

DATA QUALITY REVIEW SHEET

COGCC Facility ID: 767580
 Station Name: Cold Spring
 Sample Date: 7/6/2022
 Field Sample ID: Cold Spring

Operator:
 Drill Pad:
 Purpose:
 Lab Sample ID:

TEP Rocky Mountain LLC
GR 12-29
Rule 615 1st Subsequent
2207057-03

Field Sampling Data Review	Yes	No	N/A
1. Well properly purged?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Flow rate reduced prior to sampling?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Water quality parameters stable prior to sampling?	<input checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Procedures consistent with obtaining a representative sample?	<input checked="" type="checkbox"/>	<input 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?	<input checked="" type="checkbox"/>	<input 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 besides pH?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Lab QC samples (LCS, LCSD, MB, MS, and MSD) 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 all matrix QC?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
15. Laboratory qualifiers for sample results (other than non-detect)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Additional qualifiers assigned by WWL to the sample results?	<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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>Corrective Action</i>	<i>Date to be completed</i>		
None	N/A		

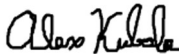
Calculated Parameters	Calculated Value	Measured Lab Value	Ratio/Percent Difference	Acceptable Limit	Meets QC Criteria?
Cation/Anion Balance, % (CAB)	5.83%	5.85	N/A	5%	<input type="checkbox"/>
Total Dissolved Solids, mg/L (TDS)	1028	1050	1.02	1.0 – 1.2	<input checked="" type="checkbox"/>
Specific Conductance, $\mu\text{S}/\text{cm}$ (SpC)	1567	1730	0.91	0.9 – 1.1	<input checked="" type="checkbox"/>
TDS/SpC, calculated	N/A	N/A	0.66	0.55-0.7	<input checked="" type="checkbox"/>
TDS/SpC, lab measured	N/A	N/A	0.61	0.55-0.7	<input checked="" type="checkbox"/>
Anion (meq/L):SpC	N/A	N/A	1.13	0.9 – 1.1	<input type="checkbox"/>
Cation (meq/L):SpC	N/A	N/A	1.01	0.9 – 1.1	<input checked="" type="checkbox"/>

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Comments:

- All sampling procedures followed the TEP SAP as consistent with the COGCC Model SAP (Version 2- April 2020).
- Laboratory pH analysis exceeded hold time by 1 day for sample Cold Spring. WWL assigned an “H” qualifier to indicate the results are estimated. All other analyses were conducted within recommended holding times.
- WWL reviewed the MB results to ensure that there was no background contamination or other interferences with the analytic instrumentation. All the MBs tested yielded “Not Detected” (ND) results with the exception of alkalinity, bicarbonate and total as CaCO₃, and sodium. No additional qualifiers were assigned by WWL because of the method blank results.
- The trip blank (Lab ID: 2207057-01) had no detections.
- WWL verified that there were no reported percent recoveries of the spiked analytes or surrogates outside of the control limits without qualification by the lab.
- No qualifiers were assigned to any of the spiked samples (MB, LCS, LCSD, MS, or MSD) associated with the samples as a result of the percent recovery of an analyte or surrogate being outside of the control limits.
- WWL verified that there were no reported RPDs for any of the duplicate samples outside of the RPD limits without qualification by the lab.
- Green Analytical Laboratories (GAL) did not select any of the field investigation samples for quality control matrix testing.
- GAL qualifies sample results that exceed the method detection limit (MDL) but are lower than the reporting limit (RL) with a “J” to indicate the result is estimated. GAL assigned sample Cold Spring boron and potassium results a “J” qualifier.
- The CAB for the analysis of the Cold Spring sample was not within the acceptable range. However, the data were not rejected on the basis of CAB. WWL qualified the CAB for sample Cold Spring with an “O” qualifier and the associated inorganic data is considered estimated.

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"/>		
The inorganic data are qualified due to one or more QC criteria not being met; data are considered estimated and provisionally released for incorporation into the COGCC Environmental Database.	<input checked="" type="checkbox"/>		
Data Reviewer's Name:	Alex Kubala	Company:	Western Water & Land, Inc.
Reviewer's Signature:		Date:	2/1/2023