*\*Template Updated 5/3/24*

*For instructions and guidance for this optional QAPP template, please see the "Region 1 Optional QAPP Template Instructions" document located at* [***https://www.epa.gov/quality/region-1-quality-systems-documents***](https://www.epa.gov/quality/region-1-quality-systems-documents)*. You may also find the EPA Region 1 Quality Assurance Project Plan Guidance document useful.*

*Before submitting the QAPP to EPA Region 1 for review please:*

*1) remove all instruction/example text in this template, which is indicated by yellow highlight and asterisks;*

*2) renumber tables and figures as necessary; and*

*3) update the Table of Contents. \**

# \*Project Title: should include QAPP\*

Prepared by: \* Organization Name & Address \*

Prepared for: U.S. Environmental Protection Agency Region 1

Version Date: \* Date \*

Revision: \* Revision number (enter 0 if first draft) \*

Estimated Project Start and End Dates: \* Month and year for the estimated project start and end; for Program and Generic QAPPs 5 years after EPA approval (also referred to as period of applicability) \*

EPA Grant/Contract/Task Order: \* Number/Identifier \*

EPA QA Tracking #: TBD

## Approval Page (A2)

Project Name: \* Project name: should be descriptive \*

Version Date: \*Date \*

Plan prepared by: \* Name and affiliation of QAPP writer \*

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Operations/Project Manager \* Name, Title, Organization\* Date

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Project Quality Assurance Manager \* Name, Title, and Organization \* Date

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_

\* Other internal/external parties that need to agree to QAPP (copy & paste if >1 person) \* Date

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_

EPA Quality Assurance Reviewer \*Name\* Date

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_

EPA Operations Manager/Project Officer \*Name\* Date

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## List of Acronyms

\*Update this list as appropriate\*

DQI – Data quality indicators
DQO – Data quality objective
EI – Environmental information
EIO – Environmental information operations
EPA – Environmental Protection Agency
PARCCS – Precision, accuracy, representativeness, comparability, completeness, sensitivity
PO – Project Officer

QA – Quality assurance
QAM – Quality assurance manager
QAPP – Quality Assurance Project Plan
QC – Quality control
RPD – Relative percent difference
RSD – Relative standard deviation
SOP – Standard Operating Procedure

## A. Project Management and Data Quality Objectives

### 1. Project Organization and Personnel (A7 - A10)

\*Add text; see [[[Region 1 Optional QAPP Template Instructions](https://www.epa.gov/quality/region-1-quality-systems-documents)](https://www.epa.gov/quality/region-1-quality-systems-documents)](https://www.epa.gov/quality/region-1-quality-systems-documents). \*

\* Insert Figure 1, organization chart. \*

### 2. Personnel Training and Certifications (A11)

\*Add text; see [[Region 1 Optional QAPP Template Instructions](https://www.epa.gov/quality/region-1-quality-systems-documents)](https://www.epa.gov/quality/region-1-quality-systems-documents). \*

### 3. Project Purpose, Problem Definition, and Background (A4)

\*Add text; see [[Region 1 Optional QAPP Template Instructions](https://www.epa.gov/quality/region-1-quality-systems-documents)](https://www.epa.gov/quality/region-1-quality-systems-documents). \*

### 4. Project Task Description and Schedule (A5)

\*Add text; see [[Region 1 Optional QAPP Template Instructions](https://www.epa.gov/quality/region-1-quality-systems-documents)](https://www.epa.gov/quality/region-1-quality-systems-documents). \*

Table . Project schedule

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Project Task**  | **Jul 2023** | **Aug 2023** | **Sep 2023** | **Oct 2023** | **Nov 2023** | **Dec 2023** | **Jan 2024** |
| QAPP Preparation and Approval |  |  |  |  |  |  |  |
| Field mobilization (Soil borings and monitoring well installation; soil and groundwater sampling) |  |  |  |  |  |  |  |
| Indoor Air Sampling |  |  |  |  |  |  |  |
| Laboratory Analysis |  |  |  |  |  |  |  |
| Data Validation and Review |  |  |  |  |  |  |  |
| Final Report |  |  |  |  |  |  |  |

###

### 5. Data Quality Objectives (A6)

\*Add text; see [[Region 1 Optional QAPP Template Instructions](https://www.epa.gov/quality/region-1-quality-systems-documents)](https://www.epa.gov/quality/region-1-quality-systems-documents). \*

Table . Project data quality indicators.

| **Data quality indicator** | **Quality control activities****and checks** | **Goal** |
| --- | --- | --- |
| Precision |  |  |
| Bias |  |  |
| Accuracy |  |  |
| Representativeness |  |  |
| Comparability |  |  |
| Completeness |  |  |
| Sensitivity |  |  |
| Measurement range |  |  |

Table . General assessment factors ([Guidance on Systematic Planning Using the Data Quality Objectives Process (EPA QA/G-4](https://www.epa.gov/sites/default/files/2015-06/documents/g4-final.pdf)).

|  |  |  |
| --- | --- | --- |
| **General Assessment Factor**  | **Description**  | **Goal** |
| Soundness  | The extent to which the scientific and technical procedures, measures, methods, or models employed to generate the information are reasonable for, and consistent with, the intended application  |  |
| Applicability and Utility  | The extent to which the information is relevant for the Agency’s intended use  |  |
| Clarity and Completeness  | The degree of clarity and completeness with which the data, assumptions, methods, quality assurance, sponsoring organizations and analyses employed to generate the information are documented  |  |
| Uncertainty and Variability  | The extent to which the variability and uncertainty (quantitative and qualitative) in the information or the procedures, measures, methods, or models are evaluated and characterized  |  |
| Evaluation and Review  | The extent of independent verification, validation, and peer review of the information or of the procedures, measures, methods, or models  |  |

### 6. Documentation and Records Management (A12)

\*Add text; see [[Region 1 Optional QAPP Template Instructions](https://www.epa.gov/quality/region-1-quality-systems-documents)](https://www.epa.gov/quality/region-1-quality-systems-documents). \*

## B. Environmental Information Operations

### 1. Project/Sampling Design and Rationale (B1)

\*Add text; see [[Region 1 Optional QAPP Template Instructions](https://www.epa.gov/quality/region-1-quality-systems-documents)](https://www.epa.gov/quality/region-1-quality-systems-documents). \*

Figure .\* Example existing data selection steps. \*

|  |
| --- |
| 1. Select the most reliable data source |
| 2. Determine if data meet quality requirements.  a. If “Yes”, use the data with full references. b. If “No”, move to step 3. |
| 3. Determine if there are other data sources available.  a. If “Yes”, evaluate the alternate data source starting at step 2. b. If “No”, move to step 4.  |
| 4. Evaluate if the data are crucial. a. If “Yes”, move to step 5.  b. If “No”, do not use the data. |
| 5. Evaluate if data can provide relevant, if limited, information.  a. If “Yes”, use the data and fully describe its limitations and document the need for better data.  b. If “No”, do not use the data and note the need for data collection.  |

### 2. Methods (B2)

\*Add text; see [[Region 1 Optional QAPP Template Instructions](https://www.epa.gov/quality/region-1-quality-systems-documents)](https://www.epa.gov/quality/region-1-quality-systems-documents). \*

Table . Project field sampling standard operating procedures reference table.

| **SOP Reference ID** | **Title, Revision Date and/or Number** | **Originating Organization** |
| --- | --- | --- |
|  |  |  |
|  |  |  |

Table . Project laboratory analysis standard operating procedures reference table.

| **SOP Reference ID** | **Title, Revision Date and/or Number** | **Originating Organization** |
| --- | --- | --- |
|  |  |  |
|  |  |  |

### 3. Integrity of Environmental Information (B3)

\*Add text; see [[Region 1 Optional QAPP Template Instructions](https://www.epa.gov/quality/region-1-quality-systems-documents)](https://www.epa.gov/quality/region-1-quality-systems-documents). \*

Table . Sampling design

| **Matrix**  | **Parameter/Analyte Group** | **# of** **Samples**  | **QC Samples**  | **Analytical Method/ SOP** | **Sample Container** | **Preservation Method** | **Holding Time** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| \* Example: Water \* | \* Total Suspended solids \* | \* 9 \* | \* 1 blank + 1 duplicate \* | \* SOP-TSS-01 \* | \* 1 L HDPE pre-cleaned \* | \* 1-6 °C \* | \* 7 days \*. |
|  |  |  |  |  |  |  |  |

### 4. Environmental Information Management (B7)

\*Add text; see [[Region 1 Optional QAPP Template Instructions](https://www.epa.gov/quality/region-1-quality-systems-documents)](https://www.epa.gov/quality/region-1-quality-systems-documents). \*

### 5. Quality Control (B4)

\*Add text; see [[Region 1 Optional QAPP Template Instructions](https://www.epa.gov/quality/region-1-quality-systems-documents)](https://www.epa.gov/quality/region-1-quality-systems-documents). \*

Table . Quality control sample summary

| **Matrix** | **Parameter** | **QC Sample Type** | **Acceptance Criteria** | **Corrective Actions** |
| --- | --- | --- | --- | --- |
| \* Example: Water \* | \* Secchi Depth \* | \* Duplicate \* | \* +/- 0.2 meters \* | \* repeat measurements \* |
|  |  |  |  |  |

### 6. Equipment/Instrument Calibration, Testing, Inspection, and Maintenance (B5)

\*Add text; see [[Region 1 Optional QAPP Template Instructions](https://www.epa.gov/quality/region-1-quality-systems-documents)](https://www.epa.gov/quality/region-1-quality-systems-documents). \*

Table . Maintenance, calibration, and testing of field and laboratory equipment and instrumentation.

| **Instrument** | **Activity** | **SOP Reference** | **Title /Position of Responsible Person** | **Frequency** | **Acceptance Criteria** | **Corrective Action** |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

### 7. Inspection/Acceptance of Supplies and Services (B6)

\*Add text; see [[Region 1 Optional QAPP Template Instructions](https://www.epa.gov/quality/region-1-quality-systems-documents)](https://www.epa.gov/quality/region-1-quality-systems-documents). \*

## C. Assessment, Response Actions, and Oversight

### 1. Assessments, Oversight, and Response Actions (C1 & C2)

\*Add text; see [[Region 1 Optional QAPP Template Instructions](https://www.epa.gov/quality/region-1-quality-systems-documents)](https://www.epa.gov/quality/region-1-quality-systems-documents). \*

### 2. Reports to Management (C2)

\*Add text; see [[Region 1 Optional QAPP Template Instructions](https://www.epa.gov/quality/region-1-quality-systems-documents)](https://www.epa.gov/quality/region-1-quality-systems-documents). \*

## D. Data Review and Usability

### 1. Data Review (D1)

\*Add text; see [[Region 1 Optional QAPP Template Instructions](https://www.epa.gov/quality/region-1-quality-systems-documents)](https://www.epa.gov/quality/region-1-quality-systems-documents). \*

### 2. Project Evaluation – Usability Determination (D2)

\*Add text; see [[Region 1 Optional QAPP Template Instructions](https://www.epa.gov/quality/region-1-quality-systems-documents)](https://www.epa.gov/quality/region-1-quality-systems-documents). \*

## References

\*Add text; see [Region 1 Optional QAPP Template Instructions](https://www.epa.gov/quality/region-1-quality-systems-documents). \*

##

## Appendices

\*Add Appendices see [Region 1 Optional QAPP Template Instructions](https://www.epa.gov/quality/region-1-quality-systems-documents). \*

Figure A \*Example chain-of-custody form. \*

|  |  |  |
| --- | --- | --- |
| EPA Project Number: | Project Name & Location: | Sampler’s Name & Signature: |
|  |  |  |
| Sample ID | Preservation | Date | Time | Composite  | Grab | Matrix | # of containers | Analysis requested | Sample comments |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Relinquished by: (Signature) | Received by: (Signature) | Date | Time | Remarks |
|  |  |  |  |  |
| Relinquished by: (Signature) | Received by: (Signature) | Date | Time | Remarks |
|  |  |  |  |  |