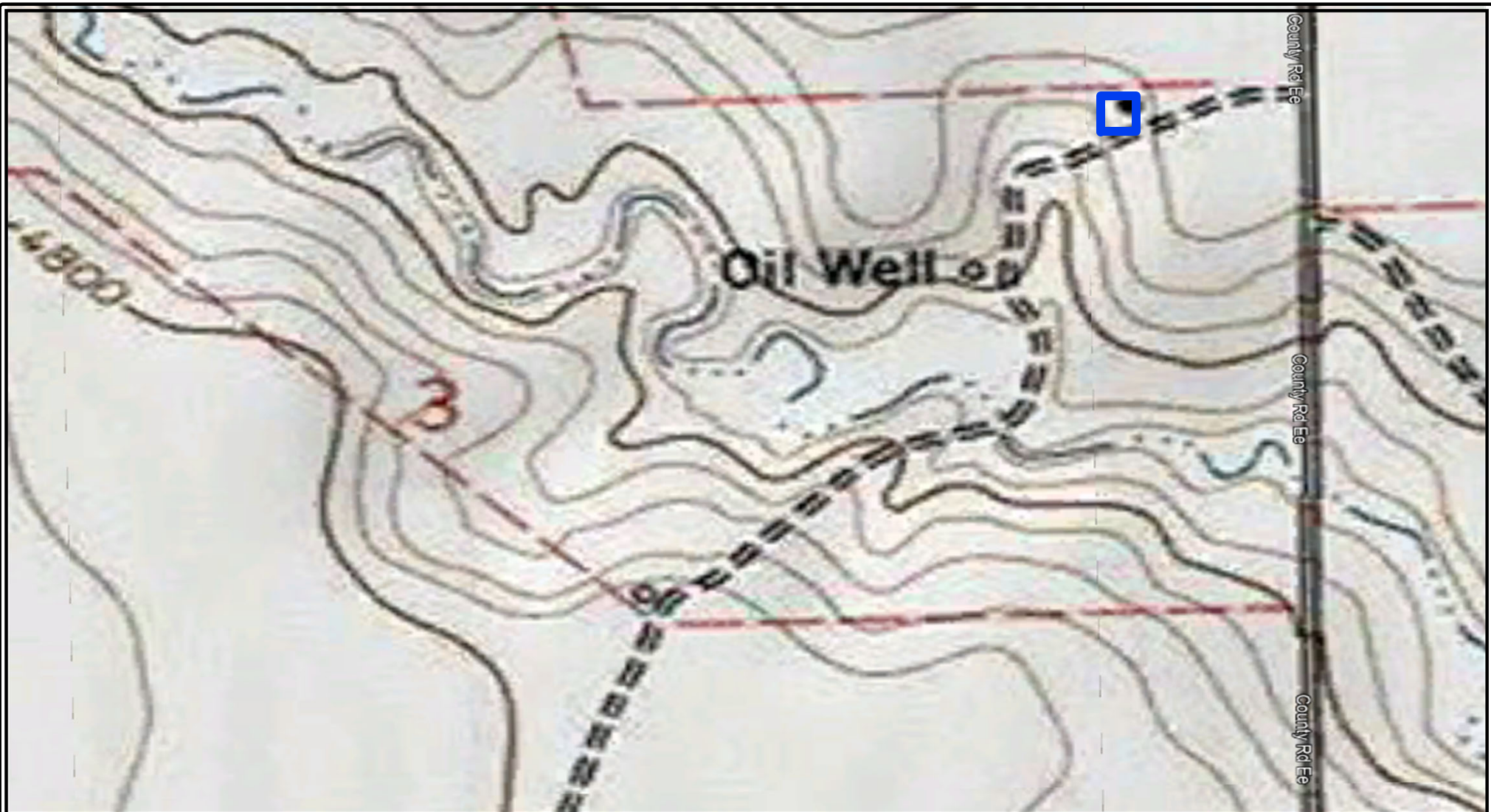




## FIGURES

**Figure 1: Topographic Site Location Map**

**Figure 2: Soil Sample Location Map**

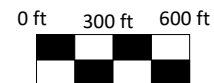


CENTRAL OPERATING, INC  
MARICK TANK BATTERY  
LOCATION ID 317092  
SENE S3, T3S R52W  
TOPOGRAPHY MAP

Legend



Location Boundary



Prepared By:  
Ardor Environmental LLC

September 1, 2023





CENTRAL OPERATING, INC  
MARICK A-2  
LOCATION ID 317092  
SENE S3, T3S R52W  
SOIL SAMPLING TANK BATTERY/PITS MAP

**Legend**

- 3/4/2024 Soil Sample Locations
- Soil Samples not taken due to standing water in pits



Prepared By:  
Ardor Environmental LLC

March 15, 2024



## **TABLES**

**Table 1: PHOTOIONIZATION DETECTOR READING SUMMARY**

**Table 2: SOIL ANALYTICAL RESULTS SUMMARY**

**Table 3: POLYCYCLIC AROMATIC HYDROCARBONS ANALYTICAL RESULTS**

**Table 4: METALS ANALYTICAL RESULTS SUMMARY**

TABLE 1  
 PHOTOIONIZATION DETECTOR READING SUMMARY  
 MARICK A-1 PITS AND TANK BATTERY  
 39.822589, -103.184897  
 SENE S3 T3S R52W  
 WASHINGTON COUNTY, COLORADO  
 LOCATION ID 317092

Sample Location (Lat/Long)	Sample Date	Approximate Depth	PID Reading (ppm)	Lab Submission (Y/N)
East Tank 39.824426, -103.183005	3/4/2024	18"	0.8	Y
Central Tank 39.824428, -103.183051	3/4/2024	18"	0.5	Y
West Tank 39.824424, -103.183093	3/4/2024	18"	0.7	Y
N Pit N Wall 39.824462, -103.183810	3/4/2024	4'	0.3	Y
N Pit E Wall 39.824392, -103.183724	3/4/2024	4'	0	Y
N Pit S Wall 39.824315, -103.183805	3/4/2024	4'	0	Y
N Pit W Wall 39.824380, -103.183917	3/4/2024	4'	0.0	Y
S Pit N Wall W 39.824253, -103.183896	3/4/2024	4'	0.1	Y
S Pit N Wall E 39.824244, -103.183753	3/4/2024	4'	0.1	Y
S Pit E Wall N 39.824194, -103.183629	3/4/2024	4'	0	Y
S Pit E Wall S 39.824077, -103.183615	3/4/2024	4'	0	Y
S Pit S Wall E 39.824016, -103.183735	3/4/2024	4'	0	Y
S Pit S Wall W 39.824023, -103.183915	3/4/2024	4'	0	Y
S Pit W Wall S 39.824094, -103.184018	3/4/2024	4'	0	Y
S Pit W Wall N 39.824203, -103.183896	3/4/2024	4'	0	Y
BG 1 39.824424, -103.184234	3/4/2024	18"	0.1	Y
BG 2 39.823904, -103.182887	3/4/2024	18"	0	Y

TABLE 2  
SOIL ANALYTICAL RESULTS SUMMARY  
MARICK A-1 PITS AND TANK BATTERY  
39.822589, -103.184897  
SENE S3 T3S R52W  
WASHINGTON COUNTY, COLORADO  
LOCATION ID 317092

Sample Location (Latitude/ Longitude)	Date	Approximate Depth (bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-RRO (mg/kg)	1,2,4-TMB (mg/kg)	1,3,5-TMB (mg/kg)	Boron (mg/kg)	Specific Conductance (mmhos/cm)	pH (pH units)	SAR
ECMC Table 915-1 Residential Soil Screening Levels			1.2	490	5.8	58	500			30	27	2	<4	6-8.3	<6
East Tank 39.824426, -103.183005	3/4/2024	18"	<0.00242	0.0027	<0.00500	<0.00654		ND		<0.00245	<0.00500	1.83	1.79	7.97	1.61
Central Tank 39.824428, -103.183051	3/4/2024	18"	<0.00242	<0.00263	<0.00500	<0.00654		ND		<0.00245	<0.00500	1.06	0.53	8.15	0.33
West Tank 39.824424, -103.183093	3/4/2024	18"	ND	<0.00263	<0.00500	<0.00654		ND		<0.00245	<0.00500	1.03	3.65	7.80	1.64
N Pit N Wall 39.824462, -103.183810	3/4/2024	4'	ND	<0.00263	<0.00500	<0.00654		ND		<0.00245	<0.00500	2.93	0.55	8.93	23.25
N Pit E Wall 39.824392, -103.183724	3/4/2024	4'	ND	<0.00263	<0.00500	<0.00654		ND		<0.00245	<0.00500	0.67	0.44	9.41	17.19
N Pit S Wall 39.824315, -103.183805	3/4/2024	4'	ND	<0.00263	<0.00500	<0.00654		ND		<0.00245	<0.00500	2.77	1.29	8.81	46.16
N Pit W Wall 39.824380, -103.183917	3/4/2024	4'	<0.00242	<0.00263	<0.00500	<0.00654		ND		<0.00245	<0.00500	3.07	0.29	8.80	32.25
S Pit N Wall W 39.824253, -103.183896	3/4/2024	4'	ND	<0.00263	<0.00500	<0.00654		ND		<0.00245	<0.00500	6.68	6.67	9.47	124.28
S Pit N Wall E 39.824244, -103.183753	3/4/2024	4'	<0.00242	<0.00263	<0.00500	<0.00654		ND		<0.00245	<0.00500	3.38	6.46	9.44	109.58
S Pit E Wall N 39.824194, -103.183629	3/4/2024	4'	ND	<0.00263	ND	<0.00263		ND		<0.00245	<0.00500	2.74	7.95	9.56	157.54
S Pit E Wall S 39.824077, -103.183615	3/4/2024	4'	ND	<0.00263	<0.00500	<0.00654		ND		<0.00245	<0.00500	2.81	6.49	9.50	104.86
S Pit S Wall E 39.824016, -103.183735	3/4/2024	4'	ND	<0.00263	ND	<0.00654		ND		<0.00245	ND	3.54	5.55	8.93	43.79
S Pit S Wall W 39.824023, -103.183915	3/4/2024	4'	ND	<0.00263	ND	<0.00654		ND		<0.00245	ND	3.04	6.78	9.09	64.67
S Pit W Wall S 39.824094, -103.184018	3/4/2024	4'	ND	<0.00263	<0.00500	<0.00654		ND		<0.00245	<0.00500	2.86	9.21	8.79	82.96
S Pit W Wall N 39.824203, -103.183896	3/4/2024	4'	ND	<0.00263	<0.00500	<0.00654		ND		<0.00245	ND	2.91	5.65	9.21	102.47
BG 1 39.824424, -103.184234	3/4/2024	18"										0.52	0.84	7.78	0.32
BG 2 39.823904, -103.182887	3/4/2024	18"										0.62	0.70	7.47	0.16

ECMC = Energy & Carbon Management Commission

Values presented with a less than symbol (<) did not contain concentrations at or above the laboratory reporting limit.

Values presented in **BOLD** contained concentrations exceeding ECMC Table 915-1 Residential Soil Screening Level Limits but within Background results where applicable.

Values presented in **BOLD** contained concentrations exceeding ECMC Table 915-1 Residential Soil Screening Level Limits and Background results.

TABLE 3  
POLYCYCLIC AROMATIC HYDROCARBONS ANALYTICAL RESULTS  
MARICK A-1 PITS AND TANK BATTERY  
39.822589, -103.184897  
SENE S3 T3S R52W  
WASHINGTON COUNTY, COLORADO  
LOCATION ID 317092

Sample Location (Latitude/ Longitude)	Date	Approximate Depth	1-Methyl- naphthalene (mg/kg)	2-Methyl- naphthalene (mg/kg)	Acenaphthen e (mg/kg)	Anthracene (mg/kg)	Benzo(a)- anthracene (mg/kg)	Benzo(a)- pyrene (mg/kg)	Benzo(b)- fluoranthene (mg/kg)	Benzo(k)- fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a, h)- anthracene (mg/kg)	Fluoranth ene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3- cd)- pyrene (mg/kg)	Naphthalen e (mg/kg)	Pyrene (mg/kg)
ECMC Table 915-1 Residential Soil Screening Levels			18	24	360	1800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	2	180
East Tank 39.824426, -103.183005	3/4/2024	18"	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Central Tank 39.824428, -103.183051	3/4/2024	18"	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
West Tank 39.824424, -103.183093	3/4/2024	18"	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N Pit N Wall 39.824462, -103.183810	3/4/2024	4'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N Pit E Wall 39.824392, -103.183724	3/4/2024	4'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N Pit S Wall 39.824315, -103.183805	3/4/2024	4'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N Pit W Wall 39.824380, -103.183917	3/4/2024	4'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S Pit N Wall W 39.824253, -103.183896	3/4/2024	4'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S Pit N Wall E 39.824244, -103.183753	3/4/2024	4'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S Pit E Wall N 39.824194, -103.183629	3/4/2024	4'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S Pit E Wall S 39.824077, -103.183615	3/4/2024	4'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S Pit S Wall E 39.824016, -103.183735	3/4/2024	4'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S Pit S Wall W 39.824023, -103.183915	3/4/2024	4'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S Pit W Wall S 39.824094, -103.184018	3/4/2024	4'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S Pit W Wall N 39.824203, -103.183896	3/4/2024	4'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BG 1 39.824424, -103.184234	3/4/2024	18"															
BG 2 39.823904, -103.182887	3/4/2024	18"															

ECMC = Energy & Carbon Management Commission

Values presented with a less than symbol (<) did not contain concentrations at or above the laboratory reporting limit.

Values presented in **BOLD** contained concentrations exceeding ECMC Table 915-1 Residential Soil Screening Level Limits but within Background results where applicable.

Values presented in **BOLD** contained concentrations exceeding ECMC Table 915-1 Residential Soil Screening Level Limits and Background results.





Marick A-1 Pits and Tank Battery  
Facility ID: 317092  
Remediation # 32117  
Central Operating Inc.  
March 2024



## **ATTACHMENT A**

### **Laboratory Analytical Reports**



## Division of Environmental Testing

2115 N Scranton St Suite 3040A

Aurora, CO 80045

800-440-5184

March 12, 2024

1600 Broadway Ste 1050  
Denver, CO 80202  
303-929-9513  
ryan@petersonenergyoperating.com

**Project Manager :** Ryan Dornbos

**Project Name :** Marick A-Z

**Project Number :** 32117

Attached are the analytical results for Marick A-Z 32117 received by Elevation Diagnostics, Division of Environmental Testing on March 05, 2024. This is associated with Elevation's number AA06345 .

The results were analyzed under the guidelines of various methods. These methods are identified in the report as follows: "SW" is referring to the EPA's SW-846 Compendium; "EPA" is referring to 40 CFR part 136; "HACH" is referring to a method which was validated by HACH®; "SM" is referring to a revision of the Standard Methods For the Examination of Water and Wastewater; and "ASTM" is referring to the standard test method set forth by ASTM International.

The analytical results in this report apply specifically to the samples listed in the attached Chain of Custody. This report may only be duplicated in full.

Any deviations to sample integrity, method specifications, or Elevation Diagnostics's standard operating procedures are documented in the report below.

Please contact us for any questions or comments concerning the content of this report.

Thank you,

Elevation Diagnostics, Division of Environmental Testing

Kristen Reichel  
Laboratory Director  
CSO,CCO

## Chain of Custody Form

# Elevation Diagnostics

2115 North Scranton Street Suite 3040A Aurora, CO 80045

800.440.5184

Client: CENTRAL OPERATING, INC.

Address: 1600 BROADWAY STE 1050

City/State/ZIP: DENVER, CO 80202

Phone: 303 929 9513

Project Contact: COI DENVERPRODUCTION@GMAIL.COM


TEANNING@ALDOZ ENVIRONMENTAL.COM

Project Name: MAZICK A-Z #32117

Project Location:

Collector Name: RYAN DORNBOOS

RYAN@PEOPERATING.COM				Preservative				Matrix		Analysis Requested				Notes		
Sample ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO <sub>3</sub>	None	Other	Water	Soil	Other	EC	MC	TABLE		
1	EAST TANK	3/4/24	0945	3			X			X		X				
2	CENTER TANK		0950									X				
3	WEST TANK		0955									X				
4	N PIT N WALL		1000									X				
5	N PIT E WALL		1005									X				
6	N PIT S WALL		1010									X				
7	N PIT W WALL		1015									X				
8	S PIT N WALL W		1020									X				
9	S PIT N WALL E		1025									X				
10	S PIT E WALL N		1030									X				

Relinquished By: <u>Ryan Dornbos</u>	Relinquished By: <u>Dylan Schen</u>	Relinquished By:	Scan to Deliver Samples
Date/Time: <u>3/4/24 510 PM</u>	Date/Time: <u>3/4/24 5:12</u>	Date/Time:	
Lab Use Only	Observed Temperature Upon Receipt: <u>11.3°C</u> ①	Samples Intact: Yes <input checked="" type="radio"/> No <input type="radio"/>	2024-03-05-003-1 
	Corrected Temperature Upon Receipt: <u>13.3°C</u> 3524	pH Checked: Yes <input checked="" type="radio"/> No <input type="radio"/>	
	Thermometer #: <u>EDXEQ238</u>	pH Adjusted: Yes <input checked="" type="radio"/> No <input type="radio"/>	
Correction Factor: <u>+2°C</u>	Name/Lot Number of Adjustment: _____		

EFOR-008.002

① temp. was not taken upon receipt. samples had previously been stored at room temp until we received at the lab, where they were put into ~~refrigeration~~ <sup>4°C ± 0.2°C</sup> refrigeration  
sat 3.5. 2024

2 of 2

## Chain of Custody Form

## Elevation Diagnostics

2115 North Scranton Street Suite 3040A Aurora, CO 80045

800.440.5184

Client: CENTRAL OPERATING, INC  
 Address: 1600 BROADWAY STE 1050  
 City/State/ZIP: DENVER, CO 80202  
 Phone: 303 929 9513  
 Project Contact: COI.DENVERPRODUCTION@GMAIL.COM  
TEANNING@ARBOR ENVIRONMENTAL.COM

Project Name: MAPICK A-Z #32117  
 Project Location: CR 17 & EE. N IM, WINTO  
 Collector Name: RYAN DORNBOUS

RYAN@PEOPERATING.COM				Preservative		Matrix		Analysis Requested		Notes								
Sample ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO <sub>3</sub>	None	Other	Water	Soil	Other							
1	S PIT E WALL S	3/4/24	1035	3		X			X	X								
2	S PIT S WALL E		1040								X							
3	S PIT S WALL W		1045								X							
4	S PIT W WALL S		1050								X							
5	S PIT W WALL N		1055								X							
6	BACKGROUND 1		1100									X	X					
7	BACKGROUND 2		1105									X	X					
8																		
9																		
10																		

Relinquished By: RYAN DORNBOUS  
 Date/Time: 3/4/24 5:10 PM

Relinquished By: Dylan Johnson  
 Date/Time: 3/4/24 5:17

Relinquished By:  
 Date/Time:

Scan to  
 Deliver  
 Samples

Lab Use Only  
 Observed Temperature Upon Receipt: 11.3°C  
 Corrected Temperature Upon Receipt: 13.3°C  
 Thermometer #: EDXEQ238  
 Correction Factor: +2°C

Samples Intact: Yes No  
 pH Checked: Yes No  
 pH Adjusted: Yes No  
 Name/Lot Number of Adjustment: \_\_\_\_\_

2024-03-05-003-2



Temp. was not taken upon receipt. Samples had previously been stored at room temp. until received at the lab, where they were put into refrigeration  
 3.5.2024

EFOR-008.002

**Division of Environmental Testing**

2115 N Scranton St Suite 3040A

Aurora, CO 80045

800-440-5184

**FINAL RESULTS REPORT****Report Date :** 3/12/2024**Report Time :** 21:16**REPORT TO**

1600 Broadway Ste 1050

Denver, CO 80202

303-929-9513

ryan@petersonenergyoperating.com

**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
-----------	-------------	--------------------------------	----------	--------	-------	--------------------	---------------------

**AA06345-1** East Tank

Collected : 03/04/2024 09:45

SAR - Calcium

03/12/2024 13:22 10.00 9.137 mEq/L 0.000 EPA 3050B

SAR - Magnesium

03/12/2024 13:22 10.00 1.894 mEq/L 0.000 EPA 3050B

SAR - Sodium

03/12/2024 13:22 10.00 3.780 mEq/L 0.000 EPA 3050B

SAR - Sodium Adsorption Ratio

03/12/2024 13:22 10.00 1.609 0.000 EPA 3050B

Soil Conductivity

03/12/2024 09:06 1.792 nmhos/cm USDA 60

**AA06345-2** East Tank

Collected : 03/04/2024 09:45

Total Metals, Soils - Cadmium

03/12/2024 03:28 10.00 0.187 mg/kg 0.001 EPA 3050B

Total Metals, Soils - Barium

03/12/2024 03:28 10.00 148.533 - MS mg/kg 0.025 EPA 3050B

Total Metals, Soils - Silver

03/12/2024 03:28 10.00 &lt;0.250 - RL1 mg/kg 0.250 EPA 3050B

Total Metals, Soils - Selenium

03/12/2024 03:28 10.00 2.192 mg/kg 0.025 EPA 3050B

Total Metals, Soils - Arsenic

03/12/2024 03:28 10.00 4.311 mg/kg 0.025 EPA 3050B

Total Metals, Soils - Copper

03/12/2024 03:28 10.00 9.023 mg/kg 0.025 EPA 3050B

Total Metals, Soils - Nickel

03/12/2024 03:28 10.00 9.258 mg/kg 0.025 EPA 3050B



**Division of Environmental Testing**

2115 N Scranton St Suite 3040A

Aurora, CO 80045

800-440-5184

**FINAL RESULTS REPORT****Report Date :** 3/12/2024**Report Time :** 21:16**REPORT TO**

1600 Broadway Ste 1050

Denver, CO 80202

303-929-9513

ryan@petersonenergyoperating.com

**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
Total Metals, Soils - Lead							
03/12/2024	03:28	10.00		10.382	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Zinc							
03/12/2024	03:28	10.00		35.884 - MS	mg/kg	0.025	EPA 3050B
Hot Water Soluble Boron							
03/07/2024	09:55			1.829	mg/kg	0.00005	Boron Hot Water Extraction
Chromium VI, Soil							
03/08/2024	10:16			<0.080	mg/kg	0.080	EPA 3060A & EPA 7199
pH, Soils							
03/07/2024	13:44			7.97	S.U.	0.01	EPA 9045D
pH, Soils Temperature							
03/07/2024	13:44			22.2	°C		
AA06345-3 East Tank							
Collected : 03/04/2024 09:45							
DRO & ORO, Soil - ORO							
03/12/2024	16:54			Not Detected	mg/kg	100.00	EPA 8015D
DRO & ORO, Soil - DRO							
03/12/2024	16:54			Not Detected	mg/kg	100.00	EPA 8015D
SVOC, Soils - Benzo(k)fluoranthene							
03/11/2024	15:45			Not Detected	mg/kg	0.005	EPA 8270
SVOC, Soils - 1-methylnaphthalene							
03/11/2024	15:45			Not Detected	mg/kg	0.005	EPA 8270
SVOC, Soils - Pyrene							
03/11/2024	15:45			Not Detected	mg/kg	0.01	EPA 8270
SVOC, Soils - 2-methylnaphthalene							
03/11/2024	15:45			Not Detected	mg/kg	0.003	EPA 8270
SVOC, Soils - Indeno(1,2,3-cd)pyrene							
03/11/2024	15:45			Not Detected	mg/kg	0.00455	EPA 8270

**Division of Environmental Testing**

2115 N Scranton St Suite 3040A

Aurora, CO 80045

800-440-5184

**FINAL RESULTS REPORT****Report Date :** 3/12/2024**Report Time :** 21:16**REPORT TO**

1600 Broadway Ste 1050

Denver, CO 80202

303-929-9513

ryan@petersonenergryoperating.com

**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
		SVOC, Soils - Fluorene					
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
		SVOC, Soils - Fluoranthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00336	EPA 8270
		SVOC, Soils - Dibenzo(a,h)anthracene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Chrysene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Benzo(a)pyrene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00593	EPA 8270
		SVOC, Soils - Benz(a)anthracene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00623	EPA 8270
		SVOC, Soils - Anthracene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00584	EPA 8270
		SVOC, Soils - Acenaphthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
		SVOC, Soils - Naphthalene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00306	EPA 8270
		SVOC, Soils - Benzo(b)fluoranthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		VOC, Soils - Toluene					
		03/12/2024 00:00		0.00270	mg/kg	0.00263	EPA 8260
		VOC, Soils - Benzene					
		03/12/2024 00:00		<0.00242	mg/kg	0.00242	EPA 8260
		VOC, Soils - Ethylbenzene					
		03/12/2024 00:00		<0.00500	mg/kg	0.00500	EPA 8260

**Division of Environmental Testing**

2115 N Scranton St Suite 3040A

Aurora, CO 80045

800-440-5184

**FINAL RESULTS REPORT****Report Date :** 3/12/2024**Report Time :** 21:16**REPORT TO**

1600 Broadway Ste 1050

Denver, CO 80202

303-929-9513

ryan@petersonenergyoperating.com

**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
VOC, Soils - m&p- xylene							
		03/12/2024 00:00		0.00451	mg/kg	0.00427	EPA 8260
VOC, Soils - Xylenes, total							
		03/12/2024 00:00		<0.00654	mg/kg	0.00654	EPA 8260
VOC, Soils - 1,3,5-trimethylbenzene							
		03/12/2024 00:00		<0.00500	mg/kg	0.00500	EPA 8260
VOC, Soils - 1,2,4-trimethylbenzene							
		03/12/2024 00:00		<0.00245	mg/kg	0.00245	EPA 8260
VOC, Soils - o-xylene							
		03/12/2024 00:00		<0.00227	mg/kg	0.00227	EPA 8260
Gasoline Range Organics, Soil							
		03/12/2024 09:43		<0.26827	mg/kg	0.26827	EPA 8260
AA06346-1 Center Tank							
Collected : 03/04/2024 09:50							
SAR - Magnesium							
		03/12/2024 13:22	10.00	0.724	mEq/L	0.000	EPA 3050B
SAR - Sodium							
		03/12/2024 13:22	10.00	0.396	mEq/L	0.000	EPA 3050B
SAR - Calcium							
		03/12/2024 13:22	10.00	2.168	mEq/L	0.000	EPA 3050B
SAR - Sodium Adsorption Ratio							
		03/12/2024 13:22	10.00	0.330		0.000	EPA 3050B
Soil Conductivity							
		03/12/2024 09:06		0.525	nmhos/cn		USDA 60
AA06346-2 Center Tank							
Collected : 03/04/2024 09:50							
Total Metals, Soils - Selenium							
		03/12/2024 03:48	10.00	3.743	mg/kg	0.025	EPA 3050B

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1600 Broadway Ste 1050

Denver, CO 80202

303-929-9513

ryan@petersonenergryoperating.com

**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
Total Metals, Soils - Lead							
03/12/2024	03:48	10.00		14.640	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Barium							
03/12/2024	03:48	10.00		209.657	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Cadmium							
03/12/2024	03:48	10.00		0.260	mg/kg	0.001	EPA 3050B
Total Metals, Soils - Silver							
03/12/2024	03:48	10.00		<0.250 - RL1	mg/kg	0.250	EPA 3050B
Total Metals, Soils - Zinc							
03/12/2024	03:48	10.00		53.431	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Copper							
03/12/2024	03:48	10.00		13.755	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Nickel							
03/12/2024	03:48	10.00		15.137	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Arsenic							
03/12/2024	03:48	10.00		6.474	mg/kg	0.025	EPA 3050B
Hot Water Soluble Boron							
03/07/2024	09:55			1.056	mg/kg	0.00005	Boron Hot Water Extraction
Chromium VI, Soil							
03/08/2024	10:16			0.119	mg/kg	0.080	EPA 3060A & EPA 7199
pH, Soils							
03/07/2024	13:44			8.15	S.U.	0.01	EPA 9045D
pH, Soils Temperature							
03/07/2024	13:44			22.3	°C		
AA06346-3 Center Tank							
Collected : 03/04/2024 09:50							
DRO & ORO, Soil - ORO							
03/12/2024	16:54			Not Detected	mg/kg	100.00	EPA 8015D

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**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
		DRO & ORO, Soil - DRO					
		03/12/2024 16:54		Not Detected	mg/kg	100.00	EPA 8015D
		SVOC, Soils - Chrysene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Benzo(k)fluoranthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Pyrene					
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
		SVOC, Soils - Naphthalene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00306	EPA 8270
		SVOC, Soils - 2-methylnaphthalene					
		03/11/2024 15:45		Not Detected	mg/kg	0.003	EPA 8270
		SVOC, Soils - 1-methylnaphthalene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Indeno(1,2,3-cd)pyrene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00455	EPA 8270
		SVOC, Soils - Fluorene					
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
		SVOC, Soils - Dibenzo(a,h)anthracene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Benzo(a)pyrene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00593	EPA 8270
		SVOC, Soils - Benz(a)anthracene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00623	EPA 8270
		SVOC, Soils - Benzo(b)fluoranthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270



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**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
SVOC, Soils - Anthracene							
		03/11/2024 15:45		Not Detected	mg/kg	0.00584	EPA 8270
SVOC, Soils - Fluoranthene							
		03/11/2024 15:45		Not Detected	mg/kg	0.00336	EPA 8270
SVOC, Soils - Acenaphthene							
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
VOC, Soils - Toluene							
		03/12/2024 00:00		<0.00263	mg/kg	0.00263	EPA 8260
VOC, Soils - Benzene							
		03/12/2024 00:00		<0.00242	mg/kg	0.00242	EPA 8260
VOC, Soils - Ethylbenzene							
		03/12/2024 00:00		<0.00500	mg/kg	0.00500	EPA 8260
VOC, Soils - m&p- xylene							
		03/12/2024 00:00		<0.00427	mg/kg	0.00427	EPA 8260
VOC, Soils - Xylenes, total							
		03/12/2024 00:00		<0.00654	mg/kg	0.00654	EPA 8260
VOC, Soils - 1,2,4-trimethylbenzene							
		03/12/2024 00:00		<0.00245	mg/kg	0.00245	EPA 8260
VOC, Soils - 1,3,5-trimethylbenzene							
		03/12/2024 00:00		<0.00500	mg/kg	0.00500	EPA 8260
VOC, Soils - o-xylene							
		03/12/2024 00:00		<0.00227	mg/kg	0.00227	EPA 8260
Gasoline Range Organics, Soil							
		03/12/2024 09:43		<0.26827	mg/kg	0.26827	EPA 8260
AA06347-1 West Tank							
Collected : 03/04/2024 09:55							
SAR - Magnesium							
		03/12/2024 13:22	10.00	5.400	mEq/L	0.000	EPA 3050B



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ryan@petersonenergyoperating.com

Project Manager : Ryan Dornbos

Project Name : Marick A-Z

Project Number : 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
SAR - Sodium							
		03/12/2024 13:22	10.00	5.518	mEq/L	0.000	EPA 3050B
SAR - Calcium							
		03/12/2024 13:22	10.00	17.379	mEq/L	0.000	EPA 3050B
SAR - Sodium Adsorption Ratio							
		03/12/2024 13:22	10.00	1.635		0.000	EPA 3050B
Soil Conductivity							
		03/12/2024 09:06		3.650	nmhos/cn		USDA 60
AA06347-2 West Tank							
Collected : 03/04/2024 09:55							
Total Metals, Soils - Selenium							
		03/12/2024 03:54	10.00	3.401	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Lead							
		03/12/2024 03:54	10.00	14.041	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Barium							
		03/12/2024 03:54	10.00	197.682	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Cadmium							
		03/12/2024 03:54	10.00	0.288	mg/kg	0.001	EPA 3050B
Total Metals, Soils - Silver							
		03/12/2024 03:54	10.00	<0.250 - RL1	mg/kg	0.250	EPA 3050B
Total Metals, Soils - Zinc							
		03/12/2024 03:54	10.00	50.333	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Nickel							
		03/12/2024 03:54	10.00	15.189	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Copper							
		03/12/2024 03:54	10.00	12.864	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Arsenic							
		03/12/2024 03:54	10.00	6.136	mg/kg	0.025	EPA 3050B

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Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
AA06347-3	West Tank Collected : 03/04/2024 09:55	Hot Water Soluble Boron 03/07/2024 09:55		1.034	mg/kg	0.00005	Boron Hot Water Extraction
		Chromium VI, Soil 03/08/2024 10:16		0.099	mg/kg	0.080	EPA 3060A & EPA 7199
		pH, Soils 03/07/2024 13:44		7.80	S.U.	0.01	EPA 9045D
		pH, Soils Temperature 03/07/2024 13:44		22.2	°C		
		DRO & ORO, Soil - ORO 03/12/2024 16:54		Not Detected	mg/kg	100.00	EPA 8015D
		DRO & ORO, Soil - DRO 03/12/2024 16:54		Not Detected	mg/kg	100.00	EPA 8015D
		SVOC, Soils - Pyrene 03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
		SVOC, Soils - Fluoranthene 03/11/2024 15:45		Not Detected	mg/kg	0.00336	EPA 8270
		SVOC, Soils - Dibenzo(a,h)anthracene 03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Chrysene 03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Fluorene 03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
		SVOC, Soils - Indeno(1,2,3-cd)pyrene 03/11/2024 15:45		Not Detected	mg/kg	0.00455	EPA 8270
		SVOC, Soils - 1-methylnaphthalene 03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270

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Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
		SVOC, Soils - Naphthalene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00306	EPA 8270
		SVOC, Soils - Benzo(a)pyrene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00593	EPA 8270
		SVOC, Soils - 2-methylnaphthalene					
		03/11/2024 15:45		Not Detected	mg/kg	0.003	EPA 8270
		SVOC, Soils - Benzo(b)fluoranthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Benz(a)anthracene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00623	EPA 8270
		SVOC, Soils - Anthracene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00584	EPA 8270
		SVOC, Soils - Acenaphthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
		SVOC, Soils - Benzo(k)fluoranthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		VOC, Soils - o-xylene					
		03/12/2024 00:00		<0.00227	mg/kg	0.00227	EPA 8260
		VOC, Soils - 1,3,5-trimethylbenzene					
		03/12/2024 00:00		<0.00500	mg/kg	0.00500	EPA 8260
		VOC, Soils - Benzene					
		03/12/2024 00:00		Not Detected	mg/kg	0.00242	EPA 8260
		VOC, Soils - Toluene					
		03/12/2024 00:00		<0.00263	mg/kg	0.00263	EPA 8260
		VOC, Soils - m&p- xylene					
		03/12/2024 00:00		<0.00427	mg/kg	0.00427	EPA 8260

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Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
VOC, Soils - Xylenes, total							
		03/12/2024 00:00		<0.00654	mg/kg	0.00654	EPA 8260
VOC, Soils - 1,2,4-trimethylbenzene							
		03/12/2024 00:00		<0.00245	mg/kg	0.00245	EPA 8260
VOC, Soils - Ethylbenzene							
		03/12/2024 00:00		<0.00500	mg/kg	0.00500	EPA 8260
Gasoline Range Organics, Soil							
		03/12/2024 09:43		<0.26827	mg/kg	0.26827	EPA 8260
AA06348-1 N Pit N Wall							
Collected : 03/04/2024 10:00							
SAR - Sodium							
		03/12/2024 13:22 10.00		7.584	mEq/L	0.000	EPA 3050B
SAR - Sodium Adsorption Ratio							
		03/12/2024 13:22 10.00		23.246		0.000	EPA 3050B
SAR - Calcium							
		03/12/2024 13:22 10.00		0.061	mEq/L	0.000	EPA 3050B
SAR - Magnesium							
		03/12/2024 13:22 10.00		0.152	mEq/L	0.000	EPA 3050B
Soil Conductivity							
		03/12/2024 09:06		0.547	nmhos/cm		USDA 60
AA06348-2 N Pit N Wall							
Collected : 03/04/2024 10:00							
Total Metals, Soils - Zinc							
		03/12/2024 04:01 10.00		54.680	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Lead							
		03/12/2024 04:01 10.00		15.283	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Barium							
		03/12/2024 04:01 10.00		201.971	mg/kg	0.025	EPA 3050B



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Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
Total Metals, Soils - Cadmium							
03/12/2024	04:01	10.00		0.277	mg/kg	0.001	EPA 3050B
Total Metals, Soils - Silver							
03/12/2024	04:01	10.00		<0.250 - RL1	mg/kg	0.250	EPA 3050B
Total Metals, Soils - Arsenic							
03/12/2024	04:01	10.00		5.202	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Copper							
03/12/2024	04:01	10.00		12.500	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Nickel							
03/12/2024	04:01	10.00		13.952	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Selenium							
03/12/2024	04:01	10.00		4.386	mg/kg	0.025	EPA 3050B
Hot Water Soluble Boron							
03/07/2024	09:55			2.934	mg/kg	0.00005	Boron Hot Water Extraction
Chromium VI, Soil							
03/08/2024	10:16			0.138	mg/kg	0.080	EPA 3060A & EPA 7199
pH, Soils							
03/07/2024	13:44			8.93	S.U.	0.01	EPA 9045D
pH, Soils Temperature							
03/07/2024	13:44			22.2	°C		
AA06348-3 N Pit N Wall							
Collected : 03/04/2024 10:00							
DRO & ORO, Soil - DRO							
03/12/2024	16:54			Not Detected	mg/kg	100.00	EPA 8015D
DRO & ORO, Soil - ORO							
03/12/2024	16:54			Not Detected	mg/kg	100.00	EPA 8015D
SVOC, Soils - Dibenzo(a,h)anthracene							
03/11/2024	15:45			Not Detected	mg/kg	0.005	EPA 8270



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Project Manager : Ryan Dornbos

Project Name : Marick A-Z

Project Number : 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
		SVOC, Soils - Pyrene					
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
		SVOC, Soils - Naphthalene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00306	EPA 8270
		SVOC, Soils - 2-methylnaphthalene					
		03/11/2024 15:45		Not Detected	mg/kg	0.003	EPA 8270
		SVOC, Soils - 1-methylnaphthalene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Indeno(1,2,3-cd)pyrene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00455	EPA 8270
		SVOC, Soils - Fluoranthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00336	EPA 8270
		SVOC, Soils - Chrysene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Benzo(a)pyrene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00593	EPA 8270
		SVOC, Soils - Benzo(k)fluoranthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Benz(a)anthracene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00623	EPA 8270
		SVOC, Soils - Anthracene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00584	EPA 8270
		SVOC, Soils - Acenaphthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
		SVOC, Soils - Benzo(b)fluoranthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270

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800-440-5184

**FINAL RESULTS REPORT****Report Date :** 3/12/2024**Report Time :** 21:16**REPORT TO**

1600 Broadway Ste 1050  
Denver, CO 80202  
303-929-9513  
ryan@petersonenergyoperating.com

**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
SVOC, Soils - Fluorene							
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
VOC, Soils - 1,2,4-trimethylbenzene							
		03/12/2024 00:00		<0.00245	mg/kg	0.00245	EPA 8260
VOC, Soils - m&p- xylene							
		03/12/2024 00:00		<0.00427	mg/kg	0.00427	EPA 8260
VOC, Soils - Benzene							
		03/12/2024 00:00		Not Detected	mg/kg	0.00242	EPA 8260
VOC, Soils - Toluene							
		03/12/2024 00:00		<0.00263	mg/kg	0.00263	EPA 8260
VOC, Soils - o-xylene							
		03/12/2024 00:00		<0.00227	mg/kg	0.00227	EPA 8260
VOC, Soils - Ethylbenzene							
		03/12/2024 00:00		<0.00500	mg/kg	0.00500	EPA 8260
VOC, Soils - Xylenes, total							
		03/12/2024 00:00		<0.00654	mg/kg	0.00654	EPA 8260
VOC, Soils - 1,3,5-trimethylbenzene							
		03/12/2024 00:00		<0.00500	mg/kg	0.00500	EPA 8260
Gasoline Range Organics, Soil							
		03/12/2024 09:43		<0.26827	mg/kg	0.26827	EPA 8260
AA06349-1 N Pit E Wall							
Collected : 03/04/2024 10:05							
SAR - Sodium Adsorption Ratio							
		03/12/2024 13:22 10.00		17.186		0.000	EPA 3050B
SAR - Sodium							
		03/12/2024 13:22 10.00		8.507	mEq/L	0.000	EPA 3050B
SAR - Calcium							
		03/12/2024 13:22 10.00		0.382	mEq/L	0.000	EPA 3050B

**Division of Environmental Testing**

2115 N Scranton St Suite 3040A

Aurora, CO 80045

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1600 Broadway Ste 1050  
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ryan@petersonenergyoperating.com

**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
SAR - Magnesium							
		03/12/2024 13:22	10.00	0.109	mEq/L	0.000	EPA 3050B
Soil Conductivity							
		03/12/2024 09:06		0.442	nmhos/cn		USDA 60
AA06349-2 N Pit E Wall							
Collected : 03/04/2024 10:05							
Total Metals, Soils - Lead							
		03/12/2024 04:21	10.00	5.703	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Barium							
		03/12/2024 04:21	10.00	85.351	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Cadmium							
		03/12/2024 04:21	10.00	0.071	mg/kg	0.001	EPA 3050B
Total Metals, Soils - Silver							
		03/12/2024 04:21	10.00	<0.250 - RL1	mg/kg	0.250	EPA 3050B
Total Metals, Soils - Selenium							
		03/12/2024 04:21	10.00	2.484	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Arsenic							
		03/12/2024 04:21	10.00	2.307	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Copper							
		03/12/2024 04:21	10.00	4.527	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Nickel							
		03/12/2024 04:21	10.00	4.966	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Zinc							
		03/12/2024 04:21	10.00	18.960	mg/kg	0.025	EPA 3050B
Hot Water Soluble Boron							
		03/07/2024 09:55		0.674	mg/kg	0.00005	Boron Hot Water Extraction
Chromium VI, Soil							
		03/08/2024 10:16		<0.080	mg/kg	0.080	EPA 3060A & EPA 7199



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Project Manager : Ryan Dornbos

Project Name : Marick A-Z

Project Number : 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
		pH, Soils					
		03/07/2024 13:44		9.41	S.U.	0.01	EPA 9045D
		pH, Soils Temperature					
		03/07/2024 13:44		22.0	°C		
AA06349-3 N Pit E Wall							
Collected : 03/04/2024 10:05							
		DRO & ORO, Soil - DRO					
		03/12/2024 16:54		Not Detected	mg/kg	100.00	EPA 8015D
		DRO & ORO, Soil - ORO					
		03/12/2024 16:54		Not Detected	mg/kg	100.00	EPA 8015D
		SVOC, Soils - Benzo(a)pyrene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00593	EPA 8270
		SVOC, Soils - Naphthalene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00306	EPA 8270
		SVOC, Soils - 2-methylnaphthalene					
		03/11/2024 15:45		Not Detected	mg/kg	0.003	EPA 8270
		SVOC, Soils - 1-methylnaphthalene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Indeno(1,2,3-cd)pyrene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00455	EPA 8270
		SVOC, Soils - Fluorene					
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
		SVOC, Soils - Fluoranthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00336	EPA 8270
		SVOC, Soils - Dibenzo(a,h)anthracene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Chrysene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270



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Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
		SVOC, Soils - Pyrene					
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
		SVOC, Soils - Benzo(b)fluoranthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Benz(a)anthracene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00623	EPA 8270
		SVOC, Soils - Anthracene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00584	EPA 8270
		SVOC, Soils - Acenaphthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
		SVOC, Soils - Benzo(k)fluoranthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		VOC, Soils - Toluene					
		03/12/2024 00:00		<0.00263	mg/kg	0.00263	EPA 8260
		VOC, Soils - 1,3,5-trimethylbenzene					
		03/12/2024 00:00		<0.00500	mg/kg	0.00500	EPA 8260
		VOC, Soils - Benzene					
		03/12/2024 00:00		Not Detected	mg/kg	0.00242	EPA 8260
		VOC, Soils - Ethylbenzene					
		03/12/2024 00:00		<0.00500	mg/kg	0.00500	EPA 8260
		VOC, Soils - m&p- xylene					
		03/12/2024 00:00		<0.00427	mg/kg	0.00427	EPA 8260
		VOC, Soils - Xylenes, total					
		03/12/2024 00:00		<0.00654	mg/kg	0.00654	EPA 8260
		VOC, Soils - 1,2,4-trimethylbenzene					
		03/12/2024 00:00		<0.00245	mg/kg	0.00245	EPA 8260

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**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
VOC, Soils - o-xylene							
		03/12/2024 00:00		<0.00227	mg/kg	0.00227	EPA 8260
Gasoline Range Organics, Soil							
		03/12/2024 09:43		<0.26827	mg/kg	0.26827	EPA 8260
AA06350-1 N Pit S Wall							
Collected : 03/04/2024 10:10							
SAR - Magnesium							
		03/12/2024 13:22	10.00	0.188	mEq/L	0.000	EPA 3050B
SAR - Sodium							
		03/12/2024 13:22	10.00	14.033	mEq/L	0.000	EPA 3050B
SAR - Calcium							
		03/12/2024 13:22	10.00	0	mEq/L	0.000	EPA 3050B
SAR - Sodium Adsorption Ratio							
		03/12/2024 13:22	10.00	46.162		0.000	EPA 3050B
Soil Conductivity							
		03/12/2024 09:06		1.290	nmhos/cn		USDA 60
AA06350-2 N Pit S Wall							
Collected : 03/04/2024 10:10							
Total Metals, Soils - Selenium							
		03/12/2024 04:27	10.00	2.277	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Lead							
		03/12/2024 04:27	10.00	9.088	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Barium							
		03/12/2024 04:27	10.00	178.461	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Cadmium							
		03/12/2024 04:27	10.00	0.133	mg/kg	0.001	EPA 3050B
Total Metals, Soils - Silver							
		03/12/2024 04:27	10.00	<0.250 - RL1	mg/kg	0.250	EPA 3050B

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Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
Total Metals, Soils - Zinc							
		03/12/2024 04:27	10.00	35.417	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Nickel							
		03/12/2024 04:27	10.00	7.960	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Copper							
		03/12/2024 04:27	10.00	8.229	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Arsenic							
		03/12/2024 04:27	10.00	2.581	mg/kg	0.025	EPA 3050B
Hot Water Soluble Boron							
		03/07/2024 09:55		2.772	mg/kg	0.00005	Boron Hot Water Extraction
Chromium VI, Soil							
		03/08/2024 10:16		0.097	mg/kg	0.080	EPA 3060A & EPA 7199
pH, Soils							
		03/07/2024 13:44		8.81	S.U.	0.01	EPA 9045D
pH, Soils Temperature							
		03/07/2024 13:44		22.0	°C		
AA06350-3 N Pit S Wall							
Collected : 03/04/2024 10:10							
DRO & ORO, Soil - ORO							
		03/12/2024 16:54		Not Detected	mg/kg	100.00	EPA 8015D
DRO & ORO, Soil - DRO							
		03/12/2024 16:54		Not Detected	mg/kg	100.00	EPA 8015D
SVOC, Soils - Dibenzo(a,h)anthracene							
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
SVOC, Soils - Benzo(a)pyrene							
		03/11/2024 15:45		Not Detected	mg/kg	0.00593	EPA 8270
SVOC, Soils - Pyrene							
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270



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Project Manager : Ryan Dornbos

Project Name : Marick A-Z

Project Number : 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
		SVOC, Soils - Chrysene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Anthracene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00584	EPA 8270
		SVOC, Soils - Fluoranthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00336	EPA 8270
		SVOC, Soils - Fluorene					
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
		SVOC, Soils - Indeno(1,2,3-cd)pyrene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00455	EPA 8270
		SVOC, Soils - 1-methylnaphthalene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Naphthalene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00306	EPA 8270
		SVOC, Soils - 2-methylnaphthalene					
		03/11/2024 15:45		Not Detected	mg/kg	0.003	EPA 8270
		SVOC, Soils - Benz(a)anthracene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00623	EPA 8270
		SVOC, Soils - Acenaphthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
		SVOC, Soils - Benzo(b)fluoranthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Benzo(k)fluoranthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		VOC, Soils - 1,3,5-trimethylbenzene					
		03/12/2024 00:00		<0.00500	mg/kg	0.00500	EPA 8260

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Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
VOC, Soils - 1,2,4-trimethylbenzene							
		03/12/2024 00:00		<0.00245	mg/kg	0.00245	EPA 8260
VOC, Soils - Xylenes, total							
		03/12/2024 00:00		<0.00654	mg/kg	0.00654	EPA 8260
VOC, Soils - o-xylene							
		03/12/2024 00:00		<0.00227	mg/kg	0.00227	EPA 8260
VOC, Soils - m&p- xylene							
		03/12/2024 00:00		<0.00427	mg/kg	0.00427	EPA 8260
VOC, Soils - Ethylbenzene							
		03/12/2024 00:00		<0.00500	mg/kg	0.00500	EPA 8260
VOC, Soils - Toluene							
		03/12/2024 00:00		<0.00263	mg/kg	0.00263	EPA 8260
VOC, Soils - Benzene							
		03/12/2024 00:00		Not Detected	mg/kg	0.00242	EPA 8260
Gasoline Range Organics, Soil							
		03/12/2024 09:43		<0.26827	mg/kg	0.26827	EPA 8260
AA06351-1 N Pit W Wall							
Collected : 03/04/2024 10:15							
SAR - Calcium							
		03/12/2024 13:22	10.00	0.049	mEq/L	0.000	EPA 3050B
SAR - Magnesium							
		03/12/2024 13:22	10.00	0.031	mEq/L	0.000	EPA 3050B
SAR - Sodium							
		03/12/2024 13:22	10.00	6.443	mEq/L	0.000	EPA 3050B
SAR - Sodium Adsorption Ratio							
		03/12/2024 13:22	10.00	32.249		0.000	EPA 3050B
Soil Conductivity							
		03/12/2024 09:06		0.285	nmhos/cn		USDA 60

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**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
AA06351-2	N Pit W Wall						
	Collected : 03/04/2024 10:15						
		Total Metals, Soils - Selenium					
		03/12/2024 04:34 10.00		3.141	mg/kg	0.025	EPA 3050B
		Total Metals, Soils - Lead					
		03/12/2024 04:34 10.00		11.493	mg/kg	0.025	EPA 3050B
		Total Metals, Soils - Barium					
		03/12/2024 04:34 10.00		161.385	mg/kg	0.025	EPA 3050B
		Total Metals, Soils - Cadmium					
		03/12/2024 04:34 10.00		0.191	mg/kg	0.001	EPA 3050B
		Total Metals, Soils - Silver					
		03/12/2024 04:34 10.00		<0.250 - RL1	mg/kg	0.250	EPA 3050B
		Total Metals, Soils - Zinc					
		03/12/2024 04:34 10.00		45.124	mg/kg	0.025	EPA 3050B
		Total Metals, Soils - Nickel					
		03/12/2024 04:34 10.00		12.777	mg/kg	0.025	EPA 3050B
		Total Metals, Soils - Arsenic					
		03/12/2024 04:34 10.00		4.674	mg/kg	0.025	EPA 3050B
		Total Metals, Soils - Copper					
		03/12/2024 04:34 10.00		11.746	mg/kg	0.025	EPA 3050B
		Hot Water Soluble Boron					Boron Hot Water Extraction
		03/07/2024 09:55		3.066	mg/kg	0.00005	
		Chromium VI, Soil					EPA 3060A & EPA 7199
		03/08/2024 10:16		0.094	mg/kg	0.080	
		pH, Soils					
		03/07/2024 13:44		8.80	S.U.	0.01	EPA 9045D
		pH, Soils Temperature					
		03/07/2024 13:44		22.4	°C		





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Project Manager : Ryan Dornbos

Project Name : Marick A-Z

Project Number : 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
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AA06351-3 N Pit W Wall

Collected : 03/04/2024 10:15

DRO & ORO, Soil - ORO

03/12/2024 16:54 Not Detected mg/kg 100.00 EPA 8015D

DRO & ORO, Soil - DRO

03/12/2024 16:54 Not Detected mg/kg 100.00 EPA 8015D

SVOC, Soils - Benzo(a)pyrene

03/11/2024 15:45 Not Detected mg/kg 0.00593 EPA 8270

SVOC, Soils - Dibenzo(a,h)anthracene

03/11/2024 15:45 Not Detected mg/kg 0.005 EPA 8270

SVOC, Soils - Fluorene

03/11/2024 15:45 Not Detected mg/kg 0.01 EPA 8270

SVOC, Soils - Indeno(1,2,3-cd)pyrene

03/11/2024 15:45 Not Detected mg/kg 0.00455 EPA 8270

SVOC, Soils - 1-methylnaphthalene

03/11/2024 15:45 Not Detected mg/kg 0.005 EPA 8270

SVOC, Soils - 2-methylnaphthalene

03/11/2024 15:45 Not Detected mg/kg 0.003 EPA 8270

SVOC, Soils - Pyrene

03/11/2024 15:45 Not Detected mg/kg 0.01 EPA 8270

SVOC, Soils - Chrysene

03/11/2024 15:45 Not Detected mg/kg 0.005 EPA 8270

SVOC, Soils - Benzo(k)fluoranthene

03/11/2024 15:45 Not Detected mg/kg 0.005 EPA 8270

SVOC, Soils - Naphthalene

03/11/2024 15:45 Not Detected mg/kg 0.00306 EPA 8270

SVOC, Soils - Benz(a)anthracene

03/11/2024 15:45 Not Detected mg/kg 0.00623 EPA 8270

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Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
		SVOC, Soils - Anthracene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00584	EPA 8270
		SVOC, Soils - Acenaphthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
		SVOC, Soils - Benzo(b)fluoranthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Fluoranthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00336	EPA 8270
		VOC, Soils - 1,3,5-trimethylbenzene					
		03/12/2024 00:00		<0.00500	mg/kg	0.00500	EPA 8260
		VOC, Soils - 1,2,4-trimethylbenzene					
		03/12/2024 00:00		<0.00245	mg/kg	0.00245	EPA 8260
		VOC, Soils - Xylenes, total					
		03/12/2024 00:00		<0.00654	mg/kg	0.00654	EPA 8260
		VOC, Soils - o-xylene					
		03/12/2024 00:00		<0.00227	mg/kg	0.00227	EPA 8260
		VOC, Soils - m&p- xylene					
		03/12/2024 00:00		<0.00427	mg/kg	0.00427	EPA 8260
		VOC, Soils - Ethylbenzene					
		03/12/2024 00:00		<0.00500	mg/kg	0.00500	EPA 8260
		VOC, Soils - Toluene					
		03/12/2024 00:00		<0.00263	mg/kg	0.00263	EPA 8260
		VOC, Soils - Benzene					
		03/12/2024 00:00		<0.00242	mg/kg	0.00242	EPA 8260
		Gasoline Range Organics, Soil					
		03/12/2024 09:43		<0.26827	mg/kg	0.26827	EPA 8260

**AA06352-1** S Pit N Wall W

Collected : 03/04/2024 10:20

**Division of Environmental Testing**

2115 N Scranton St Suite 3040A

Aurora, CO 80045

800-440-5184

**FINAL RESULTS REPORT****Report Date :** 3/12/2024**Report Time :** 21:16**REPORT TO**

1600 Broadway Ste 1050

Denver, CO 80202

303-929-9513

ryan@petersonenergyoperating.com

**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
SAR - Calcium							
		03/12/2024 13:22	10.00	0.124	mEq/L	0.000	EPA 3050B
SAR - Magnesium							
		03/12/2024 13:22	10.00	0.147	mEq/L	0.000	EPA 3050B
SAR - Sodium							
		03/12/2024 13:22	10.00	45.736	mEq/L	0.000	EPA 3050B
SAR - Sodium Adsorption Ratio							
		03/12/2024 13:22	10.00	124.275		0.000	EPA 3050B
Soil Conductivity							
		03/08/2024 19:07		6.670	nmhos/cn		USDA 60
AA06352-2 S Pit N Wall W							
Collected : 03/04/2024 10:20							
Total Metals, Soils - Barium							
		03/12/2024 04:40	10.00	233.206	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Cadmium							
		03/12/2024 04:40	10.00	0.193	mg/kg	0.001	EPA 3050B
Total Metals, Soils - Silver							
		03/12/2024 04:40	10.00	<0.250 - RL1	mg/kg	0.250	EPA 3050B
Total Metals, Soils - Selenium							
		03/12/2024 04:40	10.00	3.625	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Arsenic							
		03/12/2024 04:40	10.00	4.077	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Lead							
		03/12/2024 04:40	10.00	12.738	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Nickel							
		03/12/2024 04:40	10.00	12.237	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Copper							
		03/12/2024 04:40	10.00	9.044	mg/kg	0.025	EPA 3050B

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**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
Total Metals, Soils - Zinc							
		03/12/2024 04:40	10.00	47.019	mg/kg	0.025	EPA 3050B
Hot Water Soluble Boron							
		03/07/2024 09:55		6.676	mg/kg	0.00005	Boron Hot Water Extraction
Chromium VI, Soil							
		03/08/2024 10:16		<0.080	mg/kg	0.080	EPA 3060A & EPA 7199
pH, Soils							
		03/07/2024 13:44		9.47	S.U.	0.01	EPA 9045D
pH, Soils Temperature							
		03/07/2024 13:44		21.9	°C		
AA06352-3 S Pit N Wall W							
Collected : 03/04/2024 10:20							
DRO & ORO, Soil - DRO							
		03/12/2024 16:54		Not Detected	mg/kg	100.00	EPA 8015D
DRO & ORO, Soil - ORO							
		03/12/2024 16:54		Not Detected	mg/kg	100.00	EPA 8015D
SVOC, Soils - Fluorene							
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
SVOC, Soils - Pyrene							
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
SVOC, Soils - 2-methylnaphthalene							
		03/11/2024 15:45		Not Detected	mg/kg	0.003	EPA 8270
SVOC, Soils - Benzo(k)fluoranthene							
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
SVOC, Soils - 1-methylnaphthalene							
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
SVOC, Soils - Indeno(1,2,3-cd)pyrene							
		03/11/2024 15:45		Not Detected	mg/kg	0.00455	EPA 8270



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Denver, CO 80202  
303-929-9513  
ryan@petersonenergyoperating.com

Project Manager : Ryan Dornbos

Project Name : Marick A-Z

Project Number : 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
		SVOC, Soils - Naphthalene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00306	EPA 8270
		SVOC, Soils - Fluoranthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00336	EPA 8270
		SVOC, Soils - Dibenzo(a,h)anthracene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Benzo(a)pyrene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00593	EPA 8270
		SVOC, Soils - Benzo(b)fluoranthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Benz(a)anthracene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00623	EPA 8270
		SVOC, Soils - Anthracene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00584	EPA 8270
		SVOC, Soils - Acenaphthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
		SVOC, Soils - Chrysene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		VOC, Soils - 1,3,5-trimethylbenzene					
		03/12/2024 00:00		<0.00500	mg/kg	0.00500	EPA 8260
		VOC, Soils - Benzene					
		03/12/2024 00:00		Not Detected	mg/kg	0.00242	EPA 8260
		VOC, Soils - Toluene					
		03/12/2024 00:00		<0.00263	mg/kg	0.00263	EPA 8260
		VOC, Soils - Ethylbenzene					
		03/12/2024 00:00		<0.00500	mg/kg	0.00500	EPA 8260

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Denver, CO 80202

303-929-9513

ryan@petersonenergyoperating.com

**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
VOC, Soils - m&p- xylene							
		03/12/2024 00:00		<0.00427	mg/kg	0.00427	EPA 8260
VOC, Soils - o-xylene							
		03/12/2024 00:00		<0.00227	mg/kg	0.00227	EPA 8260
VOC, Soils - Xylenes, total							
		03/12/2024 00:00		<0.00654	mg/kg	0.00654	EPA 8260
VOC, Soils - 1,2,4-trimethylbenzene							
		03/12/2024 00:00		<0.00245	mg/kg	0.00245	EPA 8260
Gasoline Range Organics, Soil							
		03/12/2024 09:43		<0.26827	mg/kg	0.26827	EPA 8260
AA06353-1 S Pit N Wall E							
Collected : 03/04/2024 10:25							
SAR - Sodium							
		03/12/2024 13:22	10.00	43.299	mEq/L	0.000	EPA 3050B
SAR - Calcium							
		03/12/2024 13:22	10.00	0.230	mEq/L	0.000	EPA 3050B
SAR - Magnesium							
		03/12/2024 13:22	10.00	0.083	mEq/L	0.000	EPA 3050B
SAR - Sodium Adsorption Ratio							
		03/12/2024 13:22	10.00	109.508		0.000	EPA 3050B
Soil Conductivity							
		03/08/2024 19:07		6.460	nmhos/cn		USDA 60
AA06353-2 S Pit N Wall E							
Collected : 03/04/2024 10:25							
Total Metals, Soils - Nickel							
		03/12/2024 04:47	10.00	10.314	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Arsenic							
		03/12/2024 04:47	10.00	3.456	mg/kg	0.025	EPA 3050B



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1600 Broadway Ste 1050

Denver, CO 80202

303-929-9513

ryan@petersonenergryoperating.com

**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
Total Metals, Soils - Lead							
03/12/2024	04:47	10.00		13.556	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Copper							
03/12/2024	04:47	10.00		9.707	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Zinc							
03/12/2024	04:47	10.00		53.737	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Barium							
03/12/2024	04:47	10.00		195.639	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Cadmium							
03/12/2024	04:47	10.00		0.222	mg/kg	0.001	EPA 3050B
Total Metals, Soils - Silver							
03/12/2024	04:47	10.00		<0.250 - RL1	mg/kg	0.250	EPA 3050B
Total Metals, Soils - Selenium							
03/12/2024	04:47	10.00		3.106	mg/kg	0.025	EPA 3050B
Hot Water Soluble Boron							
03/07/2024	09:55			3.379	mg/kg	0.00005	Boron Hot Water Extraction
Chromium VI, Soil							
03/08/2024	10:16			<0.080	mg/kg	0.080	EPA 3060A & EPA 7199
pH, Soils							
03/07/2024	13:44			9.44	S.U.	0.01	EPA 9045D
pH, Soils Temperature							
03/07/2024	13:44			21.9	°C		
<b>AA06353-3</b> S Pit N Wall E							
Collected : 03/04/2024 10:25							
DRO & ORO, Soil - ORO							
03/12/2024	16:54			Not Detected	mg/kg	100.00	EPA 8015D
DRO & ORO, Soil - DRO							
03/12/2024	16:54			Not Detected	mg/kg	100.00	EPA 8015D



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1600 Broadway Ste 1050  
Denver, CO 80202  
303-929-9513  
ryan@petersonenergyoperating.com

Project Manager : Ryan Dornbos

Project Name : Marick A-Z

Project Number : 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
		SVOC, Soils - Benzo(k)fluoranthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Fluoranthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00336	EPA 8270
		SVOC, Soils - Pyrene					
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
		SVOC, Soils - Naphthalene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00306	EPA 8270
		SVOC, Soils - 2-methylnaphthalene					
		03/11/2024 15:45		Not Detected	mg/kg	0.003	EPA 8270
		SVOC, Soils - 1-methylnaphthalene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Fluorene					
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
		SVOC, Soils - Dibenzo(a,h)anthracene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Chrysene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Benzo(a)pyrene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00593	EPA 8270
		SVOC, Soils - Benz(a)anthracene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00623	EPA 8270
		SVOC, Soils - Anthracene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00584	EPA 8270
		SVOC, Soils - Acenaphthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270

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**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
SVOC, Soils - Benzo(b)fluoranthene							
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
SVOC, Soils - Indeno(1,2,3-cd)pyrene							
		03/11/2024 15:45		Not Detected	mg/kg	0.00455	EPA 8270
VOC, Soils - Ethylbenzene							
		03/12/2024 00:00		<0.00500	mg/kg	0.00500	EPA 8260
VOC, Soils - Toluene							
		03/12/2024 00:00		<0.00263	mg/kg	0.00263	EPA 8260
VOC, Soils - m&p- xylene							
		03/12/2024 00:00		<0.00427	mg/kg	0.00427	EPA 8260
VOC, Soils - o-xylene							
		03/12/2024 00:00		<0.00227	mg/kg	0.00227	EPA 8260
VOC, Soils - 1,2,4-trimethylbenzene							
		03/12/2024 00:00		<0.00245	mg/kg	0.00245	EPA 8260
VOC, Soils - 1,3,5-trimethylbenzene							
		03/12/2024 00:00		<0.00500	mg/kg	0.00500	EPA 8260
VOC, Soils - Benzene							
		03/12/2024 00:00		<0.00242	mg/kg	0.00242	EPA 8260
VOC, Soils - Xylenes, total							
		03/12/2024 00:00		<0.00654	mg/kg	0.00654	EPA 8260
Gasoline Range Organics, Soil							
		03/12/2024 09:43		<0.26827	mg/kg	0.26827	EPA 8260
<b>AA06354-1</b> S Pit E Wall N							
Collected : 03/04/2024 10:30							
SAR - Calcium							
		03/12/2024 13:22 10.00		0.101	mEq/L	0.000	EPA 3050B
SAR - Sodium Adsorption Ratio							
		03/12/2024 13:22 10.00		157.541		0.000	EPA 3050B

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Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
SAR - Magnesium							
		03/12/2024 13:22	10.00	0.128	mEq/L	0.000	EPA 3050B
SAR - Sodium							
		03/12/2024 13:22	10.00	53.244	mEq/L	0.000	EPA 3050B
Soil Conductivity							
		03/08/2024 19:07		7.950	nmhos/cn		USDA 60
AA06354-2 S Pit E Wall N							
Collected : 03/04/2024 10:30							
Total Metals, Soils - Lead							
		03/12/2024 04:53	10.00	11.729	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Barium							
		03/12/2024 04:53	10.00	229.916	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Cadmium							
		03/12/2024 04:53	10.00	0.183	mg/kg	0.001	EPA 3050B
Total Metals, Soils - Silver							
		03/12/2024 04:53	10.00	<0.250 - RL1	mg/kg	0.250	EPA 3050B
Total Metals, Soils - Selenium							
		03/12/2024 04:53	10.00	2.366	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Arsenic							
		03/12/2024 04:53	10.00	5.264	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Nickel							
		03/12/2024 04:53	10.00	12.496	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Copper							
		03/12/2024 04:53	10.00	10.559	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Zinc							
		03/12/2024 04:53	10.00	52.784	mg/kg	0.025	EPA 3050B
Hot Water Soluble Boron							
		03/07/2024 09:55		2.743	mg/kg	0.00005	Boron Hot Water Extraction



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Project Manager : Ryan Dornbos

Project Name : Marick A-Z

Project Number : 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
AA06354-3	S Pit E Wall N Collected : 03/04/2024 10:30	Chromium VI, Soil 03/08/2024 10:16		<0.080	mg/kg	0.080	EPA 3060A & EPA 7199
		pH, Soils 03/07/2024 16:37		9.56	S.U.	0.01	EPA 9045D
		pH, Soils Temperature 03/07/2024 16:37		22.1	°C		
		DRO & ORO, Soil - DRO 03/12/2024 16:54		Not Detected	mg/kg	100.00	EPA 8015D
		DRO & ORO, Soil - ORO 03/12/2024 16:54		Not Detected	mg/kg	100.00	EPA 8015D
		SVOC, Soils - 2-methylnaphthalene 03/11/2024 15:45		Not Detected	mg/kg	0.003	EPA 8270
		SVOC, Soils - Anthracene 03/11/2024 15:45		Not Detected	mg/kg	0.00584	EPA 8270
		SVOC, Soils - Benzo(k)fluoranthene 03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Dibenzo(a,h)anthracene 03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Benzo(b)fluoranthene 03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Benz(a)anthracene 03/11/2024 15:45		Not Detected	mg/kg	0.00623	EPA 8270
		SVOC, Soils - Fluoranthene 03/11/2024 15:45		Not Detected	mg/kg	0.00336	EPA 8270
		SVOC, Soils - Acenaphthene 03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270

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Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
		SVOC, Soils - Fluorene					
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
		SVOC, Soils - Indeno(1,2,3-cd)pyrene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00455	EPA 8270
		SVOC, Soils - 1-methylnaphthalene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Naphthalene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00306	EPA 8270
		SVOC, Soils - Pyrene					
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
		SVOC, Soils - Chrysene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Benzo(a)pyrene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00593	EPA 8270
		VOC, Soils - 1,2,4-trimethylbenzene					
		03/12/2024 00:00		<0.00245	mg/kg	0.00245	EPA 8260
		VOC, Soils - 1,3,5-trimethylbenzene					
		03/12/2024 00:00		<0.00500	mg/kg	0.00500	EPA 8260
		VOC, Soils - Benzene					
		03/12/2024 00:00		Not Detected	mg/kg	0.00242	EPA 8260
		VOC, Soils - Toluene					
		03/12/2024 00:00		<0.00263	mg/kg	0.00263	EPA 8260
		VOC, Soils - Ethylbenzene					
		03/12/2024 00:00		Not Detected	mg/kg	0.00500	EPA 8260
		VOC, Soils - m&p- xylene					
		03/12/2024 00:00		<0.00427	mg/kg	0.00427	EPA 8260

**Division of Environmental Testing**

2115 N Scranton St Suite 3040A

Aurora, CO 80045

800-440-5184

**FINAL RESULTS REPORT****Report Date :** 3/12/2024**Report Time :** 21:16**REPORT TO**

1600 Broadway Ste 1050  
Denver, CO 80202  
303-929-9513  
ryan@petersonenergyoperating.com

**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
VOC, Soils - o-xylene							
		03/12/2024 00:00		<0.00227	mg/kg	0.00227	EPA 8260
VOC, Soils - Xylenes, total							
		03/12/2024 00:00		<0.00654	mg/kg	0.00654	EPA 8260
Gasoline Range Organics, Soil							
		03/12/2024 09:43		<0.26827	mg/kg	0.26827	EPA 8260
AA06355-1 S Pit E Wall S							
Collected : 03/04/2024 10:35							
SAR - Calcium							
		03/12/2024 13:22	10.00	0.182	mEq/L	0.000	EPA 3050B
SAR - Sodium							
		03/12/2024 13:22	10.00	42.521	mEq/L	0.000	EPA 3050B
SAR - Sodium Adsorption Ratio							
		03/12/2024 13:22	10.00	104.860		0.000	EPA 3050B
SAR - Magnesium							
		03/12/2024 13:22	10.00	0.147	mEq/L	0.000	EPA 3050B
Soil Conductivity							
		03/08/2024 19:07		6.490	nmhos/cm		USDA 60
AA06355-2 S Pit E Wall S							
Collected : 03/04/2024 10:35							
Total Metals, Soils - Selenium							
		03/12/2024 05:00	10.00	2.232	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Nickel							
		03/12/2024 05:00	10.00	10.006	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Copper							
		03/12/2024 05:00	10.00	8.756	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Zinc							
		03/12/2024 05:00	10.00	34.239	mg/kg	0.025	EPA 3050B



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Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
Total Metals, Soils - Arsenic							
03/12/2024	05:00	10.00		4.105	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Silver							
03/12/2024	05:00	10.00		<0.250 - RL1	mg/kg	0.250	EPA 3050B
Total Metals, Soils - Barium							
03/12/2024	05:00	10.00		192.322	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Lead							
03/12/2024	05:00	10.00		9.074	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Cadmium							
03/12/2024	05:00	10.00		0.146	mg/kg	0.001	EPA 3050B
Hot Water Soluble Boron							
03/07/2024	09:55			2.812	mg/kg	0.00005	Boron Hot Water Extraction
Chromium VI, Soil							
03/08/2024	10:16			<0.080	mg/kg	0.080	EPA 3060A & EPA 7199
pH, Soils							
03/07/2024	16:37			9.50	S.U.	0.01	EPA 9045D
pH, Soils Temperature							
03/07/2024	16:37			22.0	°C		
<b>AA06355-3 S Pit E Wall S</b>							
Collected : 03/04/2024 10:35							
DRO & ORO, Soil - ORO							
03/12/2024	16:54			Not Detected	mg/kg	100.00	EPA 8015D
DRO & ORO, Soil - DRO							
03/12/2024	16:54			Not Detected	mg/kg	100.00	EPA 8015D
SVOC, Soils - 1-methylnaphthalene							
03/11/2024	15:45			Not Detected	mg/kg	0.005	EPA 8270
SVOC, Soils - Anthracene							
03/11/2024	15:45			Not Detected	mg/kg	0.00584	EPA 8270



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Project Manager : Ryan Dornbos

Project Name : Marick A-Z

Project Number : 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
		SVOC, Soils - Benz(a)anthracene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00623	EPA 8270
		SVOC, Soils - Benzo(b)fluoranthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Benzo(k)fluoranthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Benzo(a)pyrene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00593	EPA 8270
		SVOC, Soils - Chrysene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Dibenzo(a,h)anthracene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Fluoranthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00336	EPA 8270
		SVOC, Soils - Acenaphthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
		SVOC, Soils - Indeno(1,2,3-cd)pyrene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00455	EPA 8270
		SVOC, Soils - 2-methylnaphthalene					
		03/11/2024 15:45		Not Detected	mg/kg	0.003	EPA 8270
		SVOC, Soils - Naphthalene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00306	EPA 8270
		SVOC, Soils - Pyrene					
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
		SVOC, Soils - Fluorene					
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270

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**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
VOC, Soils - 1,3,5-trimethylbenzene							
		03/12/2024 00:00		<0.00500	mg/kg	0.00500	EPA 8260
VOC, Soils - Xylenes, total							
		03/12/2024 00:00		<0.00654	mg/kg	0.00654	EPA 8260
VOC, Soils - o-xylene							
		03/12/2024 00:00		<0.00227	mg/kg	0.00227	EPA 8260
VOC, Soils - m&p- xylene							
		03/12/2024 00:00		<0.00427	mg/kg	0.00427	EPA 8260
VOC, Soils - Ethylbenzene							
		03/12/2024 00:00		<0.00500	mg/kg	0.00500	EPA 8260
VOC, Soils - Toluene							
		03/12/2024 00:00		<0.00263	mg/kg	0.00263	EPA 8260
VOC, Soils - Benzene							
		03/12/2024 00:00		Not Detected	mg/kg	0.00242	EPA 8260
VOC, Soils - 1,2,4-trimethylbenzene							
		03/12/2024 00:00		<0.00245	mg/kg	0.00245	EPA 8260
Gasoline Range Organics, Soil							
		03/12/2024 09:43		<0.26827	mg/kg	0.26827	EPA 8260
<b>AA06356-1 S Pit S Wall E</b>							
Collected : 03/04/2024 10:40							
SAR - Calcium							
		03/12/2024 13:22	10.00	1.050	mEq/L	0.000	EPA 3050B
SAR - Sodium							
		03/12/2024 13:22	10.00	35.539	mEq/L	0.000	EPA 3050B
SAR - Sodium Adsorption Ratio							
		03/12/2024 13:22	10.00	43.788		0.000	EPA 3050B
SAR - Magnesium							
		03/12/2024 13:22	10.00	0.268	mEq/L	0.000	EPA 3050B



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Project Manager : Ryan Dornbos

Project Name : Marick A-Z

Project Number : 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
Soil Conductivity							
		03/08/2024 19:07		5.550	nmhos/cm		USDA 60
AA06356-2 S Pit S Wall E							
Collected : 03/04/2024 10:40							
Total Metals, Soils - Arsenic							
		03/12/2024 05:07 10.00		4.619	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Lead							
		03/12/2024 05:07 10.00		11.109	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Barium							
		03/12/2024 05:07 10.00		209.902	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Cadmium							
		03/12/2024 05:07 10.00		0.192	mg/kg	0.001	EPA 3050B
Total Metals, Soils - Silver							
		03/12/2024 05:07 10.00		<0.250 - RL1	mg/kg	0.250	EPA 3050B
Total Metals, Soils - Selenium							
		03/12/2024 05:07 10.00		3.076	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Zinc							
		03/12/2024 05:07 10.00		44.156	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Copper							
		03/12/2024 05:07 10.00		11.073	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Nickel							
		03/12/2024 05:07 10.00		11.810	mg/kg	0.025	EPA 3050B
Hot Water Soluble Boron							
		03/07/2024 09:55		3.538	mg/kg	0.00005	Boron Hot Water Extraction
Chromium VI, Soil							
		03/08/2024 10:16		<0.080	mg/kg	0.080	EPA 3060A & EPA 7199
pH, Soils							
		03/07/2024 16:37		8.93	S.U.	0.01	EPA 9045D

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ryan@petersonenergryoperating.com

**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
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pH, Soils Temperature

03/07/2024 16:37

21.9

°C

**AA06356-3** S Pit S Wall E

Collected : 03/04/2024 10:40

DRO &amp; ORO, Soil - DRO

03/12/2024 16:54

Not Detected

mg/kg

100.00

EPA 8015D

DRO &amp; ORO, Soil - ORO

03/12/2024 16:54

Not Detected

mg/kg

100.00

EPA 8015D

SVOC, Soils - Benzo(k)fluoranthene

03/11/2024 15:45

Not Detected

mg/kg

0.005

EPA 8270

SVOC, Soils - Pyrene

03/11/2024 15:45

Not Detected

mg/kg

0.01

EPA 8270

SVOC, Soils - Naphthalene

03/11/2024 15:45

Not Detected

mg/kg

0.00306

EPA 8270

SVOC, Soils - 2-methylnaphthalene

03/11/2024 15:45

Not Detected

mg/kg

0.003

EPA 8270

SVOC, Soils - 1-methylnaphthalene

03/11/2024 15:45

Not Detected

mg/kg

0.005

EPA 8270

SVOC, Soils - Fluoranthene

03/11/2024 15:45

Not Detected

mg/kg

0.00336

EPA 8270

SVOC, Soils - Fluorene

03/11/2024 15:45

Not Detected

mg/kg

0.01

EPA 8270

SVOC, Soils - Dibenzo(a,h)anthracene

03/11/2024 15:45

Not Detected

mg/kg

0.005

EPA 8270

SVOC, Soils - Chrysene

03/11/2024 15:45

Not Detected

mg/kg

0.005

EPA 8270

SVOC, Soils - Benzo(a)pyrene

03/11/2024 15:45

Not Detected

mg/kg

0.00593

EPA 8270



## Division of Environmental Testing

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Project Manager : Ryan Dornbos

Project Name : Marick A-Z

Project Number : 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
		SVOC, Soils - Benz(a)anthracene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00623	EPA 8270
		SVOC, Soils - Anthracene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00584	EPA 8270
		SVOC, Soils - Acenaphthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
		SVOC, Soils - Benzo(b)fluoranthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Indeno(1,2,3-cd)pyrene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00455	EPA 8270
		VOC, Soils - o-xylene					
		03/12/2024 00:00		Not Detected	mg/kg	0.00227	EPA 8260
		VOC, Soils - Benzene					
		03/12/2024 00:00		Not Detected	mg/kg	0.00242	EPA 8260
		VOC, Soils - Toluene					
		03/12/2024 00:00		<0.00263	mg/kg	0.00263	EPA 8260
		VOC, Soils - m&p- xylene					
		03/12/2024 00:00		<0.00427	mg/kg	0.00427	EPA 8260
		VOC, Soils - Xylenes, total					
		03/12/2024 00:00		<0.00654	mg/kg	0.00654	EPA 8260
		VOC, Soils - 1,2,4-trimethylbenzene					
		03/12/2024 00:00		<0.00245	mg/kg	0.00245	EPA 8260
		VOC, Soils - 1,3,5-trimethylbenzene					
		03/12/2024 00:00		Not Detected	mg/kg	0.00500	EPA 8260
		VOC, Soils - Ethylbenzene					
		03/12/2024 00:00		Not Detected	mg/kg	0.00500	EPA 8260

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Sample ID	Customer ID	Analyte Name Analysis Start		Dilution	Result	Units	Reporting Limit	Method Reference
AA06357-1	S Pit S Wall W Collected : 03/04/2024 10:45	Gasoline Range Organics, Soil						
		03/12/2024	09:43		<0.26827	mg/kg	0.26827	EPA 8260
		SAR - Sodium						
		03/12/2024	13:22	10.00	44.996	mEq/L	0.000	EPA 3050B
		SAR - Sodium Adsorption Ratio						
		03/12/2024	13:22	10.00	64.671		0.000	EPA 3050B
		SAR - Calcium						
		03/12/2024	13:22	10.00	0.743	mEq/L	0.000	EPA 3050B
AA06357-2	S Pit S Wall W Collected : 03/04/2024 10:45	SAR - Magnesium						
		03/12/2024	13:22	10.00	0.225	mEq/L	0.000	EPA 3050B
		Soil Conductivity						
		03/08/2024	19:07		6.780	nmhos/cn		USDA 60
		Total Metals, Soils - Cadmium						
		03/12/2024	05:13	10.00	0.191	mg/kg	0.001	EPA 3050B
		Total Metals, Soils - Arsenic						
		03/12/2024	05:13	10.00	4.842	mg/kg	0.025	EPA 3050B
		Total Metals, Soils - Zinc						
		03/12/2024	05:13	10.00	43.159	mg/kg	0.025	EPA 3050B
		Total Metals, Soils - Copper						
		03/12/2024	05:13	10.00	10.405	mg/kg	0.025	EPA 3050B
		Total Metals, Soils - Nickel						
		03/12/2024	05:13	10.00	11.578	mg/kg	0.025	EPA 3050B
		Total Metals, Soils - Silver						
		03/12/2024	05:13	10.00	<0.250 - RL1	mg/kg	0.250	EPA 3050B



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Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
Total Metals, Soils - Selenium							
		03/12/2024 05:13	10.00	3.556	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Barium							
		03/12/2024 05:13	10.00	199.014	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Lead							
		03/12/2024 05:13	10.00	11.766	mg/kg	0.025	EPA 3050B
Hot Water Soluble Boron							
		03/07/2024 09:55		3.036	mg/kg	0.00005	Boron Hot Water Extraction
Chromium VI, Soil							
		03/08/2024 10:16		<0.080	mg/kg	0.080	EPA 3060A & EPA 7199
pH, Soils							
		03/07/2024 16:37		9.09	S.U.	0.01	EPA 9045D
pH, Soils Temperature							
		03/07/2024 16:37		22.2	°C		
AA06357-3 S Pit S Wall W							
Collected : 03/04/2024 10:45							
DRO & ORO, Soil - DRO							
		03/12/2024 16:54		Not Detected	mg/kg	100.00	EPA 8015D
DRO & ORO, Soil - ORO							
		03/12/2024 16:54		Not Detected	mg/kg	100.00	EPA 8015D
SVOC, Soils - Fluorene							
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
SVOC, Soils - Benzo(b)fluoranthene							
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
SVOC, Soils - Benzo(k)fluoranthene							
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
SVOC, Soils - Benzo(a)pyrene							
		03/11/2024 15:45		Not Detected	mg/kg	0.00593	EPA 8270

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Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
		SVOC, Soils - Chrysene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Pyrene					
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
		SVOC, Soils - Fluoranthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00336	EPA 8270
		SVOC, Soils - Naphthalene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00306	EPA 8270
		SVOC, Soils - Indeno(1,2,3-cd)pyrene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00455	EPA 8270
		SVOC, Soils - 1-methylnaphthalene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - 2-methylnaphthalene					
		03/11/2024 15:45		Not Detected	mg/kg	0.003	EPA 8270
		SVOC, Soils - Benz(a)anthracene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00623	EPA 8270
		SVOC, Soils - Dibenzo(a,h)anthracene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Acenaphthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
		SVOC, Soils - Anthracene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00584	EPA 8270
		VOC, Soils - 1,3,5-trimethylbenzene					
		03/12/2024 00:00		Not Detected	mg/kg	0.00500	EPA 8260
		VOC, Soils - Benzene					
		03/12/2024 00:00		Not Detected	mg/kg	0.00242	EPA 8260

**Division of Environmental Testing**

2115 N Scranton St Suite 3040A

Aurora, CO 80045

800-440-5184

**FINAL RESULTS REPORT****Report Date :** 3/12/2024**Report Time :** 21:16**REPORT TO**

1600 Broadway Ste 1050  
Denver, CO 80202  
303-929-9513  
ryan@petersonenergyoperating.com

**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
VOC, Soils - Toluene							
		03/12/2024 00:00		<0.00263	mg/kg	0.00263	EPA 8260
VOC, Soils - Ethylbenzene							
		03/12/2024 00:00		Not Detected	mg/kg	0.00500	EPA 8260
VOC, Soils - m&p- xylene							
		03/12/2024 00:00		<0.00427	mg/kg	0.00427	EPA 8260
VOC, Soils - o-xylene							
		03/12/2024 00:00		Not Detected	mg/kg	0.00227	EPA 8260
VOC, Soils - Xylenes, total							
		03/12/2024 00:00		<0.00654	mg/kg	0.00654	EPA 8260
VOC, Soils - 1,2,4-trimethylbenzene							
		03/12/2024 00:00		<0.00245	mg/kg	0.00245	EPA 8260
Gasoline Range Organics, Soil							
		03/12/2024 09:43		<0.26827	mg/kg	0.26827	EPA 8260
<b>AA06358-1</b> S Pit W Wall S							
Collected : 03/04/2024 10:50							
SAR - Sodium							
		03/12/2024 13:22	10.00	52.273	mEq/L	0.000	EPA 3050B
SAR - Sodium Adsorption Ratio							
		03/12/2024 13:22	10.00	82.960		0.000	EPA 3050B
SAR - Calcium							
		03/12/2024 13:22	10.00	0.591	mEq/L	0.000	EPA 3050B
SAR - Magnesium							
		03/12/2024 13:22	10.00	0.203	mEq/L	0.000	EPA 3050B
Soil Conductivity							
		03/08/2024 19:07		9.210	nmhos/cn		USDA 60
<b>AA06358-2</b> S Pit W Wall S							
Collected : 03/04/2024 10:50							

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1600 Broadway Ste 1050  
Denver, CO 80202  
303-929-9513  
ryan@petersonenergryoperating.com

**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
Total Metals, Soils - Silver							
03/12/2024	05:20	10.00		<0.250 - RL1	mg/kg	0.250	EPA 3050B
Total Metals, Soils - Zinc							
03/12/2024	05:20	10.00		45.444	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Nickel							
03/12/2024	05:20	10.00		10.547	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Copper							
03/12/2024	05:20	10.00		9.343	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Selenium							
03/12/2024	05:20	10.00		4.021	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Cadmium							
03/12/2024	05:20	10.00		0.195	mg/kg	0.001	EPA 3050B
Total Metals, Soils - Barium							
03/12/2024	05:20	10.00		160.074	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Lead							
03/12/2024	05:20	10.00		12.141	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Arsenic							
03/12/2024	05:20	10.00		3.663	mg/kg	0.025	EPA 3050B
Hot Water Soluble Boron							
03/07/2024	09:55			2.863	mg/kg	0.00005	Boron Hot Water Extraction
Chromium VI, Soil							
03/08/2024	10:16			<0.080	mg/kg	0.080	EPA 3060A & EPA 7199
pH, Soils							
03/07/2024	16:37			8.79	S.U.	0.01	EPA 9045D
pH, Soils Temperature							
03/07/2024	16:37			22.3	°C		

**AA06358-3** S Pit W Wall S

Collected : 03/04/2024 10:50

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Denver, CO 80202

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**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
		DRO & ORO, Soil - DRO					
		03/12/2024 16:54		Not Detected	mg/kg	100.00	EPA 8015D
		DRO & ORO, Soil - ORO					
		03/12/2024 16:54		Not Detected	mg/kg	100.00	EPA 8015D
		SVOC, Soils - Indeno(1,2,3-cd)pyrene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00455	EPA 8270
		SVOC, Soils - Benzo(b)fluoranthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Benzo(k)fluoranthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Benzo(a)pyrene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00593	EPA 8270
		SVOC, Soils - Chrysene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Dibenzo(a,h)anthracene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Fluorene					
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
		SVOC, Soils - 1-methylnaphthalene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Acenaphthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
		SVOC, Soils - 2-methylnaphthalene					
		03/11/2024 15:45		Not Detected	mg/kg	0.003	EPA 8270
		SVOC, Soils - Naphthalene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00306	EPA 8270

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**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
		SVOC, Soils - Pyrene					
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
		SVOC, Soils - Fluoranthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00336	EPA 8270
		SVOC, Soils - Anthracene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00584	EPA 8270
		SVOC, Soils - Benz(a)anthracene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00623	EPA 8270
		VOC, Soils - 1,2,4-trimethylbenzene					
		03/12/2024 00:00		<0.00245	mg/kg	0.00245	EPA 8260
		VOC, Soils - Xylenes, total					
		03/12/2024 00:00		<0.00654	mg/kg	0.00654	EPA 8260
		VOC, Soils - o-xylene					
		03/12/2024 00:00		<0.00227	mg/kg	0.00227	EPA 8260
		VOC, Soils - m&p- xylene					
		03/12/2024 00:00		<0.00427	mg/kg	0.00427	EPA 8260
		VOC, Soils - Ethylbenzene					
		03/12/2024 00:00		<0.00500	mg/kg	0.00500	EPA 8260
		VOC, Soils - Toluene					
		03/12/2024 00:00		<0.00263	mg/kg	0.00263	EPA 8260
		VOC, Soils - Benzene					
		03/12/2024 00:00		Not Detected	mg/kg	0.00242	EPA 8260
		VOC, Soils - 1,3,5-trimethylbenzene					
		03/12/2024 00:00		<0.00500	mg/kg	0.00500	EPA 8260
		Gasoline Range Organics, Soil					
		03/12/2024 09:43		<0.26827	mg/kg	0.26827	EPA 8260

**AA06359-1** S Pit W Wall N

Collected : 03/04/2024 10:55

**Division of Environmental Testing**

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1600 Broadway Ste 1050  
Denver, CO 80202  
303-929-9513  
ryan@petersonenergyoperating.com

**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
SAR - Magnesium							
		03/12/2024 13:22	10.00	0.089	mEq/L	0.000	EPA 3050B
SAR - Calcium							
		03/12/2024 13:22	10.00	0.102	mEq/L	0.000	EPA 3050B
SAR - Sodium Adsorption Ratio							
		03/12/2024 13:22	10.00	102.467		0.000	EPA 3050B
SAR - Sodium							
		03/12/2024 13:22	10.00	31.627	mEq/L	0.000	EPA 3050B
Soil Conductivity							
		03/08/2024 19:07		5.650	nmhos/cn		USDA 60
AA06359-2 S Pit W Wall N							
Collected : 03/04/2024 10:55							
Total Metals, Soils - Zinc							
		03/12/2024 05:39	10.00	37.663	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Arsenic							
		03/12/2024 05:39	10.00	3.927	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Nickel							
		03/12/2024 05:39	10.00	9.747	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Selenium							
		03/12/2024 05:39	10.00	3.144	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Silver							
		03/12/2024 05:39	10.00	<0.250 - RL1	mg/kg	0.250	EPA 3050B
Total Metals, Soils - Copper							
		03/12/2024 05:39	10.00	7.590	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Barium							
		03/12/2024 05:39	10.00	186.216	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Lead							
		03/12/2024 05:39	10.00	10.873	mg/kg	0.025	EPA 3050B

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**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
Total Metals, Soils - Cadmium							
		03/12/2024 05:39	10.00	0.166	mg/kg	0.001	EPA 3050B
Hot Water Soluble Boron							
		03/07/2024 09:55		2.906	mg/kg	0.00005	Boron Hot Water Extraction
Chromium VI, Soil							
		03/08/2024 10:16		<0.080	mg/kg	0.080	EPA 3060A & EPA 7199
pH, Soils							
		03/07/2024 16:37		9.21	S.U.	0.01	EPA 9045D
pH, Soils Temperature							
		03/07/2024 16:37		22.2	°C		
AA06359-3 S Pit W Wall N							
Collected : 03/04/2024 10:55							
DRO & ORO, Soil - ORO							
		03/12/2024 18:05		Not Detected	mg/kg	100.00	EPA 8015D
DRO & ORO, Soil - DRO							
		03/12/2024 18:05		Not Detected	mg/kg	100.00	EPA 8015D
SVOC, Soils - Indeno(1,2,3-cd)pyrene							
		03/11/2024 15:45		Not Detected	mg/kg	0.00455	EPA 8270
SVOC, Soils - Benzo(b)fluoranthene							
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
SVOC, Soils - Benzo(a)pyrene							
		03/11/2024 15:45		Not Detected	mg/kg	0.00593	EPA 8270
SVOC, Soils - Chrysene							
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
SVOC, Soils - Dibenzo(a,h)anthracene							
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
SVOC, Soils - Fluorene							
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270





## Division of Environmental Testing

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ryan@petersonenergyoperating.com

Project Manager : Ryan Dornbos

Project Name : Marick A-Z

Project Number : 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
		SVOC, Soils - Anthracene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00584	EPA 8270
		SVOC, Soils - 1-methylnaphthalene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Pyrene					
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
		SVOC, Soils - Naphthalene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00306	EPA 8270
		SVOC, Soils - 2-methylnaphthalene					
		03/11/2024 15:45		Not Detected	mg/kg	0.003	EPA 8270
		SVOC, Soils - Benz(a)anthracene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00623	EPA 8270
		SVOC, Soils - Fluoranthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.00336	EPA 8270
		SVOC, Soils - Benzo(k)fluoranthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.005	EPA 8270
		SVOC, Soils - Acenaphthene					
		03/11/2024 15:45		Not Detected	mg/kg	0.01	EPA 8270
		VOC, Soils - Toluene					
		03/12/2024 00:00		<0.00263	mg/kg	0.00263	EPA 8260
		VOC, Soils - Benzene					
		03/12/2024 00:00		Not Detected	mg/kg	0.00242	EPA 8260
		VOC, Soils - Ethylbenzene					
		03/12/2024 00:00		<0.00500	mg/kg	0.00500	EPA 8260
		VOC, Soils - m&p- xylene					
		03/12/2024 00:00		<0.00427	mg/kg	0.00427	EPA 8260

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Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
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VOC, Soils - o-xylene

03/12/2024 00:00

Not Detected

mg/kg 0.00227

EPA 8260

VOC, Soils - Xylenes, total

03/12/2024 00:00

&lt;0.00654

mg/kg 0.00654

EPA 8260

VOC, Soils - 1,2,4-trimethylbenzene

03/12/2024 00:00

&lt;0.00245

mg/kg 0.00245

EPA 8260

VOC, Soils - 1,3,5-trimethylbenzene

03/12/2024 00:00

Not Detected

mg/kg 0.00500

EPA 8260

Gasoline Range Organics, Soil

03/12/2024 09:43

&lt;0.26827

mg/kg 0.26827

EPA 8260

**AA06360-1** Background 1

Collected : 03/04/2024 11:00

SAR - Sodium Adsorption Ratio

03/12/2024 13:22 10.00

0.319

0.000

EPA 3050B

SAR - Sodium

03/12/2024 13:22 10.00

0.545

mEq/L 0.000

EPA 3050B

SAR - Magnesium

03/12/2024 13:22 10.00

0.965

mEq/L 0.000

EPA 3050B

SAR - Calcium

03/12/2024 13:22 10.00

4.870

mEq/L 0.000

EPA 3050B

Soil Conductivity

03/08/2024 19:07

0.837

nmhos/cm

USDA 60

**AA06360-2** Background 1

Collected : 03/04/2024 11:00

Hot Water Soluble Boron

03/07/2024 09:55

0.582

mg/kg 0.00005

Boron Hot Water  
Extraction

pH, Soils

03/07/2024 16:37

7.78

S.U. 0.01

EPA 9045D

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**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
pH, Soils Temperature							
		03/07/2024 16:37		22.2	°C		
AA06360-3 Background 1							
Collected : 03/04/2024 11:00							
Total Metals, Soils - Silver							
		03/12/2024 05:46 10.00		<0.250 - RL1	mg/kg	0.250	EPA 3050B
Total Metals, Soils - Cadmium							
		03/12/2024 05:46 10.00		0.281	mg/kg	0.001	EPA 3050B
Total Metals, Soils - Lead							
		03/12/2024 05:46 10.00		14.698	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Barium							
		03/12/2024 05:46 10.00		166.949	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Zinc							
		03/12/2024 05:46 10.00		46.538	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Copper							
		03/12/2024 05:46 10.00		10.782	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Nickel							
		03/12/2024 05:46 10.00		11.167	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Arsenic							
		03/12/2024 05:46 10.00		5.013	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Selenium							
		03/12/2024 05:46 10.00		3.865	mg/kg	0.025	EPA 3050B
Chromium VI, Soil							
		03/08/2024 10:16		0.097	mg/kg	0.080	EPA 3060A & EPA 7199
AA06361-1 Background 2							
Collected : 03/04/2024 11:05							
SAR - Sodium Adsorption Ratio							
		03/12/2024 13:22 10.00		0.156		0.000	EPA 3050B

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**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
SAR - Calcium							
		03/12/2024 13:22	10.00	4.323	mEq/L	0.000	EPA 3050B
SAR - Magnesium							
		03/12/2024 13:22	10.00	1.427	mEq/L	0.000	EPA 3050B
SAR - Sodium							
		03/12/2024 13:22	10.00	0.264	mEq/L	0.000	EPA 3050B
Soil Conductivity							
		03/08/2024 19:07		0.701	nmhos/cn		USDA 60
AA06361-2 Background 2							
Collected : 03/04/2024 11:05							
Hot Water Soluble Boron							
		03/07/2024 09:55		0.622	mg/kg	0.00005	Boron Hot Water Extraction
pH, Soils							
		03/07/2024 16:37		7.47	S.U.	0.01	EPA 9045D
pH, Soils Temperature							
		03/07/2024 16:37		22.0	°C		
AA06361-3 Background 2							
Collected : 03/04/2024 11:05							
Total Metals, Soils - Nickel							
		03/12/2024 05:52	10.00	10.482	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Copper							
		03/12/2024 05:52	10.00	10.526	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Zinc							
		03/12/2024 05:52	10.00	45.791	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Arsenic							
		03/12/2024 05:52	10.00	5.183	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Selenium							
		03/12/2024 05:52	10.00	3.037	mg/kg	0.025	EPA 3050B



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### REPORT TO

1600 Broadway Ste 1050

Denver, CO 80202

303-929-9513

ryan@petersonenergryoperating.com

Project Manager : Ryan Dornbos

Project Name : Marick A-Z

Project Number : 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
Total Metals, Soils - Silver							
03/12/2024	05:52	10.00		<0.250 - RL1	mg/kg	0.250	EPA 3050B
Total Metals, Soils - Cadmium							
03/12/2024	05:52	10.00		0.246	mg/kg	0.001	EPA 3050B
Total Metals, Soils - Barium							
03/12/2024	05:52	10.00		148.530	mg/kg	0.025	EPA 3050B
Total Metals, Soils - Lead							
03/12/2024	05:52	10.00		13.842	mg/kg	0.025	EPA 3050B
Chromium VI, Soil							
03/08/2024	10:16			0.085	mg/kg	0.080	EPA 3060A & EPA 7199



## Division of Environmental Testing

2115 N Scranton St Suite 3040A

Aurora, CO 80045

800-440-5184

Report Date : 3/12/2024

Report Time : 21:16

## FINAL RESULTS REPORT

### REPORT TO

1600 Broadway Ste 1050  
Denver, CO 80202  
303-929-9513  
ryan@petersonenergyoperating.com

Project Manager : Ryan Dornbos

Project Name : Marick A-Z

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Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
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## QC Report

### BORON-2238

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%Rec	% REC Limits	RPD	RPD Limit
DUP	AA06345	1.881	0.00005	mg/kg		1.829		2.8032	-15 - 15
MB	AA06429	0.011		mg/kg					
LCS	AA06430	0.821		mg/kg	1.000	82.100	80 - 120		
LCS	AA06431	9.617		mg/kg	9.000	106.86	80 - 120		

### CHROM\_VI\_SOIL-2223

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%Rec	% REC Limits	RPD	RPD Limit
DUP	AA06345	0.082	0.080	mg/kg		<0.080			
MB	AA06398	0.001		mg/kg					
LCS	AA06400	0.041		mg/kg	0.040	102.50			
LCS	AA06401	0.042		mg/kg	0.040	105.00			

### GRO\_SOIL-2269

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%Rec	% REC Limits	RPD	RPD Limit
DUP	AA06345	1.0442759	0.26827	mg/kg		<0.26827		18.852	
Matrix Spike	AA06345	1.2616308		mg/kg	2.150	<0.26827	58.681		
MB	AA06504	<0.042		mg/kg					
LCS	AA06505	5.3826191		mg/kg	4.300	125.18			
LCS	AA06506	3.2482332		mg/kg	4.300	75.540			

### PH\_S-2232

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%Rec	% REC Limits	RPD	RPD Limit
DUP	AA06345	8.01	0.01	S.U.		7.97		0.5006257	-5 - 5
LCS	AA06411	6.93	0.01	S.U.	6.86	101.02	95 - 105		
LCS	AA06412	6.90	0.01	S.U.	6.86	100.58	95 - 105		

### PH\_S-2249

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%Rec	% REC Limits	RPD	RPD Limit
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**Report Date :** 3/12/2024**Report Time :** 21:16**FINAL RESULTS REPORT****REPORT TO**

1600 Broadway Ste 1050

Denver, CO 80202

303-929-9513

ryan@petersonenergyoperating.com

**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID		Analyte Name Analysis Start		Dilution	Result	Units	Reporting Limit	Method Reference
DUP	AA06354	9.55	0.01	S.U.		9.56		0.1046572	-5 - 5
LCS	AA06453	6.89	0.01	S.U.	6.86	100.44	95 - 105		
LCS	AA06454	6.86	0.01	S.U.	6.86	100.00	95 - 105		
<b>SOIL_CONDUCTIVITY-2260</b>									
		Reporting		Spike	Source		% REC		RPD
Analyte	Result	Limit		Units	Level	Result	%Rec	Limits	RPD
DUP	AA06355	6.960		mmhos/cm		6.490		6.9888	
LCS	AA06485	10230		µS/cm	10000	102.30			
LCS	AA06486	10140		µS/cm	10000	101.40			
<b>SOIL_CONDUCTIVITY-2287</b>									
		Reporting		Spike	Source		% REC		RPD
Analyte	Result	Limit		Units	Level	Result	%Rec	Limits	RPD
DUP	AA06362	92.8		µS/cm		90.5		2.5095	
LCS	AA06541	10090		µS/cm	10000	100.90			
LCS	AA06542	10360		µS/cm	10000	103.60			

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**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
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**QC Report****DRO\_ORO\_SOIL-2305**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%Rec	% REC Limits	RPD	RPD Limit
<b>AA06354</b>									
<b>DRO</b>									
DUP	438.521				Not Detected			4.2487	
Matrix Spike	420.277			350	Not Detected	120.08			
<b>ORO</b>									
DUP	405.587				Not Detected			17.958	
Matrix Spike	338.752			350	Not Detected	96.786			
<b>AA06578</b>									
<b>DRO</b>									
MB	Not Detected								
<b>ORO</b>									
MB	Not Detected								
<b>AA06579</b>									
<b>DRO</b>									
LCS	395.149			350		112.90			
<b>ORO</b>									
LCS	296.571			350		84.735			
<b>AA06580</b>									
<b>DRO</b>									
LCS	410.15			350		117.19			
<b>ORO</b>									
LCS	298.88			350		85.394			
<b>Arsenic</b>									
DUP	4.173	0.025	mg/kg		4.311			3.2532	0 - 15
Matrix Spike	13.649		mg/kg	10	4.311	93.380			



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**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
<b>Barium</b>							
DUP	148.779	0.025	mg/kg	148.533		0.16548	0 - 15
Matrix Spike	178.998		mg/kg	10	148.533	304.65	
<b>Cadmium</b>							
DUP	0.193	0.001	mg/kg		0.187	3.1579	0 - 15
Matrix Spike	10.482		mg/kg	10	0.187	102.95	
<b>Copper</b>							
DUP	8.779	0.025	mg/kg		9.023	2.7413	0 - 15
Matrix Spike	19.543		mg/kg	10	9.023	105.20	
<b>Lead</b>							
DUP	10.119	0.025	mg/kg		10.382	2.5657	0 - 15
Matrix Spike	20.261		mg/kg	10	10.382	98.790	
<b>Nickel</b>							
DUP	8.980	0.025	mg/kg		9.258	3.0486	0 - 15
Matrix Spike	20.955		mg/kg	10	9.258	116.97	
<b>Selenium</b>							
DUP	2.059	0.025	mg/kg		2.192	6.2574	0 - 15
Matrix Spike	15.454		mg/kg	10	2.192	132.62	
<b>Silver</b>							
DUP	<0.250	0.250	mg/kg		<0.250		
Matrix Spike	9.771		mg/kg	10	<0.250	97.710	
<b>Zinc</b>							
DUP	38.235	0.025	mg/kg		35.884	6.3439	0 - 15
Matrix Spike	57.393		mg/kg	10	35.884	215.09	
<b>AA06417</b>							
<b>Arsenic</b>							
MB	0.000		mg/kg				
<b>Barium</b>							
MB	0.000		mg/kg				
<b>Cadmium</b>							



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Project Name : Marick A-Z

Project Number : 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
MB	0.000	mg/kg					
<b>Copper</b>							
MB	0.000	mg/kg					
<b>Lead</b>							
MB	0.000	mg/kg					
<b>Nickel</b>							
MB	0.000	mg/kg					
<b>Selenium</b>							
MB	0.000	mg/kg					
<b>Silver</b>							
MB	0.002	mg/kg					
<b>Zinc</b>							
MB	0.000	mg/kg					
<b>AA06419</b>							
<b>Arsenic</b>							
LCS	0.088	mg/kg	0.090	97.778	80 - 120		
<b>Barium</b>							
LCS	0.092	mg/kg	0.090	102.22	80 - 120		
<b>Cadmium</b>							
LCS	0.091	mg/kg	0.090	101.11	80 - 120		
<b>Copper</b>							
LCS	0.090	mg/kg	0.090	100.00	80 - 120		
<b>Lead</b>							
LCS	0.092	mg/kg	0.090	102.22	80 - 120		
<b>Nickel</b>							
LCS	0.091	mg/kg	0.090	101.11	80 - 120		
<b>Selenium</b>							
LCS	0.093	mg/kg	0.090	103.33	80 - 120		
<b>Silver</b>							
LCS	0.094	mg/kg	0.090	104.44	80 - 120		

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**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
<b>Zinc</b>							
LCS	0.090	mg/kg	0.090	100.00	80 - 120		
<b>AA06420</b>							
<b>Arsenic</b>							
LCS	0.096	mg/kg	0.090	106.67	80 - 120		
<b>Barium</b>							
LCS	0.093	mg/kg	0.090	103.33	80 - 120		
<b>Cadmium</b>							
LCS	0.091	mg/kg	0.090	101.11	80 - 120		
<b>Copper</b>							
LCS	0.096	mg/kg	0.090	106.67	80 - 120		
<b>Lead</b>							
LCS	0.095	mg/kg	0.090	105.56	80 - 120		
<b>Nickel</b>							
LCS	0.096	mg/kg	0.090	106.67	80 - 120		
<b>Selenium</b>							
LCS	0.095	mg/kg	0.090	105.56	80 - 120		
<b>Silver</b>							
LCS	0.098	mg/kg	0.090	108.89	80 - 120		
<b>Zinc</b>							
LCS	0.095	mg/kg	0.090	105.56	80 - 120		
<b>Calcium</b>							
DUP	0.204	mEq/L	0.204	0.182		11.399	
<b>Magnesium</b>							
DUP	0.163	mEq/L	0.163	0.147		10.323	
<b>Sodium</b>							
DUP	46.625	mEq/L	46.625	42.521		9.2074	
<b>AA06478</b>							
<b>Calcium</b>							
MB	-0.442	mEq/L	-0.442				

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**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
<b>Magnesium</b>							
MB	0.028	mEq/L	0.028				
<b>Sodium</b>							
MB	0.049	mEq/L	0.049				
<b>AA06479</b>							
<b>Calcium</b>							
LCS	10.195	ppm	10	101.95			
<b>Magnesium</b>							
LCS	10.209	ppm	10	102.09			
<b>Sodium</b>							
LCS	9.94	ppm	10	99.400			
<b>AA06480</b>							
<b>Calcium</b>							
LCS	519.158	ppm	500	103.83			
<b>Magnesium</b>							
LCS	474.776	ppm	500	94.955			
<b>Sodium</b>							
LCS	464.602	ppm	500	92.920			
<b>1-methylnaphthalene</b>							
DUP	381.206	mg/kg	gt Detectd			8.2609	
Matrix Spike	350.964	mg/kg	300	gt Detectd	116.99		
<b>2-methylnaphthalene</b>							
DUP	388.986	mg/kg	gt Detectd			7.4686	
Matrix Spike	360.980	mg/kg	300	gt Detectd	120.33		
<b>Acenaphthene</b>							
DUP	361.299	mg/kg	gt Detectd			6.7360	
Matrix Spike	337.755	mg/kg	300	gt Detectd	112.58		
<b>Anthracene</b>							
DUP	312.442	mg/kg	gt Detectd			11.992	
Matrix Spike	352.301	mg/kg	300	gt Detectd	117.43		



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Project Manager : Ryan Dornbos

Project Name : Marick A-Z

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Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
<b>Benz(a)anthracene</b>							
DUP	325.666	mg/kg		nt Detecte		1.2605	
Matrix Spike	329.797	mg/kg	300	nt Detecte	109.93		
<b>Benzo(a)pyrene</b>							
DUP	266.106	mg/kg		nt Detecte		0.31442	
Matrix Spike	266.944	mg/kg	300	nt Detecte	88.981		
<b>Benzo(b)fluoranthene</b>							
DUP	272.131	mg/kg		nt Detecte		0.36167	
Matrix Spike	273.117	mg/kg	300	nt Detecte	91.039		
<b>Benzo(k)fluoranthene</b>							
DUP	320.601	mg/kg		nt Detecte		5.4786	
Matrix Spike	338.660	mg/kg	300	nt Detecte	112.89		
<b>Chrysene</b>							
DUP	308.277	mg/kg		nt Detecte		3.7245	
Matrix Spike	297.005	mg/kg	300	nt Detecte	99.002		
<b>Dibenzo(a,h)anthracene</b>							
DUP	295.414	mg/kg		nt Detecte		0.34961	
Matrix Spike	294.383	mg/kg	300	nt Detecte	98.128		
<b>Fluoranthene</b>							
DUP	285.180	mg/kg		nt Detecte		6.4690	
Matrix Spike	304.245	mg/kg	300	nt Detecte	101.42		
<b>Fluorene</b>							
DUP	340.204	mg/kg		nt Detecte		4.6685	
Matrix Spike	324.684	mg/kg	300	nt Detecte	108.23		
<b>Indeno(1,2,3-cd)pyrene</b>							
DUP	305.830	mg/kg		nt Detecte		0.095432	
Matrix Spike	306.122	mg/kg	300	nt Detecte	102.04		
<b>Naphthalene</b>							
DUP	381.843	mg/kg		nt Detecte		9.5894	
Matrix Spike	346.902	mg/kg	300	nt Detecte	115.63		



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Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
<b>Pyrene</b>							
DUP	271.716	mg/kg	at Detecte			6.5256	
Matrix Spike	290.045	mg/kg	300 at Detecte	96.682			
<b>AA06533</b>							
<b>1-methylnaphthalene</b>							
MB	Not Detected	mg/kg					
<b>2-methylnaphthalene</b>							
MB	Not Detected	mg/kg					
<b>Acenaphthene</b>							
MB	Not Detected	mg/kg					
<b>Anthracene</b>							
MB	Not Detected	mg/kg					
<b>Benz(a)anthracene</b>							
MB	Not Detected	mg/kg					
<b>Benzo(a)pyrene</b>							
MB	Not Detected	mg/kg					
<b>Benzo(b)fluoranthene</b>							
MB	Not Detected	mg/kg					
<b>Benzo(k)fluoranthene</b>							
MB	Not Detected	mg/kg					
<b>Chrysene</b>							
MB	Not Detected	mg/kg					
<b>Dibenzo(a,h)anthracene</b>							
MB	Not Detected	mg/kg					
<b>Fluoranthene</b>							
MB	Not Detected	mg/kg					
<b>Fluorene</b>							
MB	Not Detected	mg/kg					
<b>Indeno(1,2,3-cd)pyrene</b>							
MB	Not Detected	mg/kg					

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Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
<b>Naphthalene</b>							
MB	Not Detected	mg/kg					
<b>Pyrene</b>							
MB	Not Detected	mg/kg					
<b>AA06534</b>							
<b>1-methylnaphthalene</b>							
LCS	372.315	mg/kg	300	124.10			
<b>2-methylnaphthalene</b>							
LCS	373.732	mg/kg	300	124.58			
<b>Acenaphthene</b>							
LCS	364.458	mg/kg	300	121.49			
<b>Anthracene</b>							
LCS	339.709	mg/kg	300	113.24			
<b>Benz(a)anthracene</b>							
LCS	335.984	mg/kg	300	111.99			
<b>Benzo(a)pyrene</b>							
LCS	252.740	mg/kg	300	84.247			
<b>Benzo(b)fluoranthene</b>							
LCS	266.939	mg/kg	300	88.980			
<b>Benzo(k)fluoranthene</b>							
LCS	333.775	mg/kg	300	111.26			
<b>Chrysene</b>							
LCS	297.377	mg/kg	300	99.126			
<b>Dibenzo(a,h)anthracene</b>							
LCS	280.409	mg/kg	300	93.470			
<b>Fluoranthene</b>							
LCS	269.974	mg/kg	300	89.991			
<b>Fluorene</b>							
LCS	330.703	mg/kg	300	110.23			
<b>Indeno(1,2,3-cd)pyrene</b>							



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Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
LCS	283.621	mg/kg	300	94.540			
<b>Naphthalene</b>							
LCS	362.972	mg/kg	300	120.99			
<b>Pyrene</b>							
LCS	256.156	mg/kg	300	85.385			
<b>AA06535</b>							
<b>1-methylnaphthalene</b>							
LCS	318.625	mg/kg	300	106.21			
<b>2-methylnaphthalene</b>							
LCS	333.205	mg/kg	300	111.07			
<b>Acenaphthene</b>							
LCS	322.810	mg/kg	300	107.60			
<b>Anthracene</b>							
LCS	296.351	mg/kg	300	98.784			
<b>Benz(a)anthracene</b>							
LCS	334.643	mg/kg	300	111.55			
<b>Benzo(a)pyrene</b>							
LCS	245.147	mg/kg	300	81.716			
<b>Benzo(b)fluoranthene</b>							
LCS	251.828	mg/kg	300	83.943			
<b>Benzo(k)fluoranthene</b>							
LCS	290.120	mg/kg	300	96.707			
<b>Chrysene</b>							
LCS	305.416	mg/kg	300	101.81			
<b>Dibenzo(a,h)anthracene</b>							
LCS	284.911	mg/kg	300	94.970			
<b>Fluoranthene</b>							
LCS	300.734	mg/kg	300	100.24			
<b>Fluorene</b>							
LCS	299.953	mg/kg	300	99.984			



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**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
<b>Indeno(1,2,3-cd)pyrene</b>							
LCS	285.471	mg/kg	300	95.157			
<b>Naphthalene</b>							
LCS	336.956	mg/kg	300	112.32			
<b>Pyrene</b>							
LCS	286.681	mg/kg	300	95.560			
<b>1,2,4-trimethylbenzene</b>							
DUP	0.00876	mg/kg				15.579	
Matrix Spike	0.01024	mg/kg	0.025	40.960			
<b>1,3,5-trimethylbenzene</b>							
DUP	0.00849	mg/kg		<0.00500		15.735	
Matrix Spike	0.00994	mg/kg	0.025	<0.00500	39.760		
<b>Benzene</b>							
DUP	0.03430	mg/kg		<0.00242		3.1991	
Matrix Spike	0.03322	mg/kg	0.025	<0.00242	132.88		
<b>Ethylbenzene</b>							
DUP	0.01788	mg/kg		<0.00500		10.844	
Matrix Spike	0.01993	mg/kg	0.025	<0.00500	79.720		
<b>m&amp;p- xylene</b>							
DUP	0.03532	mg/kg		0.00451		10.743	
Matrix Spike	0.03933	mg/kg	0.050	0.00451	69.640		
<b>o-xylene</b>							
DUP	0.01420	mg/kg		<0.00227		12.107	
Matrix Spike	0.01603	mg/kg	0.025	<0.00227	64.120		
<b>Toluene</b>							
DUP	0.02789	mg/kg		0.00270		4.4180	
Matrix Spike	0.02915	mg/kg	0.025	0.00270	105.80		
<b>Xylenes, total</b>							
DUP	0.04952	mg/kg		<0.00654		11.137	
Matrix Spike	0.05536	mg/kg	0.075	<0.00654	73.813		

**Division of Environmental Testing**

2115 N Scranton St Suite 3040A

Aurora, CO 80045

800-440-5184

**FINAL RESULTS REPORT****Report Date :** 3/12/2024**Report Time :** 21:16**REPORT TO**

1600 Broadway Ste 1050  
Denver, CO 80202  
303-929-9513  
ryan@petersonenergyoperating.com

**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
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**AA06498****1,2,4-trimethylbenzene**

MB <0.00245 mg/kg

**1,3,5-trimethylbenzene**

MB <0.005 mg/kg

**Benzene**

MB Not Detected mg/kg

**Ethylbenzene**

MB <0.005 mg/kg

**m&p- xylene**

MB <0.00427 mg/kg

**o-xylene**

MB <0.00227 mg/kg

**Toluene**

MB <0.00263 mg/kg

**Xylenes, total**

MB <0.00654 mg/kg

**AA06499****1,2,4-trimethylbenzene**

LCS 0.04743 mg/kg 0.05 94.860

**1,3,5-trimethylbenzene**

LCS 0.04761 mg/kg 0.05 95.220

**Benzene**

LCS 0.04255 mg/kg 0.05 85.100

**Ethylbenzene**

LCS 0.04341 mg/kg 0.05 86.820

**m&p- xylene**

LCS 0.09319 mg/kg 0.1 93.190

**o-xylene**

LCS 0.04428 mg/kg 0.05 88.560

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ryan@petersonenergyoperating.com

**Project Manager :** Ryan Dornbos**Project Name :** Marick A-Z**Project Number :** 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
<b>Toluene</b>							
LCS	0.04536	mg/kg	0.05	90.720			
<b>Xylenes, total</b>							
LCS	0.13747	mg/kg	0.15	91.647			
<b>AA06500</b>							
<b>1,2,4-trimethylbenzene</b>							
LCS	0.04143	mg/kg	0.05	82.860			
<b>1,3,5-trimethylbenzene</b>							
LCS	0.04279	mg/kg	0.05	85.580			
<b>Benzene</b>							
LCS	0.03933	mg/kg	0.05	78.660			
<b>Ethylbenzene</b>							
LCS	0.03976	mg/kg	0.05	79.520			
<b>m&amp;p- xylene</b>							
LCS	0.08232	mg/kg	0.1	82.320			
<b>o-xylene</b>							
LCS	0.04144	mg/kg	0.05	82.880			
<b>Toluene</b>							
LCS	0.04043	mg/kg	0.05	80.860			
<b>Xylenes, total</b>							
LCS	0.12376	mg/kg	0.15	82.507			



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## FINAL RESULTS REPORT

Report Date : 3/12/2024

Report Time : 21:16

REPORT TO
1600 Broadway Ste 1050 Denver, CO 80202 303-929-9513 ryan@petersonenergyoperating.com

Project Manager : Ryan Dornbos

Project Name : Marick A-Z

Project Number : 32117

Sample ID	Customer ID	Analyte Name Analysis Start	Dilution	Result	Units	Reporting Limit	Method Reference
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Qualifier	Explanation
H1	Sample received outside of regulatory holding time.
H2	Sample analyzed outside of regulatory holding time due to a laboratory error.
P1	Sample received outside temperature requirements, 0-6°C.
P2	Sample received unpreserved.
P3	Broken or leaking sample container.
P4	Sample improperly collected
P5	Sample improperly preserved
B	The same analyte is found in the associated blank
B1	Blank failed high, indicating possible high bias in sample results.
B2	Blank failed low, indicating possible low bias in sample results.
MS	Matrix Spike / Matrix Spike Duplicate recovery and/or RPD limit exceeded, indicating potential matrix interference.
QC	Associated batch quality control was outside the acceptable range
D1	Duplicate RPD limit exceeded due to low sample concentration.
D2	Duplicate RPD limit exceeded due to matrix interference.
S	Surrogate recovery failed, indicating potential matrix interference.
RL1	Reporting limits raised due to matrix interference.
RL2	Reporting limits raised due to limited sample.
U	Sample result less than method detection limit.
J	Sample result less than reporting limit but higher than method detection limit.
EST	The concentration indicated has been estimated due to high analyte content
E	Electronic loss or corruption of data.
I	Subcontracted sample