Checklist for the High frequency Groundwater-Quality Record Analyst

This is a suggested checklist to be used when analyzing a groundwater-quality record. Feel free to modify these guidelines in consultation with the project manager or section supervisor.

Site Name: _____ Site ID: _____

Parameter: _____ Year (water/calendar): _____

Worked by: _____ Date: _____ Analyzed by: _____ Date: _____

☐ With the project manager and/or the section supervisor, discuss the project's data-quality objectives and set time limits for analyzing the record. (Recommendations listed below)

Time limits: _____ minutes for the field sheets (≤10 minutes per record)
_____ minutes for checking shift tables and spreadsheets (≤20 minutes)
_____ minutes for the entire record (≤90 minutes)

Yes No If field sheets are to be checked, include the following in your analysis:

- ☐ Probes were calibrated properly.
- ☐ All appropriate information included.
- ☐ Any changes in procedure over the course of the year noted and justified

☐ Examine a graph of the raw and corrected data, including marks that coincide with site visits. Use the station analysis as a guide, and look for:

- ☐ Data gaps
- ☐ Spikes in the data that exceed the project's criteria for deletion
- ☐ Obvious probe failures
- ☐ Expected patterns in the data (annual, daily, and those due to site specific conditions)
- ☐ Shift implementation – look for the size of shifts by comparing raw and corrected data
- ☐ Discontinuities (step functions) in the raw data at site visits. If present at a level that exceeds the accuracy of the probe, suggest a solution to eliminate the discontinuity.

☐ Examine other plots of the data provided by the field personnel. If necessary, create additional plots of the data showing comparisons to other constituents at this site.

- ☐ Check for consistency in the data patterns. If inconsistencies are present, suggest an appropriate course of action to remove the inconsistency or explain its presence.

Yes No If correction processes are to be analyzed, include the following in your analysis:

- ☐ Transcription errors from field sheets to correction spreadsheets
- ☐ Transcription errors from correction spreadsheets to NWIS-TS fields
- ☐ Missing or inappropriate shifts, not noted in correction spreadsheet or station analysis?
- ☐ Shifts that do not cover the entire range of the data
- ☐ Approximate percentage of data analyzed (circle one): 10 20 30 40 50 60 70 80 90 all

☐ The record has been analyzed! Notify the field personnel if changes are needed to the record. Otherwise, the record can now be sent to the designated approver.

☐ In NWIS-TS, make sure data is put into "Analyzed" status before sending to approval.

Total time needed to analyze the record: _____ hours

☐ If the time exceeded the time limit established at the top of this checklist, meet with the project manager to determine how the process might be further streamlined.

☐ After completing this checklist, put it in the record's folder.

Analyst Comments: