

APPENDIX C

QA/QC DATA EVALUATION CHECKLIST FOR CHEMICAL ANALYSIS

INITIAL DATA QUALITY SCREENING

1. Verify the laboratory data reports against chain of custody forms and SAP.
 - a. Sample identification numbers or labels correctly entered.
 - b. All samples in chain of custody are reported by the laboratory
 - c. Any deviations noted (methods, sample condition reporting limits, etc.)
 - d. Any deviations from the instructions given in SAP or chain of custody (compositing, filtering, etc.)
2. Verify the completeness of the laboratory data report
 - a. Field QA/QC sample analysis reported (field blanks, field duplicates)
 - b. Laboratory QA/QC sample analysis reported (laboratory/method blanks, laboratory duplicates, MS/MSD analysis).
 - c. Sample extraction and analysis dates are included
 - d. Results of other QA/QC analysis are reported (laboratory control sample, external reference sample, surrogate spike/blank spike – for organic constituents).
3. Check for typographical errors and other incongruities.
 - a. Laboratory results that are outside the normal or expected range (where known)
 - b. Significant discrepancies between complementary tests (total metals lower than dissolved metals)
 - c. Significant lack of agreement between laboratory and field duplicates.
 - d. Large number of blank samples with detectable amounts.

DATA QUALITY EVALUATION

- 1. Verification of Reporting Limits
- 2. Verification of Holding Times
- 3. Contamination check by reviewing analytical results (method, field, trip, and equipment blanks)
- 4. Precision of analysis results (laboratory, filed, and matrix spike duplicates)
- 5. Accuracy of analysis results (matrix spikes, surrogate spikes, laboratory control samples, and external reference standards)