



## Ancillary Parameters in Freshwater Sediment and Marine Sediment

**Table 1: Quality Control: Ancillary Parameters in Freshwater Sediment and Marine Sediment**

| Laboratory Quality Control                    | Frequency of Analysis            | Measurement Quality Objective |
|---|----------------------------------|-------------------------------|
| Laboratory Blank                              | One per analytical batch         | Per method                    |
| Laboratory Duplicate                          | One per analytical batch         | RPD<25%                       |
| Field Quality Control                         | Frequency of Analysis            | Measurement Quality Objective |
| Field Duplicate                               | 5% of total project sample count | RPD<25%                       |
| Field Blank, Travel Blank,<br>Equipment Blank | Per method                       | <30% of lowest sample         |

**Table 2: Sample Handling: Ancillary Parameters in Freshwater Sediment and Marine Sediment**

| Recommended Container | Recommended Preservation | Required Holding Time |
|-----------------------|--------------------------|-----------------------|
| Glass                 | Cool to $\leq 6$ °C      | 7 days                |

Each "Required Holding Time" is based on the assumption that the "Recommended Preservation" (or a method-mandated alternative) has been employed. If a "Required Holding Time" for filtration, preservation, preparation, or analysis is not met, the project manager and SWAMP Quality Assurance Officer must be notified. Regardless of preservation technique, data not meeting the "Required Holding Time" will be appropriately flagged in the SWAMP database.

**Table 3: Recommended Corrective Action: Ancillary Parameters in Freshwater Sediment and Marine Sediment**

| Laboratory Quality Control                        | Recommended Corrective Action   |
|---|---|
| <b>Laboratory Blank</b>                           | Reanalyze the blank to confirm the result. Investigate the source of contamination. If the source of the contamination is isolated to the sample preparation, the entire batch of samples, along with the new laboratory blanks and associated QC samples, should be prepared and/or re-extracted and analyzed. If the source of contamination is isolated to the analysis procedures, reanalyze the entire batch of samples. If reanalysis is not possible, the associated sample results must be flagged to indicate the potential presence of the contamination. |
| <b>Laboratory Duplicate</b>                       | Reanalyze the duplicate samples to confirm the results. Visually inspect the samples to determine if a high RPD between the results could be attributed to sample heterogeneity. For duplicate results due to matrix heterogeneity, or where ambient concentrations are below the reporting limit, qualify the results and document the heterogeneity.  |
| Field Quality Control                             | Recommended Corrective Action   |
| <b>Field Duplicate</b>                            | Visually inspect the samples to determine if a high RPD between results could be attributed to sample heterogeneity. For duplicate results due to matrix heterogeneity, or where ambient concentrations are below the reporting limit, qualify the results and document the heterogeneity. All failures should be communicated to the project coordinator, who in turn will follow the process detailed in the method.  |
| <b>Field Blank, Travel Blank, Equipment Blank</b> | Investigate the source of contamination. Potential sources of contamination include sampling equipment, protocols, and handling. The laboratory should report evidence of field contamination as soon as possible so corrective actions can be implemented. Samples collected in the presence of field contamination should be flagged.   |

Terms appearing in the tables are defined in the [Surface Water Ambient Monitoring Program Quality Assurance Program Plan](#), which contains a glossary (Appendix E), as well as a list of abbreviations and acronyms (Appendix F).