

TEP BWQ Groundwater Monitoring Field Form

Project Information			
Project:	TEP BWQ	Sample Purpose:	Rule 615 2 nd Sub/6 th Year COA
Site Name (Well Pad):	Watson Ranch B, Watson Ranch	Site ID:	05-045-19100/05-045-18713/05-045-22748
Station Name:	Anderson SWSE S17 75 95W	Sample Date:	5/17/21
COGCC Facility ID:	783983	Start Time:	1110
Field Sample ID:	Anderson SWSE S17 75 95W	End Time:	1410
Landowner Name:	Ted Anderson	Sample Time:	1345
Landowner Address:	561 303 CR Parachute	Sample Team:	TDS, MAD
Water Right/Well Owner:	Ted Anderson	Sampler:	TDS
Water Right/Well Permit:	No permit number	Lead Signature/Date:	<i>[Signature]</i> 5/20/21
Receipt Number:	N/A		

Station Information			
Station Description: Hydrant next to Equipment Shop			
Approximate Distance to Well Pad (from well location): 1265ft / 1575ft / 2345ft			
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 39.430661 y -108.020154 z 1705.42m	
GPS Sampling Location:	Zone	x 39.430695 y -108.020637 z 1709.69m	
Total Depth (ft):	120*	Static Depth to Water (ft):	97.50
Total Volume x 3 (gal):	85.58	Total Volume Purged (gal):	117
		Well diameter (in): 5.5	

Weather Conditions	
Sky: Clear / Scattered / Cloudy / Overcast	Estimated Air Temp (deg F): 60
Precipitation: None / Light / Moderate / Heavy	Precip Type: None / Rain / Sleet / Hail / Snow
Wind: Calm / Light / Mod / Strong	Wind Speed/Direction: 0

Field Measurements							
Parameter	Units	Reading	Time	Flag Code	Instrument	In-situ or Container	Comments
Water Temp	deg C	12.3	1400		YSI Pro1	Container	
pH	s.u.	7.34	↓		↓	↓	
Sp. Conductivity	uS/cm	1550					
Conductivity	uS/cm	1175					
DO Saturation	%	52.1					
DO	mg/L	5.52					
Baro Press	mmHg	619.4					
ORP	RmV	222.1					
Turbidity	NTU	2.20		AV	Micro		2.52, 2.05, 2.02
Discharge							
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:

Additional information:

* Total Depth is Landowner Estimate. Well is not permitted under the State so there is no well construction report.

There is a filter prior to sampling location

1357: 99.11 ft BTDC DTW post sample

Calibration Information			Date:			Location:		
Instrument	Parameter	Units	Time	Calibration Standard Value	Calibration Standard Temp (°C)	Instrument Reading of Standard	Adjusted Reading	Comments
	pH	s.u.						
	pH	s.u.						
	pH	s.u.						
	SpC	uS/cm						
	SpC	uS/cm						
	DO	%						
	DO	%						
	ORP	RmV						
	Turbidity	NTU						

See GVHS 264602

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Well Purging Information

Date: 5/17/21 Purge Method: 3 casing Volumes and Parameter Stabilization

Total Depth, ft (d_t): 120* Static Depth to Water, ft (d_w): 97.50 Sample/Set Depth (ft): Stabilization

Casing Radius (in): Diameter 6.5"

Total Volume (gal or ft³): 28.52 Total Volume x 3 (gal or ft³): 85.58

1 ft³ = 7.48 gal

Casing Volume = $\pi r^2 (d_t - d_w)$

$$\pi \left(\frac{2.75}{12} \right)^2 (120 - 97.50) (7.48) = 28.525$$

0.1649 22.5 7.48

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	12:32	12.3	7.25	9.4	7.1	54.8	5.94	240.3			4379	
1	12:37	12.3	7.25	13.9	9.4	55.5	5.95	235.7	good; 3.51	none	4479	8
2	12:42	12.4	7.25	8.9	7.0	54.6	5.95	241.8	good; 4.14	none	4479	15
3	12:47	12.5	7.25	8.5	6.5	54.6	5.83	242.0	good; 6.53	none	4403	25
4	12:52	12.3	7.25	16.0	12.2	55.2	5.90	242.9	good; 4.85	none	4408	30
5	12:56	12.4	7.25	14.0	9.9	55.1	5.90	242.1	good; 3.84	none	4429	51
* 5	* adjusted flow; pump rate very slow *										4432	53
6	13:06	12.4	7.26	12.3	9.0	55.1	5.92	241.7	good; 2.92	none	4443	64
7	13:11	12.4	7.25	23.1	14.7	55.3	5.92	241.0	good; 3.22	none	4465	76
8	13:16	12.4	7.25	8.26	6.28	55.2	5.88	226.4	good; 2.37	none	4469	80
9	13:22	12.4	7.25	8.21	6.25	55.3	5.89	227.9	good; 2.76	none	4481	92
10	13:27	12.4	7.26	8.11	6.17	55.5	5.93	199.0	good; 5.31	none	4496	107
11	13:31	12.4	7.26	8.13	6.19	56.0	5.95	179.6	good; 3.66	none	4500	117

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