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August 27, 2024

Mr. John Heil
Environmental Protection Specialist
Colorado Energy & Carbon Management Commission
1120 Lincoln Street, Suite 801
Denver, Colorado 80203

RE: 2024 Site Characterization and Groundwater Monitoring Report
Cottonwood Compressor Station
Garfield County, Colorado
ECMC Facility No.: 424537

Dear Mr. Heil:

On behalf of Bargath LLC, Aptim Environmental & Infrastructure, LLC (APTIM) is pleased to present this 2024 Site Characterization and Groundwater Monitoring Report for Cottonwood Compressor Station located in Garfield County, Colorado.

Site Background

The Cottonwood Compressor Station (site) – Facility Number 424537 is an active compressor station operated by Williams (Bargath, LLC). During installation of cathodic protection borings at the site in January 2023, hydrocarbon impacts were observed to the west of the compressor building. While the cathodic protection borings were advanced to 30 feet below grade, the extent of impacts vertically and horizontally was not known. Investigation activities were completed with the objective of defining the extent of hydrocarbon impacts.

The Cottonwood Compressor Station is a natural gas gathering and compression facility located in the southwest quarter (SW ¼) of the northwest quarter (NW ¼) of Section 34, Township 6 South, Range 95 West of the 6th Principal Meridian, Garfield County, Colorado east-northeast of Parachute, Colorado at latitude 39.481880 and longitude -107.991962.

The site is located in an area of southwest-sloping topography at an elevation of approximately 5,248 feet above mean sea level (ft-msl). The area south of the site is generally undeveloped land with oil and gas developments and undeveloped land to the east of the site. The area to the west is Cottonwood Gulch followed by oil and gas developments. North of the site a generally undeveloped land followed by a mountainous area. An access road adjoins the site to the east.

Previous investigations have included site characterization, well installation, and groundwater monitoring.

Groundwater Monitoring Well Installation

On March 25, 2024, APTIM mobilized to the site to supervise soil boring advancement and groundwater monitoring well installation activities. Prior to advancement activities, each location was cleared to the depth of approximately eight (8) feet below grade surface (bgs), with a pothole or “daylighting” rig, to ensure no unmarked utilities were present beneath the boring location. Two (2) soil borings (MW-08 and

MW-09) were advanced to delineate the extent of hydrocarbon impacts south-southwest of the compressor station facility. Following advancement activities, each soil boring was completed as a permanent 2-inch poly vinyl chloride (PVC) groundwater monitoring well. GDI utilized a 8140LS Series Geoprobe track rig to complete drilling activities at the site.

Each location was logged in the field for description of soil, soil classification, moisture content, staining, olfactory odor, and volatile organic compound (VOC) concentrations. Soil samples were collected continuously within 10-foot, plastic sample liners. The samples within the plastic liners were generally separated in 5-foot intervals for soil identification, screening, and field analysis. A portion from each interval was placed in a sealable plastic bag, for VOC headspace analysis utilizing a field calibrated photoionization detector (PID). The bag was sealed, labeled, and allowed to volatilize for approximately five to ten minutes. Another portion of the soil sample from the same interval was placed in a laboratory supplied, 4-once glass jar and sealed for laboratory analysis. Upon volatilization, the bagged sample was perforated with the probe of the PID to measure the organic vapor concentration within the headspace. Organic vapor concentrations were recorded in parts per million by volume (ppm-v) for each sample and recorded on the boring log.

Based on PID reading and sample location above the saturated zone, soil samples selected for laboratory analysis were placed in an iced, insolated cooler for submittal to ALS Environmental located in Holland, Michigan. All samples were presented under proper chain-of custody procedures for shipment to the laboratory and were received within Quality Assurance/Quality Control (QA/QC) parameters. The soil samples collected from soil borings MW-08 and MW-09 were analyzed for benzene, toluene, ethylbenzene, total xylenes (BTEX), naphthalene, 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene following Environmental Protection Agency (EPA) Method 8260, total petroleum hydrocarbons – gasoline range organics (TPH-GRO) following EPA Method 8015, and total petroleum hydrocarbons – diesel range organics (TPH-DRO) following modified EPA Method 3546.

Soil Analytical Results

Based on laboratory analytical results received for soil borings MW-08 and MW-09, did not contain BTEX, naphthalene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, TPH-GRO or TPH-DRO concentrations exceeding their respective regulatory limits.

A site map presenting new well locations MW-08 and MW-09 is included as Figure 1. Laboratory analytical reports are included in Attachment A.

Groundwater Monitoring and Sampling Activities

The initial 2024 bi-annual groundwater monitoring event was completed March 25 through March 28, 2024. Prior to groundwater sample collection, the following field parameters were collected and recorded:

- Depth to groundwater using an interface probe capable of measuring the depth to groundwater or product to an accuracy of 0.01 feet;
- Dissolved oxygen (DO), Oxygen Reduction Potential (ORP), Conductivity, Temperature and pH concentrations utilizing a multi-parameter probe capable of measuring accurate data.

The 2024 groundwater depth measurements were correlated to the established top of casing (TOC) elevations to determine the elevation of the groundwater beneath the site. Groundwater was

encountered in monitoring wells MW-01 through MW-09 at depths ranging from 48.81 (MW-03) to 66.14 (MW-06). The groundwater flow direction beneath the site is generally to the south-southeast with an average hydrologic gradient of 0.0619 vertical feet per horizontal foot across the site (measured from MW-03 to MW-09. A summary of the groundwater elevation data is summarized in **Table 1**.

Groundwater monitoring wells MW-01 through MW-09 were purged and sampled during the groundwater monitoring event conducted in March 2024. The collected groundwater samples were submitted for laboratory analysis for benzene, toluene, ethylbenzene, total xylenes (BTEX), 1,2,4 and 1,3,5-Trimethylbenzene (TMB), Naphthalene, total petroleum hydrocarbons-gasoline range organics (TPH-GRO), TPH-diesel range organics (TPH-DRO), Chloride, total dissolved solids (TDS) and Sulfates. The groundwater samples were placed in an iced and insolated cooler, under standard chain-of-custody (COC) procedures, for shipment to ALS Environmental – Holland and were received within QA/QC parameters.

Groundwater Analytical Results

The March 2024 groundwater analytical results document that monitoring wells MW-02, MW-04, MW-06, MW-07, MW-08 and MW-09 did not contain compounds above the Colorado Energy and Carbon Management Commission (ECMC) guidelines.

Monitoring wells, MW-01 and MW-03 contained benzene and TMB concentrations above the MCL during the March 2024 groundwater monitoring event. Toluene, ethylbenzene, total xylenes, Naphthalene and remaining compounds were below their respective MCLs. Groundwater analytical data for the 2023 groundwater sampling events is summarized in **Table 2** and illustrated in associated Figures.

Conclusions

Based upon the information presented in this report, APTIM concludes the following:

- Based on laboratory analytical results received for soil borings MW-08 and MW-09, newly installed monitoring wells did not contain BTEX, naphthalene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, TPH-GRO or TPH-DRO concentrations exceeding their respective regulatory limits.
- Groundwater flow direction beneath the site is generally to the south-southeast with an average hydrologic gradient of 0.0619 vertical feet per horizontal foot across the site (measured from MW-03 to MW-09.
- Groundwater samples collected from monitoring wells MW-01 and MW-03 contained concentrations of benzene and TMB exceeding the ECMC MCLs.
- The groundwater samples collected from the remaining groundwater monitoring wells at the site, did not contain concentrations exceeding their respective laboratory reporting limits.
- Based on the site characterization conducted at the facility, soil and groundwater impacts appear to be delineated at the time of this report.

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Recommendations

Based upon the information presented in this report, APTIM concludes the following:

- Continue semi-annual groundwater monitoring activities.
- Evaluate active remedial approaches to address soil and groundwater impacts.

If you have any questions or comments, please feel free to contact me at (303) 910-7478.

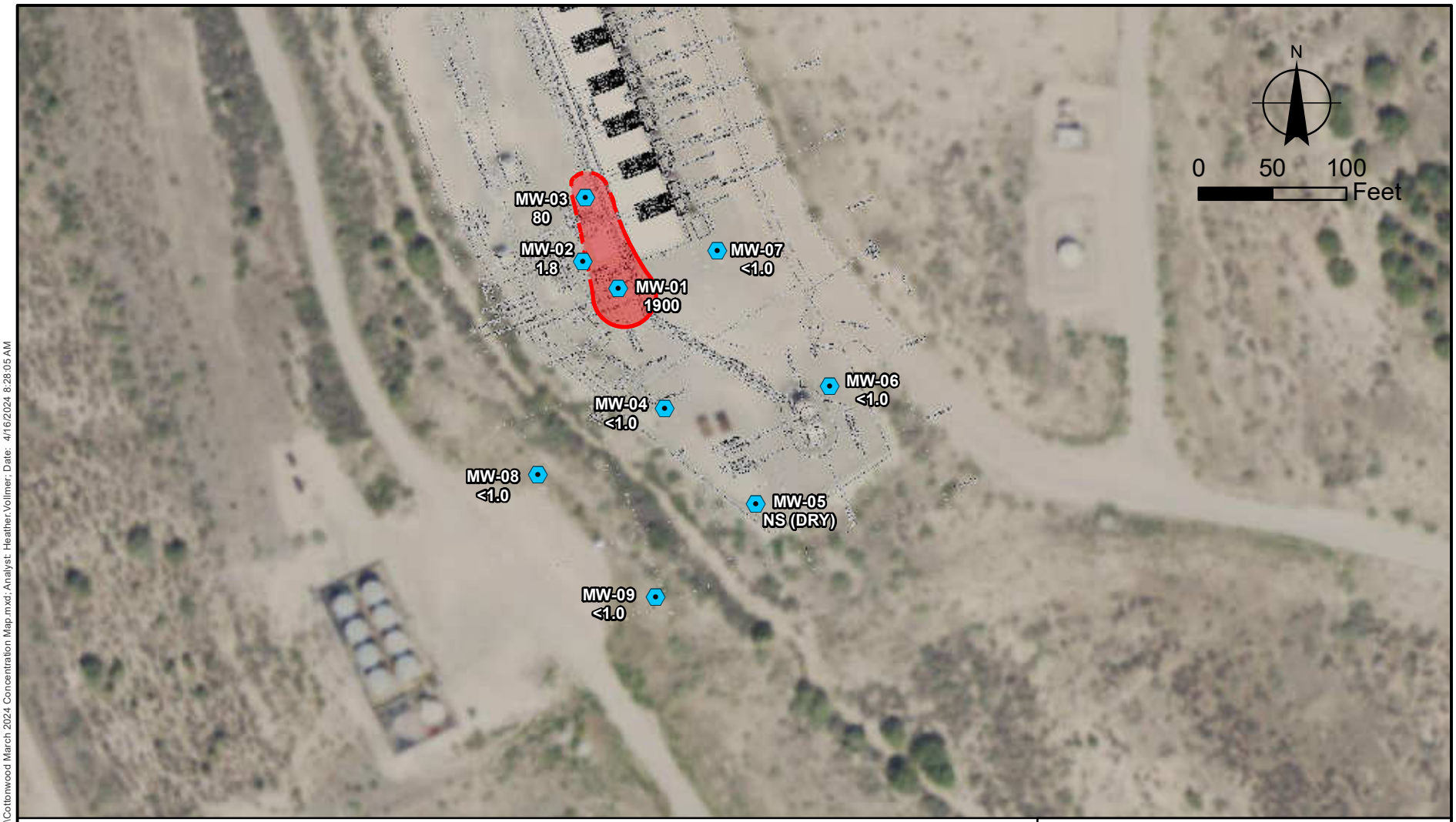
Sincerely,

Jason Dowdy, REM
Geologist/Project Manager
Aptim Environmental & Infrastructure, LLC.

Cc: Aaron Galer
David Way

Attachments

Figures



Legend:

- Monitoring Well
- COGCC Benzene Target Concentration Line >5.0 µg/L
- Inferred Benzene Target Concentration Line >5.0 µg/L
- Estimated Benzene Target Contamination Exceedance Zone 5.0 µg/L

Notes:

1. Background imagery is the 2017 USGS National Imagery Imagery Program.
2. Benzene samples were collected March 26, 2024.
3. Colorado Energy and Carbon Management (ECMC) Table 915-1 Concentration Level for Benzene = 5 µg/L.

Williams (Bargath, LLC)

Cottonwood Compressor
Garfield, CO

FIGURE NUMBER 1

March 2024
Benzene Isoconcentration Map

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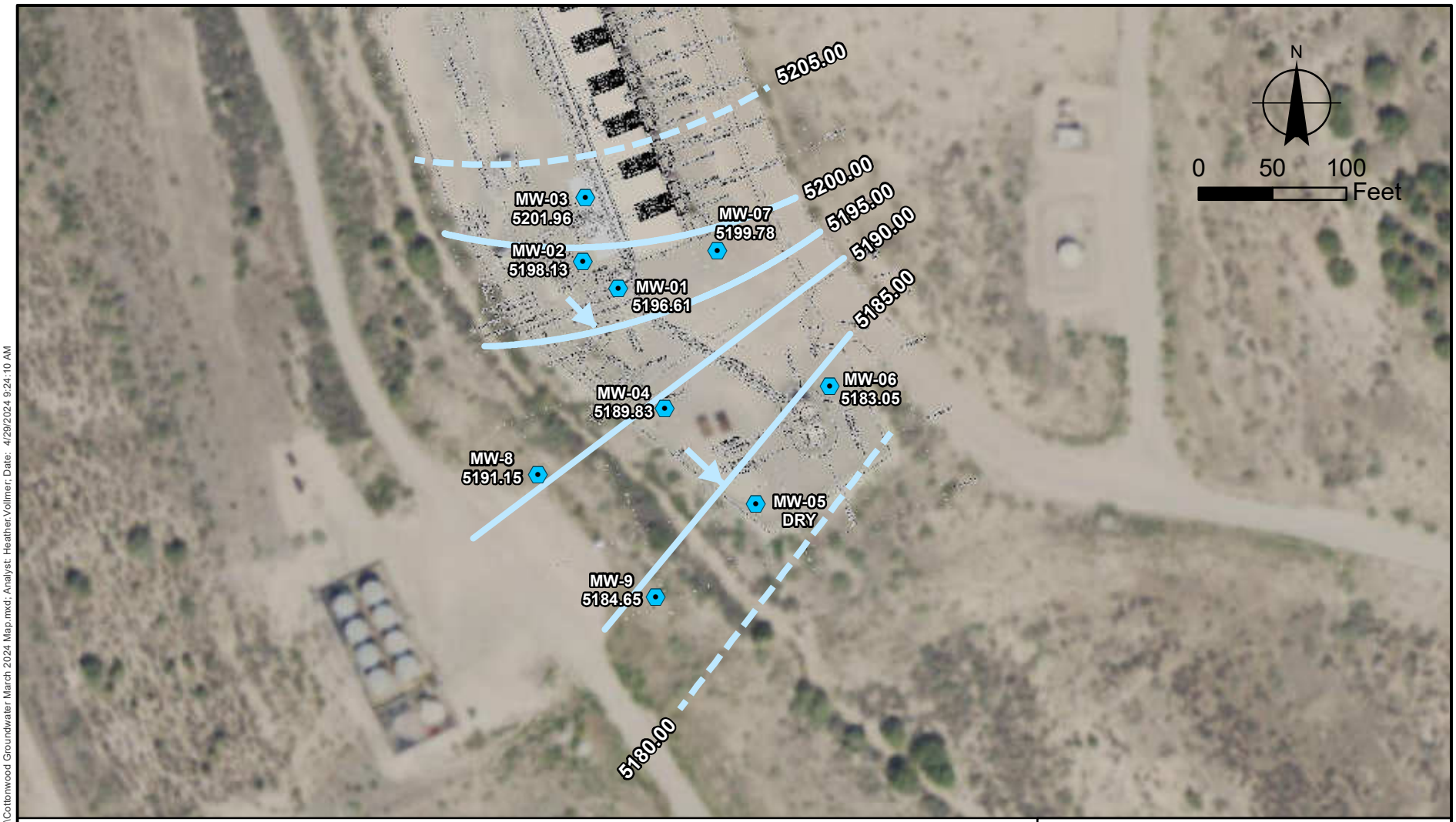

Legend:

- Monitoring Well
- Groundwater Contour
- Inferred Groundwater Contour

Notes:

1. Background imagery is the 2017 USGS National Imagery Imagery Program.
2. Ground water levels were measured March 25, 2024.

Williams (Bargath, LLC)

Cottonwood Compressor
Garfield, CO

FIGURE NUMBER
2

Groundwater Gradient March 2024

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Tables

Table 1
Bargath LLC - Cottonwood CS
Comprehensive Liquid Level Data

Well ID	LATITUDE NAD83 DEGREES	LONGITUDE NAD83 DEGREES	Ground Elevation (ft BM)	Top of Casing Elevation (ft BM)	Date	Depth to Groundwater (Ft from TOC)	Depth to Product (ft below TOC)	Product Thickness (ft)	Corrected GW Elevation (ft BM) (1)
MW-01	39.48165887	-107.9919979	99.27	99.00	1/29/2023	DRY @ 59.85			
MW-01	39.48165887	-107.9919979	99.27	99.00	4/3/2023	DRY @ 59.85			
MW-01	39.48165887	-107.9919979	5250.53	5250.26	7/10/2023	45.72			5204.54
MW-01	39.48165887	-107.9919979	5250.53	5250.26	3/25/2024	53.65			5196.61
MW-02	39.4817069	-107.992085	98.89	98.58	1/29/2023	60.33			38.25
MW-02	39.4817069	-107.992085	98.89	98.58	4/3/2023	58.07			40.51
MW-02	39.4817069	-107.992085	5250.15	5249.84	7/10/2023	44.24			5205.60
MW-02	39.4817069	-107.992085	5250.15	5249.84	3/25/2024	51.71			5198.13
MW-03	39.48182622	-107.9920829	99.98	99.51	1/29/2023	57.48			42.03
MW-03	39.48182622	-107.9920829	5251.24	5250.77	7/10/2023	41.63			5209.14
MW-03	39.48182622	-107.9920829	5251.24	5250.77	3/25/2024	48.81			5201.96
MW-04	39.48143804	-107.9918788	5248.81	5248.50	7/10/2023	50.26			5198.24
MW-04	39.48143804	-107.9918788	5248.81	5248.50	3/25/2024	58.67			5189.83
MW-05	39.48126589	-107.9916541	5247.86	5247.53	7/10/2023	68.23			5179.30
MW-05	39.48126589	-107.9916541	5247.86	5247.53	3/25/2024	DRY	DRY	DRY	DRY
MW-06	39.4814881	-107.9914848	5249.85	5249.19	7/10/2023	64.11			5185.08
MW-06	39.4814881	-107.9914848	5249.85	5249.19	3/25/2024	66.14			5183.05
MW-07	39.48173458	-107.9917633	5250.43	5250.05	7/10/2023	43.96			5206.09
MW-07	39.48173458	-107.9917633	5250.43	5250.05	3/25/2024	50.27			5199.78
MW-08	39.48130822	-107.9921779	5244.40	5247.47	3/28/2024	56.32			5191.15
MW-09	39.4810873	-107.9918882	5241.47	5244.44	3/27/2024	59.79			5184.65

Table 2
Bargath LLC - Cottonwood CS
Comprehensive Groundwater Analytical Summary

		COGCC Table 915-1 Concentration Levels	5 µg/L	1000 µg/L	700 µg/L	10,000 µg/L	67 µg/L	67 µg/L	140 µg/L	250 mg/l or <1.25 X Background	<1.25 X Background	250 mg/l or <1.25 X Background	Field Parameters				
Sample Location	**Media**	**Sampling Date**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethylbenzene (µg/L)**	**Total Xylenes (µg/L)**	**1,2,4-Trimethylbenzene (µg/L)**	**1,3,5-Trimethylbenzene (µg/L)**	**Naphthalene (µg/L)**	**Chloride (mg/L)**	**TDS (mg/L)**	**Sulfate (mg/L)**	**Dissolved Oxygen (mg/L)**	**ORP (mV)**	**Conductivity (mS/cm)**	**Temperature (°C)**	**pH**
MW01	Groundwater	1/29/2023	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
MW01	Groundwater	7/11/2023	2000	260	310	2600	230	240	<50	37.1	890	73	1.76	-119.2	1.400	18.0	7.32
MW01	Groundwater	3/25/2024	1900	56	470	790	350	370	<120	34.9	850	<1.0	2.01	-119.3	1.448	12.7	7.44
MW02	Groundwater	1/29/2023	7.2	14	<1.0	13	<1.0	<1.0	<5.0	36.9	1100	300	NT	NT	NT	NT	NT
MW02	Groundwater	7/11/2023	2.5	1.8	<1.0	<3.0	<1.0	<1.0	<5.0	32.9	950	290	1.39	-106.9	1.341	16.5	7.29
MW02	Groundwater	3/25/2024	1.8	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	39.9	930	348	2.21	-100.3	1.588	10.9	7.44
MW03	Groundwater	1/29/2023	190	7.1	90	700	67	80	<5.0	43.9	890	58	NT	NT	NT	NT	NT
MW03	Groundwater	7/11/2023	160	<1.0	69	240	64	78	<5.0	34.2	1000	290	1.79	-114.5	1.619	16.8	7.22
MW03	Groundwater	3/25/2024	80	<1.0	4.3	22	2.8	30	<5.0	39.9	910	294	2.47	-97.4	1.817	11.2	7.49
MW03 DUP	Groundwater	7/11/2023	170	<1.0	73	200	68	82	<5.0	34.4	1100	280	1.79	-114.5	1.619	16.8	7.22
MW03 DUP	Groundwater	3/25/2024	62	<1.0	2.9	9.5	1.6	22	<5.0	39.1	990	356	2.47	-97.4	1.817	11.2	7.49
MW04	Groundwater	7/11/2023	790	<1.0	<1.0	<1.0	<1.0	1.3	<5.0	41.3	940	180	2.02	-64.1	1.445	16.9	7.07
MW04	Groundwater	3/25/2024	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<5.0	10.0	990	281	2.84	-10.5	1.545	12.8	7.10
MW05	Groundwater	7/11/2023	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	42.7	1100	320	3.01	-39.4	1.580	17.6	7.06
MW05	Groundwater	3/25/2024	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
MW06	Groundwater	7/11/2023	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	38.7	1400	550	3.08	5.8	1.802	17.5	7.07
MW06	Groundwater	3/25/2024	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<25	53.2	1400	849	2.59	25.2	1.924	12.8	7.12
MW07	Groundwater	7/11/2023	<1.0	1.0	<1.0	<1.0	<1.0	<1.0	<5.0	38.7	1000	330	1.43	-1.0	1.514	18.2	7.10
MW07	Groundwater	3/25/2024	<1.0	1.0	<1.0	<3.0	<1.0	<1.0	<5.0	38.5	1000	534	3.14	34.1	1.599	13.2	7.21
MW08	Groundwater	3/28/2024	<1.0	1.0	<1.0	<3.0	<1.0	<1.0	<5.0	41.4	1100	394	2.07	-76.6	1.655	14.2	7.09
MW09	Groundwater	3/27/2024	<1.0	12	<1.0	11	<1.0	<1.0	<5.0	3.11	17000	331	2.05	-55.1	1.558	14.1	7.13

Note:

J - Indicates an estimated value below laboraory reporting limit

NS = Not Sampled

NT = Not Tested

µg/L - Micrograms per Liter

mg/L - Milligrams per Liter

Above ECMC (formerly COGCC) Table 915-1 Concentration Level

Table 3

Bargath LLC - Cottonwood CS
Soil Data

			Sample Location	Background	SB-01	SB-01	SB-01	SB-01	SB-01	SB-02	SB-02	SB-02	SB-02	SB-02	SB-03	SB-03	SB-03	SB-03	SB-03
			Sample Depth (Feet)	3'	0-1'	15-20'	25-30'	30-38'	45-50'	0-1'	15-20'	25-30'	30-35'	40-45'	0-1'	15-20'	25-30'	33-35'	45-50'
			Date Sampled	1/28/2023	1/3/23	1/12/23	1/12/23	1/12/23	1/24/23	1/3/23	1/10/23	1/10/23	1/10/23	1/10/23	1/3/23	1/27/23	1/27/23	1/27/23	1/27/23
Contaminant of Concern	**Table 915-1 Soil Screening Standards**	**Table 915-1 Soil to Groundwater Stds**	**Units**																
Organic Compounds in Soil																			
DRO	N/A	N/A	mg/kg	NA	<23	38	22J	310	87	14J	76	29	57	57	15J	<22	40	130	72
GRO	N/A	N/A	mg/kg	NA	<7.0	<5.1	<5.3	<5.5	<2.8	<6.9	<5.8	200	140	42	<7.7	<6.1	840	1,100	260
TPH (DRO+GRO)	500	500	mg/kg	NA	<7.0	38	22	310	87	14	76	229	197	99	15	<22	880	1,230	332
Benzene	1.2	0.0026	mg/kg	NA	0.0024J	0.0023j	0.0018J	0.0067	0.0027J	0.0022J	<0.035	0.20J	0.11	0.078	0.0020J	<0.036	1.3	2.1	0.27
Ethylbenzene	5.8	0.78	mg/kg	NA	0.0026J	0.0026j	0.0033J	0.0047J	0.0043J	0.0025J	0.023	1.2	0.47	0.13	0.0023J	<0.036	5.5	6.5	1.0
Toluene	490	0.69	mg/kg	NA	0.0059	0.0055	0.0069	0.0120	0.0086	0.0057	0.330	6.7	1.6	0.076	0.0054	0.074	30	32	0.13
Xylenes (Total)	58	9.9	mg/kg	NA	<0.0050	<0.0044	0.0025J	0.024	0.0048J	<0.0047	0.520	16	5.1	1.8	<0.0044	0.11	82	95	9.7
1,2,4-trimethylbenzene	30	0.0081	mg/kg	NA	<0.0050	<0.0044	<0.0053	<0.0051	<0.0057	<0.0047	<0.035	<0.33	0.11	0.098	<0.0044	<0.036	7.4	11	5.1
1,3,5-trimethylbenzene	27	0.0087	mg/kg	NA	<0.0050	<0.0044	<0.0053	<0.0051	<0.0057	<0.0047	<0.120	<1.1	0.14	0.13	<0.0044	<0.12	8.8	13	6.0
Acenaphthene	360	0.55	mg/kg	NA	<0.0049	<0.0048	<0.0048	<0.0047	<0.0047	<0.0048	<0.0044	<0.0047	<0.0047	<0.0049	<0.0047	<0.0046	<0.0050	<0.0047	<0.0048
Anthracene	1800	5.8	mg/kg	NA	<0.0049	<0.0048	<0.0048	<0.0047	<0.0047	<0.0048	<0.0044	<0.0047	<0.0047	<0.0049	<0.0047	<0.0046	<0.0050	<0.0047	<0.0048
Benzo(A)anthracene	1.1	0.011	mg/kg	NA	<0.0049	<0.0048	<0.0048	<0.0047	<0.0047	<0.0048	<0.0044	<0.0047	<0.0047	<0.0049	<0.0047	<0.0046	<0.0050	<0.0047	<0.0048
Benzo(B)fluoranthene	1.1	0.30	mg/kg	NA	<0.0049	<0.0048	<0.0048	<0.0047	<0.0047	<0.0048	<0.0044	<0.0047	<0.0047	<0.0049	<0.0047	<0.0046	<0.0050	<0.0047	<0.0048
Benzo(K)fluoranthene	11	2.9	mg/kg	NA	<0.0049	<0.0048	<0.0048	<0.0047	<0.0047	<0.0048	<0.0044	<0.0047	<0.0047	<0.0049	<0.0047	<0.0046	<0.0050	<0.0047	<0.0048
Benzo(A)pyrene	0.11	0.24	mg/kg	NA	<0.0049	0.0076	<0.0048	<0.0047	<0.0047	<0.0048	<0.0044	<0.0047	<0.0047	<0.0049	<0.0047	<0.0046	<0.0050	<0.0047	<0.0048
Chrysene	110	9.0	mg/kg	NA	<0.0049	<0.0048	<0.0048	<0.0047	<0.0047	<0.0048	<0.0044	<0.0047	<0.0047	<0.0049	<0.0047	<0.0046	<0.0050	<0.0047	<0.0048
Dibenzo(A,H)anthracene	0.11	0.096	mg/kg	NA	<0.0049	<0.0048	<0.0048	<0.0047	<0.0047	<0.0048	<0.0044	<0.0047	<0.0047	<0.0049	<0.0047	<0.0046	<0.0050	<0.0047	<0.0048
Fluoranthene	240	8.9	mg/kg	NA	<0.0049	<0.0048	<0.0048	<0.0047	<0.0047	<0.0048	<0.0044	<0.0047	<0.0047	<0.0049	<0.0047	<0.0046	<0.0050	<0.0047	<0.0048
Fluorene	240	5.4	mg/kg	NA	<0.0049	<0.0048	<0.0048	<0.0047	<0.0047	<0.0048	<0.0044	<0.0047	<0.0047	<0.0049	<0.0047	<0.0046	<0.0050	<0.0047	<0.0048
Indeno(1,2,3-cd)pyrene	1.1	0.98	mg/kg	NA	<0.0049	<0.0048	<0.0048	<0.0047	<0.0047	<0.0048	<0.0044	<0.0047	<0.0047	<0.0049	<0.0047	<0.0046	<0.0050	<0.0047	<0.0048
Naphthalene	2.0	0.0038	mg/kg	NA	<0.0049	<0.0048	<0.0048	0.0070	<0.0047	<0.0048	<0.0044	<0.0047	<0.0047	<0.0049	<0.0047	<0.0046	<0.0050	0.054	0.053
1-methylnaphthalene	18.0	0.0060	mg/kg	NA	<0.0049	<0.0048	<0.0048	0.012	<0.0047	<0.0048	<0.0044	<0.0047	<0.0047	<0.0049	<0.0047	<0.0046	<0.0050	0.027	0.014
2-methylnaphthalene	24.0	0.0190	mg/kg	NA	<0.0049	<0.0048	<0.0048	0.058	<0.0047	<0.0048	<0.0044	<0.0047	<0.0047	<0.0049	<0.0047	<0.0046	<0.0050	0.071	0.036
Pyrene	180	1.3	mg/kg	NA	<0.0049	<0.0048	<0.0048	<0.0047	<0.0047	<0.0048	<0.0044	<0.0047	<0.0047	<0.0049	<0.0047	<0.0046	<0.0050	<0.0047	<0.0048
Inorganics in Soil																			
Electrical Conductivity	<4		mmhos/cm	5.5	1.7	NA	NA	NA	NA	5.6	NA	NA	NA	NA	2.8	NA	NA	NA	NA
Sodium Absorption Ratio	<6		Unitless	1.2	6.4	NA	NA	NA	NA	6.7	NA	NA	NA	NA	6.8	NA	NA	NA	NA
pH	6-8.3		Unitless	8.21	9.55	NA	NA	NA	NA	8.83	NA	NA	NA	NA	8.76	NA	NA	NA	NA
Percent Moisture			Unitless	11	17	14	15	13	13	14	8.5	14	12	15	13	12	17	11	18
Metals in Soil																			
Arsenic	0.68	0.29	mg/kg	5.5	8.2	9.4	9.9	13	10	13	14	13	11	8.9	8.2	5.9	7.9	14	15
Barium total	15000	82	mg/kg	190	280	250	230	310	210	280	350	350	310	240	270	77	280	360	470
Boron	2.0	N/A	mg/L	0.91	2.1	1.1	0.73	0.66	0.35J	1.8	0.42J	0.37J	0.34J	0.42J	1.8	0.32	0.56	0.45	0.33J
Cadmium	71	0.38	mg/kg	0.34	0.55	0.49	0.46	0.47	0.78	0.55	0.86	0.40	0.48	0.45	1.0	0.45	0.39	0.38	0.3
Chromium (VI)	0.30	0.00067	mg/kg	<1.1	<1.2	<1.2	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.2	<1.1	<1.1	<1.2	<1.1	<1.1
Copper	3100	46	mg/kg	11	10	11	12	11	15	14	13	15	12	12	10	4.9	13	12	23
Lead	400	14	mg/kg	12	12	13	14	13	18	22	15	16	13	12	13	6.9	12	13	14
Nickel	1500	26	mg/kg	11	11	13	13	9.9	16	13	11	13	11	12	11	5.1	11	11	11
Selenium	390	0.26	mg/kg	<0.32	0.41	0.30J	0.44	0.54	<0.34	0.73	0.31	0.30	0.31J	0.36	0.43	<0.29	0.34J	0.31J	0.39
Silver	390	0.80	mg/kg	0.054J	0.044J	0.045J	0.054J	0.050J	0.051J	0.064J	0.057J	0.063J	0.058J	<0.32	0.045J	<0.29	<0.34	0.051J	0.079J
Zinc	23000	370	mg/kg	78	40	43	45	32	60	51	40	44	41	40	40	35	72	74	63

ND - Non Detect
NS - Not Sampled
Exceeds ECMC (formerly COGCC) Table 915-1 Standard
ppmv - Parts per million by volume
mmhos/cm - Millimhos per centimeter

Table 3

Bargath LLC - Cottonwood CS
Soil Data

			Sample Location	SB-03	SB-04	SB-04	SB-04	SB-04	SB-04	SB-04	SB-04	SB-04	SB-05	SB-05	SB-05	SB-05	SB-05	SB-05	SB-05
			Sample Depth (Feet)	55-60'	0-1'	15-20'	25-30'	35-39'	45-47'	55-60'	60-64'	68'	0-1'	15-18'	20-25'	35-40'	45-50'	55-60'	62-65'
			Date Sampled	1/28/23	1/3/23	1/26/23	1/27/23	1/27/23	1/27/23	1/27/23	1/27/23	1/27/23	1/4/23	1/26/23	1/26/23	1/26/23	1/26/23	1/26/23	1/26/23
Contaminant of Concern	**Table 915-1 Soil Screening Standards**	**Table 915-1 Soil to Groundwater Stds**	**Units**																
Organic Compounds in Soil																			
DRO	N/A	N/A	mg/kg	37	19J	24	96	110	170	83	26	620	<23	64	12J	58	170	80	230
GRO	N/A	N/A	mg/kg	890	<6.8	<4.9	<5.9	18	260	1,900	590	670	<6.7	<5.4	<5.3	<5.5	3.5	63	52
TPH (DRO+GRO)	500	500	mg/kg	927	19	24	96	128	430	1,983	616	1,290	<23	64	12J	58	174	143	282
Benzene	1.2	0.0026	mg/kg	0.26	0.0021J	0.0018J	0.0018J	<0.027	0.11	2.8	1.7	<0.17	0.0020J	0.0017J	0.0025J	0.0027J	<0.036	<0.037	0.041
Ethylbenzene	5.8	0.78	mg/kg	3.0	0.0026J	0.0024J	0.0033J	0.013J	0.89	7.7	3.2	1.2	0.0019J	<0.0020J	0.0025J	0.0018J	<0.036	<0.037	<0.041
Toluene	490	0.69	mg/kg	0.11	0.0059	0.0056	0.0066	<0.027	0.039	11	0.22	<0.17	0.0044J	<0.0044J	0.0053	0.0049J	<0.036	<0.037	0.28
Xylenes (Total)	58	9.9	mg/kg	28	<0.0022	0.0030J	0.0041J	<0.080	7.4	110	43	17	<0.0050	<0.0047	<0.0045	<0.0054	<0.036	<0.110	0.099J
1,2,4-trimethylbenzene	30	0.0081	mg/kg	7.9	<0.0050	<0.0045	<0.0051	<0.027	3.0	15	5.6	11	<0.0050	<0.0047	<0.0045	<0.0054	<0.110	<0.037	<0.041
1,3,5-trimethylbenzene	27	0.0087	mg/kg	9.7	<0.0050	<0.0045	<0.0051	<0.088	3.5	19	6.4	13	<0.0050	<0.0047	<0.0045	<0.0054	<0.120	0.094J	<0.140
Acenaphthene	360	0.55	mg/kg	<0.0052	<0.0045	<0.0046	<0.0046	<0.0045	<0.0047	<0.0052	<0.0051	<0.056	<0.0048	<0.0048	<0.0048	<0.0046	<0.0047	<0.0048	<0.0053
Anthracene	1800	5.8	mg/kg	<0.0052	<0.0045	<0.0046	<0.0046	<0.0045	<0.0047	<0.0052	<0.0051	<0.056	<0.0048	<0.0048	<0.0048	<0.0046	<0.0047	<0.0048	<0.0053
Benzo(A)anthracene	1.1	0.011	mg/kg	<0.0052	<0.0045	<0.0046	<0.0046	<0.0045	<0.0047	<0.0052	<0.0051	<0.056	<0.0048	<0.0048	<0.0048	<0.0046	<0.0047	<0.0048	<0.0053
Benzo(B)fluoranthene	1.1	0.30	mg/kg	<0.0052	<0.0045	<0.0046	<0.0046	<0.0045	<0.0047	<0.0052	<0.0051	<0.056	<0.0048	<0.0048	<0.0048	<0.0046	<0.0047	<0.0048	<0.0053
Benzo(K)fluoranthene	11	2.9	mg/kg	<0.0052	<0.0045	<0.0046	<0.0046	<0.0045	<0.0047	<0.0052	<0.0051	<0.056	<0.0048	<0.0048	<0.0048	<0.0046	<0.0047	<0.0048	<0.0053
Benzo(A)pyrene	0.11	0.24	mg/kg	<0.0052	<0.0045	<0.0046	0.0045J	0.0036J	<0.0047	<0.0052	<0.0051	<0.056	<0.0048	<0.0048	<0.0048	<0.0046	<0.0047	<0.0048	<0.0053
Chrysene	110	9.0	mg/kg	<0.0052	<0.0045	<0.0046	<0.0046	<0.0045	<0.0047	<0.0052	<0.0051	<0.056	<0.0048	<0.0048	<0.0048	<0.0046	<0.0047	<0.0048	<0.0053
Dibenzo(A,H)anthracene	0.11	0.096	mg/kg	<0.0052	<0.0045	<0.0046	<0.0046	0.0038J	<0.0047	<0.0052	<0.0051	<0.056	<0.0048	<0.0048	<0.0048	<0.0046	<0.0047	<0.0048	<0.0053
Fluoranthene	240	8.9	mg/kg	<0.0052	<0.0045	<0.0046	<0.0046	<0.0045	<0.0047	<0.0052	<0.0051	<0.056	<0.0048	<0.0048	<0.0048	<0.0046	<0.0047	<0.0048	<0.0053
Fluorene	240	5.4	mg/kg	<0.0052	<0.0045	<0.0046	<0.0046	<0.0045	<0.0047	<0.0052	<0.0051	<0.056	<0.0048	<0.0048	<0.0048	<0.0046	<0.0047	<0.0048	<0.0053
Indeno(1,2,3-cd)pyrene	1.1	0.98	mg/kg	<0.0052	<0.0045	<0.0046	<0.0046	<0.0045	<0.0047	<0.0052	<0.0051	<0.056	<0.0048	<0.0048	<0.0048	<0.0046	<0.0047	<0.0048	<0.0053
Naphthalene	2.0	0.0038	mg/kg	0.046	<0.0045	<0.0046	<0.0046	<0.0045	0.14	0.14	0.91	0.13	<0.0048	<0.0048	0.0080	<0.0046	<0.0047	<0.0048	<0.0053
1-methylnaphthalene	18.0	0.0060	mg/kg	0.0096	<0.0045	<0.0046	<0.0046	<0.0045	0.039	0.061	0.031	0.14	<0.0048	<0.0048	<0.0048	<0.0046	<0.0047	<0.0048	<0.0053
2-methylnaphthalene	24.0	0.0190	mg/kg	0.022	<0.0045	<0.0046	<0.0046	<0.0045	0.11	0.17	0.082	0.37	<0.0048	<0.0048	<0.0048	<0.0046	<0.0047	<0.0048	0.016
Pyrene	180	1.3	mg/kg	<0.0052	<0.0045	<0.0046	<0.0046	<0.0045	<0.0047	<0.0052	<0.0051	<0.056	<0.0048	<0.0048	<0.0048	<0.0046	<0.0047	<0.0048	<0.0053
Inorganics in Soil																			
Electrical Conductivity	<4		mmhos/cm	NA	3.3	NA	NA	NA	NA	NA	NA	NA	2.5	NA	NA	NA	NA	NA	NA
Sodium Absorption Ratio	<6		Unitless	NA	6.7	NA	NA	NA	NA	NA	NA	NA	8.3	NA	NA	NA	NA	NA	NA
pH	6-8.3		Unitless	NA	8.3	NA	NA	NA	NA	NA	NA	NA	9.3	NA	NA	NA	NA	NA	NA
Percent Moisture			Unitless	21	12	10	11	10	12	20	19	7.4	15	13	15	14	12	15	22
Metals in Soil																			
Arsenic	0.68	0.29	mg/kg	14	8.4	7.9	13	12	9.6	11	13	3.9	8.1	11	11	13	13	15.0	14
Barium total	15000	82	mg/kg	490	270	250	180	280	390	360	290	86	240	450	240	260	360	270	300
Boron	2.0	N/A	mg/L	0.29J	1.8	0.31	0.31J	0.39J	0.32J	0.33J	0.29J	0.10J	2.4	0.96	0.48	0.51	0.27J	0.28J	0.49J
Cadmium	71	0.38	mg/kg	0.2	0.37	0.42	0.32	0.43	0.42	0.42	0.32	0.086J	0.34	0.32	0.33	0.33	0.35	0.68	0.22
Chromium (VI)	0.30	0.00067	mg/kg	<1.3	<1.1	<1.1	<1.1	<1.1	<1.1	<1.2	<1.2	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.2	<1.2
Copper	3100	46	mg/kg	11	11	9.6	10	12	9.8	11	12	4.5	11	11	11	18	11	806	27
Lead	400	14	mg/kg	23	12	11	11	13	11	11	13	6.4	12	11	11	14	12	11	18
Nickel	1500	26	mg/kg	9	12	10	9.6	10	9.1	22	13	8.9	11	10	10	12	10	9.8	24
Selenium	390	0.26	mg/kg	0.62	0.38	<0.33	0.32J	<0.31	<0.30	<0.37	<0.38	<0.29	0.41	<0.29	0.31	<0.32	<0.29	<0.34	<0.32
Silver	390	0.80	mg/kg	0.12J	<0.35	0.048J	0.049J	0.047J	0.052J	<0.37	<0.38	<0.29	0.045J	0.049J	<0.30	0.062J	0.046J	<0.34	0.067J
Zinc	23000	370	mg/kg	81	38	36	32	34	33	45	38	20	39	32	37	42	33	30	53

ND - Non Detect
NS - Not Sampled
Exceeds ECMC (formerly COGCC) Table 915-1 Standard
ppmv - Parts per million by volume
mmhos/cm - Millimhos per centimeter

Table 3

Bargath LLC - Cottonwood CS
Soil Data

			Sample Location	SB-06	SB-06	SB-06	SB-06	SB-06	SB-06	SB-06	SB-07	SB-07	SB-07	SB-07	SB-07	SB-07	SB-08	SB-08	SB-08
			Sample Depth (Feet)	0-1'	15-20'	20-25'	30-35'	45-50'	52-57'	57-61'	0-1'	15-20'	25-30'	30-35'	40-47'	50-55'	0-1'	15-20'	25-30'
			Date Sampled	1/4/23	1/10/23	1/10/23	1/10/23	1/10/23	1/10/23	1/10/23	1/11/23	1/11/23	1/11/23	1/11/23	1/11/23	1/11/23	1/12/23	1/24/23	1/24/23
Contaminant of Concern	**Table 915-1 Soil Screening Standards**	**Table 915-1 Soil to Groundwater Stds**	**Units**																
Organic Compounds in Soil																			
DRO	N/A	N/A	mg/kg	12J	76	86	94	55	110	150	13J	44	12J	21J	70	240	10J	47	<23
GRO	N/A	N/A	mg/kg	<7.8	13	19	19	41	2,800	2,000	<5.3	<5.1	<5.4	<5.5	<5.6	<7.1	<5.3	<5.6	<7.0
TPH (DRO+GRO)	500	500	mg/kg	12	89	105	103	96	2,910	2,150	13	44	12	21	70	240	10	47	<23
Benzene	1.2	0.0026	mg/kg	0.0023J	0.10	0.11	0.076	0.12	2.3	1.0	0.0031J	0.0023J	0.0021J	<0.033	0.0026J	0.0019J	0.0020J	0.0020J	0.0024J
Ethylbenzene	5.8	0.78	mg/kg	0.0023J	0.19	0.22	0.21	0.27	11	5.4	0.0039J	0.0031J	0.0024J	<0.033	0.0023J	0.0037J	0.0018J	0.0035J	0.0021J
Toluene	490	0.69	mg/kg	0.0056	0.10	0.14	0.10	0.066	0.78	0.19	0.0084	0.0068	0.0051	<0.033	0.0050J	0.0065	0.0043J	0.0067	0.0050
Xylenes (Total)	58	9.9	mg/kg	<0.0049	2.5	2.8	2.8	2.0	160	76	0.0029J	0.0025J	<0.0046	<0.098	<0.0050	0.0028J	<0.0046	0.0036J	<0.0048
1,2,4-trimethylbenzene	30	0.0081	mg/kg	<0.0049	0.094	0.13	0.16	0.68	26	16	<0.0052	<0.0053	<0.0046	<0.033	<0.0050	<0.0058	<0.0046	<0.0049	<0.0048
1,3,5-trimethylbenzene	27	0.0087	mg/kg	<0.0049	0.12J	0.15	0.19	0.96	31	20	<0.0052	<0.0053	<0.0046	<0.11	<0.0050	<0.0058	<0.0046	<0.0049	<0.0048
Acenaphthene	360	0.55	mg/kg	<0.0048	<0.0045	<0.0045	<0.0045	<0.0046	<0.022	<0.022	<0.0048	<0.0043	<0.0047	<0.0048	<0.0047	<0.0051	<0.0049	<0.0046	<0.0048
Anthracene	1800	5.8	mg/kg	<0.0048	<0.0045	<0.0045	<0.0045	<0.0046	<0.022	<0.022	<0.0048	<0.0043	<0.0047	<0.0048	<0.0047	<0.0051	<0.0049	<0.0046	<0.0048
Benzo(A)anthracene	1.1	0.011	mg/kg	<0.0048	<0.0045	<0.0045	<0.0045	<0.0046	<0.022	<0.022	<0.0048	<0.0043	<0.0047	<0.0048	<0.0047	<0.0051	<0.0049	<0.0046	<0.0048
Benzo(B)fluoranthene	1.1	0.30	mg/kg	<0.0048	<0.0045	<0.0045	<0.0045	<0.0046	<0.022	<0.022	<0.0048	<0.0043	<0.0047	<0.0048	<0.0047	<0.0051	<0.0049	<0.0046	<0.0048
Benzo(K)fluoranthene	11	2.9	mg/kg	<0.0048	<0.0045	<0.0045	<0.0045	<0.0046	<0.022	<0.022	<0.0048	<0.0043	<0.0047	<0.0048	<0.0047	<0.0051	<0.0049	<0.0046	<0.0048
Benzo(A)pyrene	0.11	0.24	mg/kg	<0.0048	<0.0045	<0.0045	<0.0045	<0.0046	<0.022	<0.022	<0.0048	<0.0043	<0.0047	<0.0048	<0.0047	<0.0051	<0.0049	<0.0046	<0.0048
Chrysene	110	9.0	mg/kg	<0.0048	<0.0045	<0.0045	<0.0045	<0.0046	<0.022	<0.022	<0.0048	<0.0043	<0.0047	<0.0048	<0.0047	<0.0051	<0.0049	<0.0046	<0.0048
Dibenzo(A,H)anthracene	0.11	0.096	mg/kg	<0.0048	<0.0045	<0.0045	<0.0045	<0.0046	<0.022	<0.022	<0.0048	<0.0043	<0.0047	<0.0048	<0.0047	<0.0051	<0.0049	<0.0046	<0.0048
Fluoranthene	240	8.9	mg/kg	<0.0048	<0.0045	<0.0045	<0.0045	<0.0046	<0.022	<0.022	<0.0048	<0.0043	<0.0047	<0.0048	<0.0047	<0.0051	<0.0049	<0.0046	<0.0048
Fluorene	240	5.4	mg/kg	<0.0048	<0.0045	<0.0045	<0.0045	<0.0046	<0.022	<0.022	<0.0048	<0.0043	<0.0047	<0.0048	<0.0047	<0.0051	<0.0049	<0.0046	<0.0048
Indeno(1,2,3-cd)pyrene	1.1	0.98	mg/kg	<0.0048	<0.0045	<0.0045	<0.0045	<0.0046	<0.022	<0.022	<0.0048	<0.0043	<0.0047	<0.0048	<0.0047	<0.0051	<0.0049	<0.0046	<0.0048
Naphthalene	2.0	0.0038	mg/kg	<0.0048	<0.0045	<0.0045	<0.0045	0.017	0.19	0.10	<0.0048	<0.0043	<0.0047	<0.0048	<0.0047	<0.0051	<0.0049	<0.0046	<0.0048
1-methylnaphthalene	18.0	0.0060	mg/kg	<0.0048	0.0034J	<0.0045	<0.0045	0.018	0.098	0.090	<0.0048	<0.0043	<0.0047	<0.0048	<0.0047	<0.0051	<0.0049	<0.0046	<0.0048
2-methylnaphthalene	24.0	0.0190	mg/kg	<0.0048	<0.0045	<0.0045	<0.0045	0.020	0.17	0.15	<0.0048	<0.0043	<0.0047	<0.0048	<0.0047	<0.0051	<0.0049	<0.0046	<0.0048
Pyrene	180	1.3	mg/kg	<0.0048	<0.0045	<0.0045	<0.0045	<0.0046	<0.022	<0.022	<0.0048	<0.0043	<0.0047	<0.0048	<0.0047	<0.0051	<0.0049	<0.0046	<0.0048
Inorganics in Soil																			
Electrical Conductivity	<4		mmhos/cm	2.6	NA	NA	NA	NA	NA	NA	2.30	NA	NA	NA	NA	NA	1.1	NA	NA
Sodium Absorption Ratio	<6		Unitless	6.8	NA	NA	NA	NA	NA	NA	6.1	NA	NA	NA	NA	NA	6.9	NA	NA
pH	6-8.3		Unitless	9.1	NA	NA	NA	NA	NA	NA	9.3	NA	NA	NA	NA	NA	9.54	NA	NA
Percent Moisture			Unitless	14	8.7	8.2	7.2	10	18	18	15	5.4	14	12	12	18	16	11	14
Metals in Soil																			
Arsenic	0.68	0.29	mg/kg	11	13	12	11	6.0	13	33	11	14	8.4	8.0	14	25	9.1	16	6.2
Barium total	15000	82	mg/kg	130	300	330	360	450	320	340	270	250	240	230	290	380	240	260	270
Boron	2.0	N/A	mg/L	2.3	0.31J	0.28J	0.32J	0.23J	0.33J	0.33J	1.50	0.34J	1.2	0.95	0.26J	0.046	1.0	0.38J	0.44J
Cadmium	71	0.38	mg/kg	0.33	0.49	0.64	0.35	0.53	0.40	0.46	0.37	0.37	0.52	0.45	0.39	0.38	0.42	0.55J	0.47J
Chromium (VI)	0.30	0.00067	mg/kg	<1.2	<1.0	<1.1	<1.0	<1.1	<1.2	<1.2	<1.1	<1.0	<1.1	<1.1	<1.1	<1.2	<1.1	<1.1	<1.1
Copper	3100	46	mg/kg	8.3	11	12	12	6.4	16	13	12	12	11	11	14	22	13	21	9.4
Lead	400	14	mg/kg	9.0	12	13	12	9.2	17	19	17	13	13	13	14	21	12	16	11
Nickel	1500	26	mg/kg	9.6	9.6	9.5	9.1	8.1	14	13	11	11	12	13	10	13	12	11	11
Selenium	390	0.26	mg/kg	0.32	<0.34	0.26J	0.32	<0.30	0.32J	0.42	0.46	<0.28	0.28J	0.31J	0.31J	0.42	0.36	<0.34	0.47
Silver	390	0.80	mg/kg	<0.31	0.052J	0.062J	0.060J	0.045J	0.058J	<0.34	0.12J	0.057J	0.053J	0.044J	0.060J	0.075J	<0.34	0.049J	<0.34
Zinc	23000	370	mg/kg	40	35	32	31	27	42	39	37	43	40	43	34	46	43	45	39

ND - Non Detect
NS - Not Sampled
Exceeds ECMC (formerly COGCC) Table 915-1 Standard
ppmv - Parts per million by volume
mmhos/cm - Millimhos per centimeter

Table 3

Bargath LLC - Cottonwood CS
Soil Data

			Sample Location	SB-08	SB-08	SB-08	SB-09	SB-09	SB-09	SB-09	SB-09	SB-09	SB-09	SB-10	SB-10	SB-10	SB-10	SB-10	SB-10
			Sample Depth (Feet)	35-40'	45-50'	50-52'	0-1'	15-20'	25-29'	35-40'	40-50'	55-60'	60-65'	0-1'	15-20'	25-30'	30-35'	45-50'	55-60'
			Date Sampled	1/24/23	1/24/23	1/24/23	1/12/23	1/25/23	1/25/23	1/25/23	1/25/23	1/25/23	1/25/23	1/12/23	1/24/23	1/24/23	1/24/23	1/24/23	1/24/23
Contaminant of Concern	**Table 915-1 Soil Screening Standards**	**Table 915-1 Soil to Groundwater Stds**	**Units**																
Organic Compounds in Soil																			
DRO	N/A	N/A	mg/kg	34	140	59	33	42	16J	100	87	34	<23	28	18J	47	85	11J	<25
GRO	N/A	N/A	mg/kg	<7.7	<5.9	<3.0	<5.7	<5.2	<2.0	<5.9	<5.5	48	2.8	<6.2	<6.3	<7.0	<6.0	28	280
TPH (DRO+GRO)	500	500	mg/kg	34	140	59	33	42	16J	100	87	82	2.8	28	18J	47	85	39	280
Benzene	1.2	0.0026	mg/kg	0.0028J	0.0018J	<0.038	0.0015J	0.0021J	0.0025J	0.0017J	<0.032	0.22	0.17	0.0016J	0.0038J	0.0035J	0.0035J	<0.025	0.41
Ethylbenzene	5.8	0.78	mg/kg	0.0049J	0.0057	<0.038	0.0014J	0.0018J	0.0025J	0.0028J	<0.032	0.30	0.054	0.0013J	0.0028J	0.0032J	0.0026J	0.10	0.17
Toluene	490	0.69	mg/kg	0.0088	0.0093	<0.038	0.0033J	0.012	0.0059	0.0063	0.24	<0.030	<0.035	0.0033J	0.0053	0.0060	0.0050	<0.025	<0.035
Xylenes (Total)	58	9.9	mg/kg	0.0040J	0.0046J	<0.11	<0.0043	0.0087	0.0022J	0.0026J	0.39	1.8	0.51	<0.0047	0.0078	0.0057	0.0061	1.7	6.4
1,2,4-trimethylbenzene	30	0.0081	mg/kg	<0.0054	<0.0056	<0.038	<0.0043	<0.0052	<0.0046	<0.0054	<0.032	0.72	0.13	<0.0047	<0.0053	<0.0052	<0.0050	0.38	1.2
1,3,5-trimethylbenzene	27	0.0087	mg/kg	<0.0054	<0.0056	<0.13	<0.0043	<0.0052	<0.0046	<0.0054	<0.11	0.99	0.20	<0.0047	<0.0053	<0.0052	<0.0050	0.48	1.6
Acenaphthene	360	0.55	mg/kg	<0.0045	<0.030	<0.0047	<0.0048	<0.0045	<0.0045	<0.0045	<0.0045	<0.0046	<0.0050	<0.0047	<0.0046	<0.0050	<0.0046	<0.0051	<0.0051
Anthracene	1800	5.8	mg/kg	<0.0045	<0.030	<0.0047	<0.0048	<0.0045	<0.0045	<0.0045	<0.0045	<0.0046	<0.0050	<0.0047	<0.0046	<0.0050	<0.0046	<0.0051	<0.0051
Benzo(A)anthracene	1.1	0.011	mg/kg	<0.0045	<0.030	<0.0047	<0.0048	<0.0045	<0.0045	<0.0045	<0.0045	<0.0046	<0.0050	<0.0047	<0.0046	<0.0050	<0.0046	<0.0051	<0.0051
Benzo(B)fluoranthene	1.1	0.30	mg/kg	<0.0045	<0.030	<0.0047	<0.0048	<0.0045	<0.0045	<0.0045	<0.0045	<0.0046	<0.0050	<0.0047	<0.0046	<0.0050	<0.0046	<0.0051	<0.0051
Benzo(K)fluoranthene	11	2.9	mg/kg	<0.0045	<0.030	<0.0047	<0.0048	<0.0045	<0.0045	<0.0045	<0.0045	<0.0046	<0.0050	<0.0047	<0.0046	<0.0050	<0.0046	<0.0051	<0.0051
Benzo(A)pyrene	0.11	0.24	mg/kg	<0.0045	<0.030	<0.0047	<0.0048	<0.0045	<0.0045	<0.0045	<0.0045	<0.0046	<0.0050	<0.0047	<0.0046	<0.0050	<0.0046	<0.0051	<0.0051
Chrysene	110	9.0	mg/kg	<0.0045	<0.030	<0.0047	<0.0048	<0.0045	<0.0045	<0.0045	<0.0045	<0.0046	<0.0050	<0.0047	<0.0046	<0.0050	<0.0046	<0.0051	<0.0051
Dibenzo(A,H)anthracene	0.11	0.096	mg/kg	<0.0045	<0.030	<0.0047	<0.0048	<0.0045	<0.0045	<0.0045	<0.0045	<0.0046	<0.0050	<0.0047	<0.0046	<0.0050	<0.0046	<0.0051	<0.0051
Fluoranthene	240	8.9	mg/kg	<0.0045	<0.030	<0.0047	<0.0048	<0.0045	<0.0045	<0.0045	<0.0045	<0.0046	<0.0050	<0.0047	<0.0046	<0.0050	<0.0046	<0.0051	<0.0051
Fluorene	240	5.4	mg/kg	<0.0045	<0.030	<0.0047	<0.0048	<0.0045	<0.0045	<0.0045	<0.0045	<0.0046	<0.0050	<0.0047	<0.0046	<0.0050	<0.0046	<0.0051	<0.0051
Indeno(1,2,3-cd)pyrene	1.1	0.98	mg/kg	<0.0045	<0.030	<0.0047	<0.0048	<0.0045	<0.0045	<0.0045	<0.0045	<0.0046	<0.0050	<0.0047	<0.0046	<0.0050	<0.0046	<0.0051	<0.0051
Naphthalene	2.0	0.0038	mg/kg	<0.0045	<0.030	<0.0047	<0.0048	<0.0045	<0.0045	<0.0045	<0.0045	<0.0046	<0.0050	<0.0047	<0.0046	<0.0050	<0.0046	<0.0051	0.0086
1-methylnaphthalene	18.0	0.0060	mg/kg	<0.0045	<0.030	<0.0047	<0.0048	<0.0045	<0.0045	<0.0045	<0.0045	<0.0046	<0.0050	<0.0047	<0.0046	<0.0050	<0.0046	<0.0051	<0.0051
2-methylnaphthalene	24.0	0.0190	mg/kg	<0.0045	<0.030	<0.0047	<0.0048	<0.0045	<0.0045	<0.0045	<0.0045	<0.0046	<0.0050	<0.0047	<0.0046	<0.0050	<0.0046	<0.0051	<0.0051
Pyrene	180	1.3	mg/kg	<0.0045	<0.030	<0.0047	<0.0048	<0.0045	<0.0045	<0.0045	<0.0045	<0.0046	<0.0050	<0.0047	<0.0046	<0.0050	<0.0046	<0.0051	<0.0051
Inorganics in Soil																			
Electrical Conductivity	<4		mmhos/cm	NA	NA	NA	1.7	NA	NA	NA	NA	NA	NA	2.6	NA	NA	NA	NA	NA
Sodium Absorption Ratio	<6		Unitless	NA	NA	NA	4.4	NA	NA	NA	NA	NA	NA	11	NA	NA	NA	NA	NA
pH	6-8.3		Unitless	NA	NA	NA	8.91	NA	NA	NA	NA	NA	NA	9.12	NA	NA	NA	NA	NA
Percent Moisture			Unitless	10	11	12	13	11	10	8.6	9.4	15	17	12	11	16	10	19	19
Metals in Soil																			
Arsenic	0.68	0.29	mg/kg	9.2	7.0	8.1	6.7	7.5	8.8	9.8	9.9	5.7	3.0	6.9	5.8	9.8	15	14	4.2
Barium total	15000	82	mg/kg	310	410	250	240	210	200	350	280	270	220	220	190	240	220	320	260
Boron	2.0	N/A	mg/L	0.53	0.91	1.1	0.75	1.2	1.3	0.42J	0.51	0.71	0.73	1.2	0.86	1.3	0.47	1.2	0.54
Cadmium	71	0.38	mg/kg	0.63J	0.37	0.60	0.39	0.35	0.41	0.35	0.53	0.39	0.43	0.34	0.36	0.43	0.38	0.39	0.42
Chromium (VI)	0.30	0.00067	mg/kg	<1.1	<1.1	<1.1	<1.2	1.2	1.6	1..0J	1.6	<1.2	3.4	<1.1	<1.1	1.2	1.3	<1.2	2.7
Copper	3100	46	mg/kg	9.8	13	10	11	8.3	10	11	11	9.0	9.3	11	8.9	11	11	14	8.3
Lead	400	14	mg/kg	11	11	10	12	10	12	10	12	13	13	11	9.0	12	12	14	11
Nickel	1500	26	mg/kg	11	10	9.4	11	9.2	11	8.6	9.6	12	16	11	9.1	11	9.4	14	12
Selenium	390	0.26	mg/kg	0.32	<0.30	<0.31	0.32J	<0.31	<0.32	0.28J	<0.30	0.42	<0.32	0.37	<0.32	<0.32	0.39	<0.38	0.36
Silver	390	0.80	mg/kg	<0.30	0.061J	0.046J	0.051J	0.044J	0.048J	0.066J	0.058J	<0.34	<0.32	0.047J	0.043J	0.061J	0.070J	<0.38	<0.32
Zinc	23000	370	mg/kg	37	32	30	39	29	39	32	34	40	52	38	30	38	28	42	42

ND - Non Detect
NS - Not Sampled
Exceeds ECMC (formerly COGCC) Table 915-1 Standard
ppmv - Parts per million by volume
mmhos/cm - Millimhos per centimeter

Table 3

Bargath LLC - Cottonwood CS
Soil Data

	Sample Location			SB-10	MW-08	MW-09
	Sample Depth (Feet)			60-65'	50-55"	45-50"
	Date Sampled			1/25/23	3/27/24	3/27/24
Contaminant of Concern	**Table 915-1 Soil Screening Standards**	**Table 915-1 Soil to Groundwater Stds**	**Units**			
Organic Compounds in Soil						
DRO	N/A	N/A	mg/kg	<23	<2.9	22
GRO	N/A	N/A	mg/kg	<5.3	<5.5	<4.4
TPH (DRO+GRO)	500	500	mg/kg	<23	<5.5	22.0
Benzene	1.2	0.0026	mg/kg	<0.031	0.002J	0.0059J
Ethylbenzene	5.8	0.78	mg/kg	<0.031	0.0020J	0.0060J
Toluene	490	0.69	mg/kg	<0.031	0.01	0.016
Xylenes (Total)	58	9.9	mg/kg	<0.093	0.0073	0.0069J
1,2,4-trimethylbenzene	30	0.0081	mg/kg	<0.031	<0.0017	<0.0054
1,3,5-trimethylbenzene	27	0.0087	mg/kg	<0.10	<0.0015	<0.0048
Acenaphthene	360	0.55	mg/kg	<0.0049	NS	NS
Anthracene	1800	5.8	mg/kg	<0.0049	NS	NS
Benzo(A)anthracene	1.1	0.011	mg/kg	<0.0049	NS	NS
Benzo(B)fluoranthene	1.1	0.30	mg/kg	<0.0049	NS	NS
Benzo(K)fluoranthene	11	2.9	mg/kg	<0.0049	NS	NS
Benzo(A)pyrene	0.11	0.24	mg/kg	<0.0049	NS	NS
Chrysene	110	9.0	mg/kg	<0.0049	NS	NS
Dibenzo(A,H)anthracene	0.11	0.096	mg/kg	<0.0049	NS	NS
Fluoranthene	240	8.9	mg/kg	<0.0049	NS	NS
Fluorene	240	5.4	mg/kg	<0.0049	NS	NS
Indeno(1,2,3-cd)pyrene	1.1	0.98	mg/kg	<0.0049	NS	NS
Naphthalene	2.0	0.0038	mg/kg	<0.0049	<0.002	<0.0064
1-methylnaphthalene	18.0	0.0060	mg/kg	<0.0049	NS	NS
2-methylnaphthalene	24.0	0.0190	mg/kg	<0.0049	NS	NS
Pyrene	180	1.3	mg/kg	<0.0049	NS	NS
Inorganics in Soil						
Electrical Conductivity	<4		mmhos/cm	NA	NA	NA
Sodium Absorption Ratio	<6		Unitless	NA	NA	NA
pH	6-8.3		Unitless	NA	NA	NA
Percent Moisture			Unitless	15	14	7
Metals in Soil						
Arsenic	0.68	0.29	mg/kg	2.5	NS	NS
Barium total	15000	82	mg/kg	170	NS	NS
Boron	2.0	N/A	mg/L	0.69	NS	NS
Cadmium	71	0.38	mg/kg	0.41	NS	NS
Chromium (VI)	0.30	0.00067	mg/kg	<1.2	NS	NS
Copper	3100	46	mg/kg	9.5	NS	NS
Lead	400	14	mg/kg	12	NS	NS
Nickel	1500	26	mg/kg	15	NS	NS
Selenium	390	0.26	mg/kg	<0.32	NS	NS
Silver	390	0.80	mg/kg	<0.32	NS	NS
Zinc	23000	370	mg/kg	50	NS	NS

ND - Non Detect
NS - Not Sampled
Exceeds ECMC (formerly COGCC) Table 915-1 Standard
ppmv - Parts per million by volume
mmhos/cm - Millimhos per centimeter

Boring Logs

Form No. GWS-31 02/2024	**WELL CONSTRUCTION AND YIELD ESTIMATE REPORT** State of Colorado, Office of the State Engineer 1313 Sherman St., Room 818, Denver, CO 80203 303.866.3581 dwr.colorado.gov and dwrpermitsonline@state.co.us	For Office Use Only

1. Well Permit Number: 4000943-MH **Receipt Number:** 04000943

2. Owner's Well Designation: MW-08

3. Well Owner Name: Williams (Baragath LLC)

4. Well Location Street Address: Willaims - Cottonwood CS

5. As Built GPS Well Location (required): ☐ Zone 12 ☒ Zone 13 Easting: 39.48130 Northing: -107.9921779

6. Legal Well Location: SW 1/4, NW 1/4, Sec., 34 Twp. 6 ☐ N or S ☒, Range 95 ☐ E or W ☒, S P.M.
County: Garfield
Subdivision: _____, Lot ____, Block ____, Filing (Unit) ____

7. Ground Surface Elevation: 5247.47 feet **Date Completed:** 03/28/2024 **Drilling Method:** GDI Drilling

8. Completed Aquifer Name : Alluvial **Total Depth:** 68' feet **Depth Completed:** 68' feet

9. Advance Notification: Was Notification Required Prior to Construction? ☒ Yes ☐ No, Date Notification Given: 03/19/2024

10. Aquifer Type: (Check one)
☐ Type I (One Confining Layer) ☐ Type I (Multiple Confining Layers) ☐ Laramie-Fox Hills
☐ Type II (Not overlain by Type III) ☐ Type II (Overlain by Type III) ☒ Type III (alluvial/colluvial)

11. Geologic Log:

Depth	Type	Grain Size	Color	Water Loc.
0-8' (pothole)	Interbedded Silts	gravel to Cob	Lgt brn	
8-10'	Silt w/Sands	Cob to Peb	Yel Orng	
10-20'	Silt (Cob @18')	sand to grav	Lgt brn	
20-30'	Silt(SandStn@28)	Sand to Grav	Lgt brn	
30-35'	Clay	Fine to sand	Lgt brn	
35-40'	Silt	int. Sands	Lgt brn	
40-50'	Silt w/clay	fine to sand	Fe; Lgt brn	
48'	Siltstone	fine	Lgt Yel/Wht	
50-60'	Clay	Fine to sand	Brn	
56'	Pebble lense	sand to peb		Wet
58'	Wrx SandStn	fine	lgt gry	
60-68'	Clay w/Sand	fine	Brn	
63'	Cobble/Sand	grav to Cob	Brn	
64-68'	Lean Clay	fine to sand	Lgt brn	
69-70'	Shale		Blk	

12. Hole Diameter (in.)

	From (ft)	To (ft)
6.0	0-68'	

13. Plain Casing

OD (in)	Kind	Wall Size (in)	From (ft)	To (ft)
2.0	PVC	0.010	+4	48'

Perforated Casing Screen Slot Size (in): ____

OD (in)	Kind	Wall Size (in)	From (ft)	To (ft)
2.0	PVC	0.010	48'	68'

14. Filter Pack:
Material ____
Size ____
Interval ____

15. Packer Placement:
Type ____
Depth ____

16. Grouting Record

Material	Amount	Density	Interval	Method

Remarks:

17. Disinfection: Type NA Amt. Used NA

18. Well Yield Estimate Data: ☐ Check box if Test Data is submitted on Form Number GWS-39, Well Yield Test Report
Well Yield Estimate Method: NA
Static Level: 56.32
Date/Time measured: 03/28/2024
Estimated Yield (gpm) ____
Estimate Length (hrs) ____
☐ Dry Hole, Keep Permit Active
☐ Dry Hole, Mark "Well Constructed"

Remarks:

19. I have read the statements made herein and know the contents thereof, and they are true to my knowledge. This document is signed (or name entered if filing online) and certified in accordance with Rule 17.4 of the Water Well Construction Rules, 2 CCR 402 2. The filing of a document that contains false statements is a violation of section 37 91 108(1)(e), C.R.S., and is punishable by fines up to $1,000 and/or revocation of the contracting license. If filing online the State Engineer considers the entry of the licensed contractor's name to be compliance with Rule 17.4.

Company Name:	Email:	Phone w/area code:	License Number:
APTIM	Jason.Dowdy@aptim.com	303.910.7478	

Mailing Address: 2000 South Colorado Blvd, Annex Suite 260

Sign (or enter name if filing online)	Print Name and Title	Date:
	Jason Dowdy, REM; Project Manager/Geologist	07/24/2024

Form No. GWS-31 02/2024	**WELL CONSTRUCTION AND YIELD ESTIMATE REPORT** State of Colorado, Office of the State Engineer 1313 Sherman St., Room 818, Denver, CO 80203 303.866.3581 dwr.colorado.gov and dwrpermitsonline@state.co.us	For Office Use Only

1. Well Permit Number: 4000943-MH **Receipt Number:** 04000943

2. Owner's Well Designation: MW-09

3. Well Owner Name: Williams (Baragath LLC)

4. Well Location Street Address: Willaims - Cottonwood CS

5. As Built GPS Well Location (required): ☐ Zone 12 ☒ Zone 13 Easting: 39.48130 Northing: -107.9921779

6. Legal Well Location: SW 1/4, NW 1/4, Sec., 34 Twp. 6 ☐ N or S ☒, Range 95 ☐ E or W ☒, S P.M.

County: Garfield

Subdivision: _____, Lot ____, Block ____, Filing (Unit) ____

7. Ground Surface Elevation: 5244.44 feet **Date Completed:** 03/26/2024 **Drilling Method:** GDI Drilling

8. Completed Aquifer Name : Alluvial **Total Depth:** 70' feet **Depth Completed:** 70' feet

9. Advance Notification: Was Notification Required Prior to Construction? ☒ Yes ☐ No, Date Notification Given: 03/19/2024

10. Aquifer Type: (Check one) ☐ Type I (One Confining Layer) ☐ Type I (Multiple Confining Layers) ☐ Laramie-Fox Hills ☐ Type II (Not overlain by Type III) ☐ Type II (Overlain by Type III) ☒ Type III (alluvial/colluvial)

11. Geologic Log:

Depth	Type	Grain Size	Color	Water Loc.
0-8' (pothole)	Interbedded Silts	gravel to Cob	Lgt brn	
8-10'	Silt w/Sands	Cob to Peb	Yel Orng	
10-20'	Silt (Cob @10')	sand to grav	Lgt brn	
20-30'	Silt	Sand to Grav	Lgt brn	
30-35'	Silt	Fine to sand	Lgt brn	
35-40'	Silt	int. Sands	Lgt brn	
40-50'	Silt w/sands	fine to sand	Fe; Lgt brn	
46-47'	Sand	fine to peb	Lgt Yel/Wht	moist
50-60'	Silt	Fine to sand	Brn	
55'	Cobbles			Wet
60-68'	Lean Clay	fine	Brn	
68-70'	Shale		Blk	

12. Hole Diameter (in.)

	From (ft)	To (ft)
6.0	0-70'	

13. Plain Casing

OD (in)	Kind	Wall Size (in)	From (ft)	To (ft)
2.0	PVC	0.010	+4	46'

Perforated Casing Screen Slot Size (in): ____

OD (in)	Kind	Wall Size (in)	From (ft)	To (ft)
2.0	PVC	0.010	46'	70'

14. Filter Pack:

Material: Silica

Size: 10/20

Interval: 44-70'

15. Packer Placement:

Type: NA

Depth: NA

16. Grouting Record

Material	Amount	Density	Interval	Method
Bentonite		3/8"	2-44'	OH
neat cement			0-2'	

Remarks:

17. Disinfection: Type NA Amt. Used NA

18. Well Yield Estimate Data: ☐ Check box if Test Data is submitted on Form Number GWS-39, Well Yield Test Report

Well Yield Estimate Method: NA

Static Level: 59.79

Date/Time measured: 03/27/2024

Estimated Yield (gpm) ____

Estimate Length (hrs) ____

☐ Dry Hole, Keep Permit Active

☐ Dry Hole, Mark "Well Constructed"

Remarks:

19. I have read the statements made herein and know the contents thereof, and they are true to my knowledge. This document is signed (or name entered if filing online) and certified in accordance with Rule 17.4 of the Water Well Construction Rules, 2 CCR 402 2. The filing of a document that contains false statements is a violation of section 37 91 108(1)(e), C.R.S., and is punishable by fines up to $1,000 and/or revocation of the contracting license. If filing online the State Engineer considers the entry of the licensed contractor's name to be compliance with Rule 17.4.

Company Name:	Email:	Phone w/area code:	License Number:
APTIM	Jason.Dowdy@aptim.com	303.910.7478	

Mailing Address: 2000 South Colorado Blvd, Annex Suite 260

Sign (or enter name if filing online)	Print Name and Title	Date:
	Jason Dowdy, REM; Project Manager/Geologist	07/24/2024

Attachment A
Laboratory Analytical Reports