

DATA QUALITY REVIEW SHEET

COGCC Facility ID: 753285
 Station Name: Union 26068-F
 Sample Date: 9/22/2020
 Field Sample ID: Union No. 6-26068-F

Operator:
 Drill Pad:
 Purpose:
 Lab Sample ID:

TEP Rocky Mountain LLC
Starkey CWMF
Baseline Sampling
2009499-2

Field Sampling Data Review	Yes	No	N/A
1. Well properly purged?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Flow rate reduced prior to sampling?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Water quality parameters stable prior to sampling?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Field instruments calibrated properly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Sampling methods performed according to SAP procedures?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. Procedures consistent with obtaining a representative sample?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Lab Data Report Review			
7. Proper sample custody maintained until laboratory receipt?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Receipt form is without discrepancies? <i>If no, list in comments.</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9. Samples received at the recommended water temperature of $\leq 6^{\circ}\text{C}$?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. All samples analyzed for the requested analyses?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Proper laboratory methods used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. All sample holding times met (other than lab pH)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
13. Lab QA samples (e.g., matrix spikes and matrix spike duplicates) collected and analyzed according to lab method and results within method acceptance limits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
14. Was the field investigation sample matrix used by the lab for matrix QC for all analyses?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
15. Laboratory qualifiers for data (other than non-detect)? <i>List in comments.</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Additional qualifiers assigned by WWL (other than pH)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Were submitted trip blanks acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Are corrective actions required? <i>If yes, list actions and dates to be completed by:</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Corrective Action</i>	<i>Date to be completed</i>		
The analytic result for dissolved calcium was not within the historical range for this well. A reanalysis for dissolved calcium was requested by the laboratory on October 27, 2020. The reanalysis was conducted on December 4, 2020; the result was similar to the original analytic result and therefore accepted as quality data.	December 4, 2020		


Calculated Parameters	Calculated Value	Measured Lab Value	Ratio/Percent Difference	Acceptable Limit	Meets QC Criteria?
Cation/Anion Balance, % (CAB)	0.604%	N/A	N/A	$\pm 5\%$	<input checked="" type="checkbox"/>
Total Dissolved Solids, mg/L (TDS)	1550	1600	1.03	1.0 – 1.2	<input checked="" type="checkbox"/>
Specific Conductance, $\mu\text{S}/\text{cm}$ (SpC)	2388	2156	1.11	0.9 – 1.1	<input type="checkbox"/>
TDS/SpC, calculated	N/A	N/A	0.65	0.55-0.7	<input checked="" type="checkbox"/>
TDS/SpC, lab measured	N/A	N/A	0.74	0.55-0.7	<input type="checkbox"/>

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Comments:

Three casing volumes were not purged prior to sample collection; water from the well entered a water storage tank (approximately 12,000 gallons) and was therefore not purged three full casing volumes. Parameters were stabilized according to TEP SAP stabilization criteria with the exception of turbidity and ORP. The sample may not be representative of the groundwater due to potential atmospheric interaction, microbial activity, and settling during storage tank residence time. It was noted on the sample receipt that not all samples were received within the holding times for the requested analyses for the Union No. 6-26068-F sample. Laboratory pH, nitrate, nitrite, and TDS were analyzed out of holding time; WWL assigned an "H" qualifier to indicate the results are estimated. "J" qualifier assigned to manganese method blank results to indicate a result greater than the method detection limit but less than the reporting limit. "J" qualifier assigned to DRO sample results indicate a result greater than the method detection limit but less than the reporting limit.

Data Suitability Statement

Based upon this data quality review and your professional judgement, have the data been collected and analyzed in general accordance with the COGCC Model Sampling and Analysis Plan? *		<input checked="" type="checkbox"/>
Are the data suitable for release for incorporation into the COGCC Environmental Database?		<input checked="" type="checkbox"/>
Data Review's Name:	Trevor Smith	Company: Western Water & Land, Inc.
Reviewer's Signature:		Date: 12/7/2020

*Sample collected under conditions with structural restrictions that prevented ideal well sampling procedures.