

SW2	
9/17/2024	
EC	0.522
SAR	0.0735
pH	7.98
Boron	0.177

SW1	
9/17/2024	
EC	0.403
SAR	0.0526
pH	<b>8.31</b>
Boron	0.251

ST6	
6/5/2024	
EC	0.622
SAR	3.66
pH	<b>8.41</b>
Boron	0.195

ST4		
Date	6/5/2024	9/17/2024
EC	0.174	0.296
SAR	0.267	0.0439
pH	<b>8.40</b>	8.22
Boron	0.262	0.233

ST2		
Date	6/5/2024	9/17/2024
EC	0.340	0.251
SAR	4.25	0.0564
pH	<b>8.54</b>	8.25
Boron	0.751	0.143

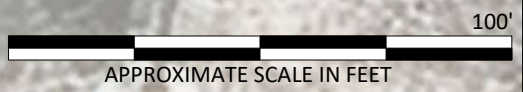
ST1		
Date	6/5/2024	9/17/2024
EC	0.556	0.270
SAR	5.36	0.0744
pH	<b>8.58</b>	8.24
Boron	1.12	0.122

ST3		
Date	6/5/2024	9/17/2024
EC	1.05	0.319
SAR	1.67	0.0792
pH	8.18	8.26
Boron	0.403	0.200

SBG	
9/17/2024	
EC	0.503
SAR	0.386
pH	<b>8.38</b>
Boron	ND

ST7	
6/5/2024	
EC	0.430
SAR	2.12
pH	<b>8.36</b>
Boron	0.179

ST5		
Date	6/5/2024	9/17/2024
EC	0.153	0.316
SAR	0.238	0.0795
pH	<b>8.35</b>	8.26
Boron	0.216	0.140



**LEGEND:**

 SOIL SAMPLE LOCATION

CECMC Table 915-1 Soil Screening Levels	
EC	<4 mmhos/cm
SAR	<6
pH	6-8.3
Boron	2 mg/l

CECMC- Colorado Energy & Carbon Management Commission  
 EC- Electrical conductivity Mmhos/cm- millimhos per centimeter  
 Mg/l- milligrams per liter  
 SAR- Sodium absorption ratio

**STAUDINGER 1-31-H FIRE**  
 SOIL SAMPLE LOCATION MAP  
 ECMC REM #35054  
 RED HAWK (#10503)

**NOTES:**  
 VALUES PRESENTED IN **BOLD** EXCEED CECMC TABLE 915-1 REGULATORY LIMITS  
 ALL LOCATIONS ARE APPROXIMATE UNLESS NOTED OTHERWISE



Imagery source: Google Earth; 2016 Google

SW2	
9/17/2024	
Benzene	ND
Toluene	ND
Ethylbenzene	ND
Total Xylenes	ND
Naphthalene	ND
1,2,4 TMB	ND
1,3,5 TMB	ND
TPH	ND

SW1	
9/17/2024	
Benzene	ND
Toluene	ND
Ethylbenzene	ND
Total Xylenes	ND
Naphthalene	ND
1,2,4 TMB	ND
1,3,5 TMB	ND
TPH	ND

ST6	
6/5/2024	
Benzene	ND
Toluene	ND
Ethylbenzene	ND
Total Xylenes	ND
Naphthalene	ND
1,2,4 TMB	0.00206
1,3,5 TMB	ND
TPH	0.445

ST4		
Date	6/5/2024	9/17/2024
Benzene	ND	ND
Toluene	ND	ND
Ethylbenzene	ND	ND
Total Xylenes	ND	ND
Naphthalene	ND	ND
1,2,4 TMB	ND	ND
1,3,5 TMB	ND	ND
TPH	ND	ND

ST2		
Date	6/5/2024	9/17/2024
Benzene	ND	ND
Toluene	ND	ND
Ethylbenzene	ND	ND
Total Xylenes	ND	ND
Naphthalene	ND	ND
1,2,4 TMB	ND	ND
1,3,5 TMB	ND	ND
TPH	<b>803</b>	ND

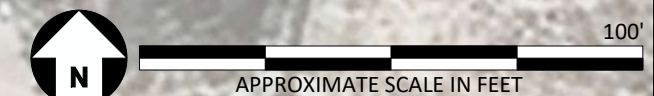
ST1		
Date	6/5/2024	9/17/2024
Benzene	ND	ND
Toluene	ND	ND
Ethylbenzene	ND	ND
Total Xylenes	ND	ND
Naphthalene	ND	ND
1,2,4 TMB	ND	ND
1,3,5 TMB	ND	ND
TPH	<b>869</b>	ND

ST3		
Date	6/5/2024	9/17/2024
Benzene	ND	ND
Toluene	ND	ND
Ethylbenzene	ND	ND
Total Xylenes	ND	ND
Naphthalene	ND	ND
1,2,4 TMB	ND	ND
1,3,5 TMB	ND	ND
TPH	ND	ND

SBG	
9/17/2024	
Benzene	ND
Toluene	ND
Ethylbenzene	ND
Total Xylenes	ND
Naphthalene	ND
1,2,4 TMB	ND
1,3,5 TMB	ND
TPH	ND

ST7	
6/5/2024	
Benzene	ND
Toluene	ND
Ethylbenzene	ND
Total Xylenes	ND
Naphthalene	ND
1,2,4 TMB	ND
1,3,5 TMB	ND
TPH	ND

ST5		
Date	6/5/2024	9/17/2024
Benzene	ND	ND
Toluene	ND	ND
Ethylbenzene	ND	ND
Total Xylenes	ND	ND
Naphthalene	ND	ND
1,2,4 TMB	ND	ND
1,3,5 TMB	ND	ND
TPH	ND	ND



**LEGEND:**  
 SOIL SAMPLE LOCATION

**NOTES:**  
 VALUES PRESENTED IN **BOLD** EXCEED CECMC TABLE 915-1 REGULATORY LIMITS  
 ALL LOCATIONS ARE APPROXIMATE UNLESS NOTED OTHERWISE

CECMC Table 915-1 Soil Standards		
Compound	Residential (mg/kg)	Protection of Groundwater (mg/kg)
Benzene	1.2	0.0026
Toluene	490	0.69
Ethylbenzene	5.8	0.78
Total Xylenes	58	9.9
Naphthalene	30	0.0081
1,2,4-Trimethylbenzene	27	0.0087
1,3,5-Trimethylbenzene	2	0.0038
TPH	500	500

mg/kg- milligrams per kilogram  
 TPH- Total Petroleum Hydrocarbons  
 CECMC- Colorado Energy & Carbon Management Commission  
 ND- Not detected

**STAUDINGER 1-31-H FIRE**  
 SOIL SAMPLE LOCATION MAP  
 ECMC REM #35054  
 RED HAWK (#10503)



Imagery source: Google Earth; 2016 Google

SW2	
9/17/2024	
Arsenic	<b>4.19</b>
Barium	<b>104</b>
Cadmium	0.124
Chromium (VI)	ND
Copper	11.4
Lead	6.60
Nickel	8.17
Selenium	ND
Silver	ND
Zinc	ND

SW1	
9/17/2024	
Arsenic	<b>4.44</b>
Barium	<b>114</b>
Cadmium	0.130
Chromium (VI)	ND
Copper	11.9
Lead	6.98
Nickel	9.04
Selenium	ND
Silver	ND
Zinc	ND

ST6	
6/5/2024	
Arsenic	<b>1.58</b>
Barium	<b>126</b>
Cadmium	ND
Chromium (VI)	ND
Copper	ND
Lead	4.36
Nickel	3.35
Selenium	ND
Silver	ND
Zinc	ND

ST4		
Date	6/5/2024	9/17/2024
Arsenic	<b>2.87</b>	<b>3.83</b>
Barium	48.9	<b>113</b>
Cadmium	ND	0.133
Chromium (VI)	ND	ND
Copper	ND	11.3
Lead	4.72	6.26
Nickel	5.93	8.57
Selenium	ND	ND
Silver	ND	ND
Zinc	ND	ND

ST2		
Date	6/5/2024	9/17/2024
Arsenic	<b>4.80</b>	<b>4.17</b>
Barium	<b>196</b>	<b>120</b>
Cadmium	0.180	0.134
Chromium (VI)	ND	ND
Copper	10.2	12.2
Lead	6.99	7.63
Nickel	8.18	9.19
Selenium	ND	ND
Silver	ND	ND
Zinc	ND	ND

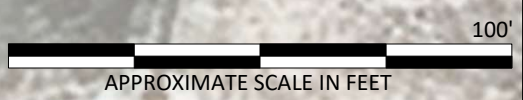
ST1		
Date	6/5/2024	9/17/2024
Arsenic	<b>4.77</b>	<b>4.36</b>
Barium	<b>262</b>	<b>142</b>
Cadmium	0.302	0.136
Chromium (VI)	ND	ND
Copper	11.2	12.0
Lead	8.33	7.22
Nickel	8.27	9.57
Selenium	<b>0.283</b>	ND
Silver	0.161	ND
Zinc	ND	ND

ST3		
Date	6/5/2024	9/17/2024
Arsenic	<b>3.53</b>	<b>6.26</b>
Barium	43.7	<b>82.1</b>
Cadmium	ND	0.127
Chromium (VI)	ND	ND
Copper	ND	10.6
Lead	4.08	6.98
Nickel	5.13	7.60
Selenium	ND	<b>0.300</b>
Silver	ND	ND
Zinc	ND	ND

SBG	
9/17/2024	
Arsenic	<b>6.71</b>
Barium	<b>91.9</b>
Cadmium	0.310
Chromium (VI)	ND
Copper	14.6
Lead	12.0
Nickel	18.5
Selenium	<b>0.349</b>
Silver	ND
Zinc	61.9

ST7	
6/5/2024	
Arsenic	<b>1.99</b>
Barium	<b>141</b>
Cadmium	0.105
Chromium (VI)	ND
Copper	ND
Lead	5.05
Nickel	3.92
Selenium	ND
Silver	ND
Zinc	ND

ST5		
Date	6/5/2024	9/17/2024
Arsenic	<b>3.19</b>	<b>4.62</b>
Barium	51.1	<b>114</b>
Cadmium	ND	0.157
Chromium (VI)	ND	ND
Copper	ND	12.2
Lead	7.15	7.73
Nickel	6.23	9.65
Selenium	ND	0.238
Silver	ND	ND
Zinc	32.9	34.4



**LEGEND:**

SOIL SAMPLE LOCATION

NOTES:  
 VALUES PRESENTED IN **BOLD** EXCEED CECMC TABLE 915-1 REGULATORY LIMITS  
 ALL LOCATIONS ARE APPROXIMATE UNLESS NOTED OTHERWISE

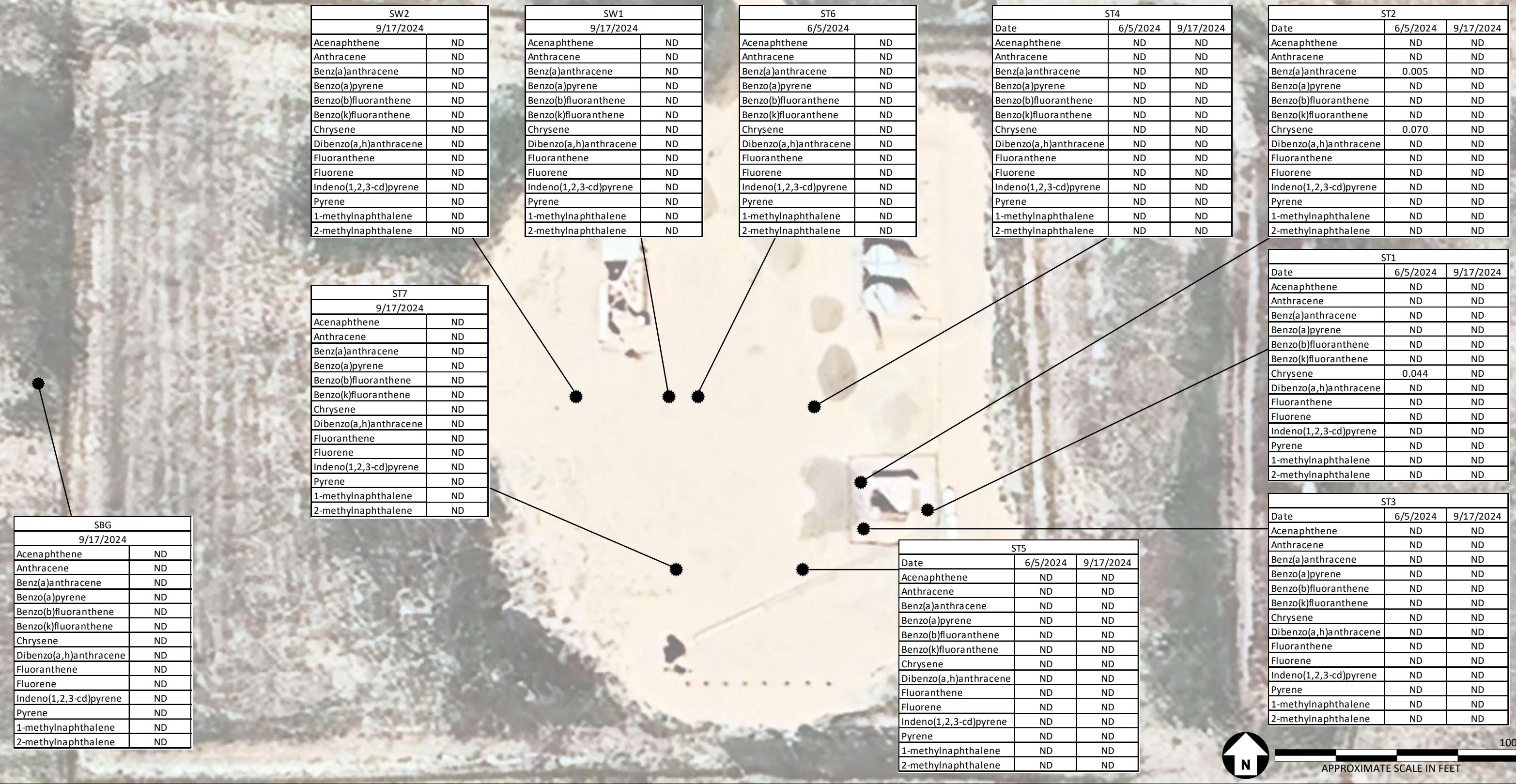
CECMC Table 915-1 Soil Screening Levels		
Compound	Residential (mg/kg)	Protection of Groundwater (mg/kg)
Arsenic	0.68	0.29 (M)
Barium	15000	82 (M)
Cadmium	71	0.38 (M)
Chromium (VI)	0.3	0.00067 (R)
Copper	3100	46 (M)
Lead	400	14 (M)
Nickel	1500	26 (R)
Selenium	390	0.26 (M)
Silver	390	0.8 (R)
Zinc	23000	370 (R)

mg/kg- milligrams per kilogram  
 (R)- Risk based screening level  
 (M)- Drinking water maximum contaminant level  
 CECMC- Colorado Energy & Carbon Management Commission

**STAUDINGER 1-31-H FIRE**  
 SOIL SAMPLE LOCATION MAP  
 ECMC REM #35054  
 RED HAWK (#10503)



Imagery source: Google Earth; 2016 Google



SW2	
9/17/2024	
Acenaphthene	ND
Anthracene	ND
Benz(a)anthracene	ND
Benzo(a)pyrene	ND
Benzo(b)fluoranthene	ND
Benzo(k)fluoranthene	ND
Chrysene	ND
Dibenzo(a,h)anthracene	ND
Fluoranthene	ND
Fluorene	ND
Indeno(1,2,3-cd)pyrene	ND
Pyrene	ND
1-methylnaphthalene	ND
2-methylnaphthalene	ND

SW1	
9/17/2024	
Acenaphthene	ND
Anthracene	ND
Benz(a)anthracene	ND
Benzo(a)pyrene	ND
Benzo(b)fluoranthene	ND
Benzo(k)fluoranthene	ND
Chrysene	ND
Dibenzo(a,h)anthracene	ND
Fluoranthene	ND
Fluorene	ND
Indeno(1,2,3-cd)pyrene	ND
Pyrene	ND
1-methylnaphthalene	ND
2-methylnaphthalene	ND

ST6	
6/5/2024	
Acenaphthene	ND
Anthracene	ND
Benz(a)anthracene	ND
Benzo(a)pyrene	ND
Benzo(b)fluoranthene	ND
Benzo(k)fluoranthene	ND
Chrysene	ND
Dibenzo(a,h)anthracene	ND
Fluoranthene	ND
Fluorene	ND
Indeno(1,2,3-cd)pyrene	ND
Pyrene	ND
1-methylnaphthalene	ND
2-methylnaphthalene	ND

ST4		
Date	6/5/2024	9/17/2024
Acenaphthene	ND	ND
Anthracene	ND	ND
Benz(a)anthracene	ND	ND
Benzo(a)pyrene	ND	ND
Benzo(b)fluoranthene	ND	ND
Benzo(k)fluoranthene	ND	ND
Chrysene	ND	ND
Dibenzo(a,h)anthracene	ND	ND
Fluoranthene	ND	ND
Fluorene	ND	ND
Indeno(1,2,3-cd)pyrene	ND	ND
Pyrene	ND	ND
1-methylnaphthalene	ND	ND
2-methylnaphthalene	ND	ND

ST2		
Date	6/5/2024	9/17/2024
Acenaphthene	ND	ND
Anthracene	ND	ND
Benz(a)anthracene	0.005	ND
Benzo(a)pyrene	ND	ND
Benzo(b)fluoranthene	ND	ND
Benzo(k)fluoranthene	ND	ND
Chrysene	0.070	ND
Dibenzo(a,h)anthracene	ND	ND
Fluoranthene	ND	ND
Fluorene	ND	ND
Indeno(1,2,3-cd)pyrene	ND	ND
Pyrene	ND	ND
1-methylnaphthalene	ND	ND
2-methylnaphthalene	ND	ND

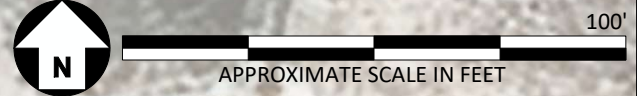
ST7	
9/17/2024	
Acenaphthene	ND
Anthracene	ND
Benz(a)anthracene	ND
Benzo(a)pyrene	ND
Benzo(b)fluoranthene	ND
Benzo(k)fluoranthene	ND
Chrysene	ND
Dibenzo(a,h)anthracene	ND
Fluoranthene	ND
Fluorene	ND
Indeno(1,2,3-cd)pyrene	ND
Pyrene	ND
1-methylnaphthalene	ND
2-methylnaphthalene	ND

ST1		
Date	6/5/2024	9/17/2024
Acenaphthene	ND	ND
Anthracene	ND	ND
Benz(a)anthracene	ND	ND
Benzo(a)pyrene	ND	ND
Benzo(b)fluoranthene	ND	ND
Benzo(k)fluoranthene	ND	ND
Chrysene	0.044	ND
Dibenzo(a,h)anthracene	ND	ND
Fluoranthene	ND	ND
Fluorene	ND	ND
Indeno(1,2,3-cd)pyrene	ND	ND
Pyrene	ND	ND
1-methylnaphthalene	ND	ND
2-methylnaphthalene	ND	ND

SBG	
9/17/2024	
Acenaphthene	ND
Anthracene	ND
Benz(a)anthracene	ND
Benzo(a)pyrene	ND
Benzo(b)fluoranthene	ND
Benzo(k)fluoranthene	ND
Chrysene	ND
Dibenzo(a,h)anthracene	ND
Fluoranthene	ND
Fluorene	ND
Indeno(1,2,3-cd)pyrene	ND
Pyrene	ND
1-methylnaphthalene	ND
2-methylnaphthalene	ND

ST5		
Date	6/5/2024	9/17/2024
Acenaphthene	ND	ND
Anthracene	ND	ND
Benz(a)anthracene	ND	ND
Benzo(a)pyrene	ND	ND
Benzo(b)fluoranthene	ND	ND
Benzo(k)fluoranthene	ND	ND
Chrysene	ND	ND
Dibenzo(a,h)anthracene	ND	ND
Fluoranthene	ND	ND
Fluorene	ND	ND
Indeno(1,2,3-cd)pyrene	ND	ND
Pyrene	ND	ND
1-methylnaphthalene	ND	ND
2-methylnaphthalene	ND	ND

ST3		
Date	6/5/2024	9/17/2024
Acenaphthene	ND	ND
Anthracene	ND	ND
Benz(a)anthracene	ND	ND
Benzo(a)pyrene	ND	ND
Benzo(b)fluoranthene	ND	ND
Benzo(k)fluoranthene	ND	ND
Chrysene	ND	ND
Dibenzo(a,h)anthracene	ND	ND
Fluoranthene	ND	ND
Fluorene	ND	ND
Indeno(1,2,3-cd)pyrene	ND	ND
Pyrene	ND	ND
1-methylnaphthalene	ND	ND
2-methylnaphthalene	ND	ND



**LEGEND:**  
 SOIL SAMPLE LOCATION

**NOTES:**  
 VALUES PRESENTED IN **BOLD** EXCEED CECMC TABLE 915-1 REGULATORY LIMITS  
 ALL LOCATIONS ARE APPROXIMATE UNLESS NOTED OTHERWISE

CECMC Table 915-1 Soil Screening Levels		
Compound	Residential (mg/kg)	Protection of Groundwater (mg/kg)
Acenaphthene	360	0.55 (R)
Anthracene	1800	5.8 (R)
Benz(a)anthracene	1.1	0.011 (R)
Benzo(b)fluoranthene	1.1	0.03 (R)
Benzo(k)fluoranthene	11	2.9 (R)
Benzo(a)pyrene	0.11	0.24 (M)
Chrysene	110	9 (R)
Dibenzo(a,h)anthracene	0.11	0.096 (R)
Fluoranthene	240	8.9 (R)
Fluorene	240	0.54 (R)
Indeno(1,2,3-cd)pyrene	1.1	0.98 (R)
Pyrene	180	1.3 (R)
1-methylnaphthalene	18	0.006 (R)
2-methylnaphthalene	24	0.019 (R)

mg/kg- milligrams per kilogram  
 (R)- Risk based screening level  
 (M)- Drinking water maximum contaminant level  
 CECMC- Colorado Energy & Carbon Management Commission

**STAUDINGER 1-31-H FIRE**  
 SOIL SAMPLE LOCATION MAP  
 ECMC REM #35054  
 RED HAWK (#10503)



Imagery source: Google Earth; 2016 Google