**QAPP Worksheet #12: Measurement Performance Criteria**

**(UFP-QAPP Manual Section 2.6.2)**

**(EPA 2106-G-05 Section 2.2.6)**

This worksheet documents the quantitative measurement performance criteria (MPC) in terms of precision, bias, and sensitivity for both field and laboratory measurements and is used to guide the selection of appropriate measurement techniques and analytical methods. MPC are developed to ensure collected data will satisfy the PQOs or DQOs documented on Worksheet #11. A separate worksheet should be completed for each type of field or laboratory measurement. For analytical methods, MPC should be determined for each matrix, analyte, and concentration level. [Qualitative MPC (representativeness and comparability) should be addressed in the sample design, which is documented on Worksheet #17.] If MPC are analyte-specific, include this detail in a separate table or modify this worksheet as necessary. An example is provided below in blue text. The example is provided for illustration only – it should not be construed as guidance for establishing MPC.

Matrix: Groundwater

Analytical Group or Method: VOA/8260B

Concentration Level: Low

|  |  |  |
| --- | --- | --- |
| **Data Quality Indicator (DQI)** | **QC sample or measurement performance activity** | **Measurement Performance Criteria** |
| Overall Precision | Field Duplicates | RPD ≤ 30% when VOCs are detected in both samples ≥ sample-specific LOQ |
| Analytical Precision (laboratory) | Laboratory Control Sample Duplicates | RPD ≤ 25% |
| Analytical Accuracy/Bias (laboratory) | Laboratory Control Samples | Analyte-specific (Attach list) |
| Analytical Accuracy/Bias (matrix interference) | Matrix Spike Duplicates | Analyte-specific (Attach list) |
| Overall accuracy/bias (contamination) | Equipment Blanks | No target analyte concentrations ≥ 1/2 LOQ |
| Sensitivity | LOQ verification sample (spiked at LOQ) | Recovery within ±25% of LOQ |
| Completeness | See Worksheet #34 | See Worksheet #34 |