

TEP BWQ Groundwater Monitoring Field Form

Project Information			
Project:	TEP BWQ	Sample Purpose:	6th Year COA
Site Name (Well Pad):	Monument Ridge Pad	Site API:	05-045-20527
Station Name:	Mikowski 64327-F	Sample Date:	6/7/21
COGCC Facility ID:	752937	Start Time:	0935
Field Sample ID:	Mikowski 64327-F	End Time:	1205
Landowner Name:	Matthew Mikowski	Sample Time:	1135
Landowner Address:	304 CR 303, Parachute	Sample Team:	TDS
Water Right/Well Owner:	Matthew Mikowski	Sampler:	TDS
Water Right/Well Permit:	64327-F	Lead Signature/Date:	<i>[Signature]</i> 7/9/21
Receipt Number:	9502 457B		

Station Information			
Station Description: Spigot next to water softener in garage			
Approximate Distance to Well Pad (from well location): 1100 ft E			
Station Type: Well / Spring / Seep / Other:	Water Use: Domestic / Irrigation /		
Sampling Location: Kitchen Tap / Pipe / Well House / Hose bib / Hydrant / Other:			
GPS Well Location: Zone	x 39.431269	y -108.029281	z 1660.19
GPS Sampling Location: Zone	x 39.431396	y -108.028990	z 1667.26
Total Depth (ft):	145	Static Depth to Water (ft):	99.10
Total Volume x 3 (gal):	169.85	Total Volume Purged (gal):	171
		Well diameter (in):	5.5

Weather Conditions	
Sky: Clear / Scattered / Cloudy / Overcast	Estimated Air Temp (deg F): 75°F
Precipitation: None / Light / Moderate / Heavy	Precip Type: None / Rain / Sleet / Hail / Snow
Wind: Calm / Light / Mod / Strong	Wind Speed/Direction: Q

Field Measurements							
Parameter	Units	Reading	Time	Flag Code	Instrument	In-situ or Container	Comments
Water Temp	deg C	14.6	1139		YSI Pro1	Container	
pH	s.u.	7.71					
Sp. Conductivity	uS/cm	611.4					
Conductivity	uS/cm	491.9					
DO Saturation	%	91.1					
DO	mg/L	9.12					
Baro Press	mmHg	620.7					
ORP	RmV	198.1					
Turbidity	NTU	0.90	1146	AV	MicroTPI		
Discharge							1.27, 0.78, 0.66

Color:	Clear / White / Yellow / Brown / Green / Blue / Other	Light / Med / Dark
Odor:	None / Mild / Mod / Strong	
Effervescence:	None / Mild / Mod / Strong	Bubbles: None / Low / Mod / High
Sediment:	None / Light / Mod / Heavy	VOA Headspace: None / ≤ Pea Size / ≥ Pea Size

Lab Analysis:	Rule 609 / COA 9 / COA 22 / Other
Field Filtered:	Yes / No
Filter Size:	N/A
No. Filters used:	N/A

Flag Codes: NM (not measured), E (estimated), N/A (not applicable), I (insufficient sample), Q (uncertain value), Y (calculated value), AV (averaged value), EC (exceeds calibration range), P (probe malfunction), NS (not stabilized), VAR (variable), OT (other flag to be defined later)

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Landowner Comments on water quality:

Sample location is pre-softener

Additional information:

0955: Pre purge DTW: 99.10ft BTOC
 1149: Post sampl DTW: 99.13ft BTOC

Calibration Information			Date: 6/7/21			Location: Office		
Instrument	Parameter	Units	Time	Calibration Standard Value	Calibration Standard Temp (°C)	Instrument Reading of Standard	Adjusted Reading	Comments
YSI Pro1	pH	s.u.	0818	7.00	22.9	7.02		
	pH	s.u.	0820	4.01	22.8	4.01		
	pH	s.u.	0823	10.01	22.8	10.00		
	SpC	uS/cm	0814	430	23.1	467.6	430	
	SpC	uS/cm						
	DO	%	0830	637.4	75.8	22.5	83.9	
	DO	%						
	ORP	RmV	0833	254.14	7.2	250.3	254.7	
	Turbidity	NTU						

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Well Purging Information

Date: 6/7/21 Purge Method: 3 casing volumes and Parameter Stabilization

Total Depth, ft (d_t): 145 Static Depth to Water, ft (d_w): 99.10ft Sample/Set Depth (ft):

Casing Radius (in): 5.5"
Diameter

Total Volume (gal) or ft³: 56.62 Total Volume x 3 (gal or ft³): 169.85

1 ft³ = 7.48 gal

Casing Volume = $\pi r^2(d_t - d_w)(7.48) = 56.62 \text{ gal}$

$\pi \left(\frac{2.75}{12}\right)^2 (145 - 99.10) (7.48) = 56.62 \text{ gal}$

Purge #	Time	Temp (°C) ±0.2°C ±3%	pH (s.u.) ±0.1 s.u.	SpC (uS/cm) ±3%	Cond (uS/cm)	DO (%)	DO (mg/L) ±10%	ORP (RmV) ±10 RmV	Water Clarity (Poor/Mod/Good) or NTUs ±10% OR <5	Effervescence (None/Slight/Mod/Heavy)	Volume Purged (gal)	Cum Vol Purged (gal)
0	1001											
1	1010	13.9	7.55	574.4	452.0	65.4	6.75	248.1	0.80		5103	0
2	1015	13.4	7.55	567.3	441.6	67.2	7.00	239.7	0.71	Moderate	5121	18
3	1020	13.3	7.56	555.7	431.3	67.6	7.06	228.8	1.99	Moderate	5132	29
4	1025	13.1	7.56	559.9	433.8	69.4	7.27	219.1	2.31	Moderate	5141	38
5	1030	13.3	7.57	554.1	430.8	66.9	7.57	209.4	4.24	Slight	5151	48
6	1035	13.3	7.57	554.1	430.8	67.8	7.07	193.5	5.42	Slight	5160	57
7	1046	13.2	7.56	571.8	443.2	72.2	7.60	183.7	0.98	Slight	5168	65
8	1045	13.2	7.56	573.0	442.8	72.7	7.65	182.5	2.40	none	5177	74
9	1050	13.4	7.57	562.3	440.3	72.3	7.58	181.0	2.40	none	5187	84
10	1055	13.4	7.57	577.6	449.4	72.2	7.55	176.9	0.37	none	5197	94
11	1100	13.4	7.57	575.1	447.6	71.6	7.47	172.6	0.86	none	5207	104
12	1105	13.4	7.57	581.7	449.7	73.4	7.64	167.4	4.46	none	5216	113
13	1110	13.2	7.57	582.5	451.7	76.3	7.98	160.5	1.04	none	5225	122
14	1115	13.0	7.56	583.4	449.0	77.9	8.12	152.1	4.83	none	5237	134
15	1120	13.0	7.56	589.0	454.3	77.2	8.11	144.0	1.33	none	5249	146
16	1125	13.8	7.57	582.2	449.1	78.1	8.12	135.4	1.10	none	5262	159
											5274	171

