Publication Numbers:

EPA: EPA-505-B-04-900C
DoD: DTIC ADA 427486

Intergovernmental Data Quality Task Force

Workbook for Uniform Federal Policy for Quality Assurance Project Plans

Evaluating, Assessing, and Documenting Environmental Data Collection and Use Programs

Part 2A: UFP-QAPP Workbook

This Workbook supplements Part 1 of the UFP-QAPP, the UFP-QAPP Manual. Proper completion of these worksheets requires knowledge of the QAPP elements explained in the Manual.

Final
Version 1
March 2005

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WORKBOOK FOR UNIFORM FEDERAL POLICY FOR QUALITY ASSURANCE PROJECT PLANS

INTRODUCTION

This *Workbook for Uniform Federal Policy for Quality Assurance Project Plans* is Part 2A of the *Uniform Federal Policy for Quality Assurance Project Plans* (UFP-QAPP). It provides examples of worksheets to assist with the preparation of QAPPs in accordance with Part 1 of the UFP-QAPP (the UFP-QAPP Manual) and Section 6 (Part B) of *Quality Systems for Environmental Data and Technology Programs - Requirements with guidance for use*, ANSI/ASQ E4 (February 2004). This Workbook may be used by the lead organization and its contractors to assist with the preparation of QAPPs for environmental data gathering activities.

Each worksheet addresses specific requirements of the UFP-QAPP. Both the UFP-QAPP Manual and the Workbook are intended to be comprehensive and are not intended to be program-specific. Since the content and level of detail in a specific QAPP will vary by program, by the work being performed, and by the intended use of the data, specific worksheets may not be applicable to all projects.

The ultimate success of an environmental program or project depends on the quality of the environmental data collected and used in decision-making, and this may depend significantly on the adequacy of the QAPP and its effective implementation. It is recommended that the individual worksheets included in this Workbook be taken to the project scoping and planning sessions. The use of the worksheets will aid in identifying the critical project information that will ensure that the right type, quality, and quantity of data are collected to meet all of the project's quality objectives. Though the format of each worksheet is not mandatory, the information required on the worksheets must still be presented in the QAPP, as appropriate to the project. In addition, QAPP preparers are encouraged to develop additional tables, as appropriate to the project. Sufficient written discussion in text format should accompany all tables. Certain sections, by their nature, will require more written discussion than others. In particular, Section 3.1.1 should provide an in-depth explanation of the sampling design rationale, and Section 5.2 should describe the procedures and criteria that will be used for data review.

QAPP Worksheet #1
(UFP-QAPP Manual Section 2.1)
Title and Approval Page

Site Name/Project Name:
Site Location:

Title:
Revision Number:
Revision Date:
Page ___ of ___

_____
Document Title

_____
Lead Organization

_____
Preparer's Name and Organizational Affiliation

_____
Preparer's Address, Telephone Number, and E-mail Address

_____
Preparation Date (Day/Month/Year)

Investigative Organization's Project Manager:_____
Signature

_____
Printed Name/Organization/Date

Investigative Organization's Project QA Officer: _____
Signature

_____
Printed Name/Organization/Date

Lead Organization's Project Manager:_____
Signature

_____
Printed Name/Organization/Date

Approval Signatures: _____
Signature

_____
Printed Name/Title/Date

_____
Approval Authority

Other Approval Signatures: _____
Signature

_____
Printed Name/Title/Date

Document Control Number: _____

QAPP Worksheet #2
(UFP-QAPP Manual Section 2.2.4)
QAPP Identifying Information

Site Name/Project Name:
Site Location:
Site Number/Code:
Operable Unit:
Contractor Name:
Contractor Number:
Contract Title:
Work Assignment Number:

Title:
Revision Number:
Revision Date:
Page ___ of ___

1. Identify guidance used to prepare QAPP:

_____

2. Identify regulatory program: _____

3. Identify approval entity: _____

4. Indicate whether the QAPP is a generic or a project-specific QAPP. (circle one)

5. List dates of scoping sessions that were held:_____
_____
_____
_____
_____
_____

6. List dates and titles of QAPP documents written for previous site work, if applicable:

Title	Approval Date
_____	_____
_____	_____
_____	_____
_____	_____

7. List organizational partners (stakeholders) and connection with lead organization: _____
_____
_____

8. List data users:_____
_____
_____

9. If any required QAPP elements and required information are not applicable to the project, then circle the omitted QAPP elements and required information on the attached table. Provide an explanation for their exclusion below:_____
_____
_____

Identify where each required QAPP element is located in the QAPP (provide section, worksheet, table, or figure number) or other project planning documents (provide complete document title, date, section number, page numbers, and location of the information in the document). Circle QAPP elements and required information that are not applicable to the project. Provide an explanation in the QAPP.

Required QAPP Element(s) and Corresponding QAPP Section(s)	Required Information	Crosswalk to Related Documents
Project Management and Objectives		
2.1 Title and Approval Page	- Title and Approval Page	
2.2 Document Format and Table of Contents 2.2.1 Document Control Format 2.2.2 Document Control Numbering System 2.2.3 Table of Contents 2.2.4 QAPP Identifying Information	- Table of Contents - QAPP Identifying Information	
2.3 Distribution List and Project Personnel Sign-Off Sheet 2.3.1 Distribution List 2.3.2 Project Personnel Sign-Off Sheet	- Distribution List - Project Personnel Sign-Off Sheet	
2.4 Project Organization 2.4.1 Project Organizational Chart 2.4.2 Communication Pathways 2.4.3 Personnel Responsibilities and Qualifications 2.4.4 Special Training Requirements and Certification	- Project Organizational Chart - Communication Pathways - Personnel Responsibilities and Qualifications Table - Special Personnel Training Requirements Table	
2.5 Project Planning/Problem Definition 2.5.1 Project Planning (Scoping) 2.5.2 Problem Definition, Site History, and Background	- Project Planning Session Documentation (including Data Needs tables) - Project Scoping Session Participants Sheet - Problem Definition, Site History, and Background - Site Maps (historical and present)	
2.6 Project Quality Objectives and Measurement Performance Criteria 2.6.1 Development of Project Quality Objectives Using the Systematic Planning Process 2.6.2 Measurement Performance Criteria	- Site-Specific PQOs - Measurement Performance Criteria Table	

Required QAPP Element(s) and Corresponding QAPP Section(s)	Required Information	Crosswalk to Related Documents
2.7 Secondary Data Evaluation	- Sources of Secondary Data and Information - Secondary Data Criteria and Limitations Table	
2.8 Project Overview and Schedule 2.8.1 Project Overview 2.8.2 Project Schedule	- Summary of Project Tasks - Reference Limits and Evaluation Table - Project Schedule/Timeline Table	
Measurement/Data Acquisition		
3.1 Sampling Tasks 3.1.1 Sampling Process Design and Rationale 3.1.2 Sampling Procedures and Requirements 3.1.2.1 Sampling Collection Procedures 3.1.2.2 Sample Containers, Volume, and Preservation 3.1.2.3 Equipment/Sample Containers Cleaning and Decontamination Procedures 3.1.2.4 Field Equipment Calibration, Maintenance, Testing, and Inspection Procedures 3.1.2.5 Supply Inspection and Acceptance Procedures 3.1.2.6 Field Documentation Procedures	- Sampling Design and Rationale - Sample Location Map - Sampling Locations and Methods/ SOP Requirements Table - Analytical Methods/SOP Requirements Table - Field Quality Control Sample Summary Table - Sampling SOPs - Project Sampling SOP References Table - Field Equipment Calibration, Maintenance, Testing, and Inspection Table	
3.2 Analytical Tasks 3.2.1 Analytical SOPs 3.2.2 Analytical Instrument Calibration Procedures 3.2.3 Analytical Instrument and Equipment Maintenance, Testing, and Inspection Procedures 3.2.4 Analytical Supply Inspection and Acceptance Procedures	- Analytical SOPs - Analytical SOP References Table - Analytical Instrument Calibration Table - Analytical Instrument and Equipment Maintenance, Testing, and Inspection Table	

Required QAPP Element(s) and Corresponding QAPP Section(s)	Required Information	Crosswalk to Related Documents
3.3 Sample Collection Documentation, Handling, Tracking, and Custody Procedures 3.3.1 Sample Collection Documentation 3.3.2 Sample Handling and Tracking System 3.3.3 Sample Custody	- Sample Collection Documentation Handling, Tracking, and Custody SOPs - Sample Container Identification - Sample Handling Flow Diagram - Example Chain-of-Custody Form and Seal	
3.4 Quality Control Samples 3.4.1 Sampling Quality Control Samples 3.4.2 Analytical Quality Control Samples	- QC Samples Table - Screening/Confirmatory Analysis Decision Tree	
3.5 Data Management Tasks 3.5.1 Project Documentation and Records 3.5.2 Data Package Deliverables 3.5.3 Data Reporting Formats 3.5.4 Data Handling and Management 3.5.5 Data Tracking and Control	- Project Documents and Records Table - Analytical Services Table - Data Management SOPs	
Assessment/Oversight		
4.1 Assessments and Response Actions 4.1.1 Planned Assessments 4.1.2 Assessment Findings and Corrective Action Responses	- Assessments and Response Actions - Planned Project Assessments Table - Audit Checklists - Assessment Findings and Corrective Action Responses Table	
4.2 QA Management Reports	- QA Management Reports Table	
4.3 Final Project Report		

Required QAPP Element(s) and Corresponding QAPP Section(s)	Required Information	Crosswalk to Related Documents
Data Review		
5.1 Overview		
5.2 Data Review Steps 5.2.1 Step I: Verification 5.2.2 Step II: Validation 5.2.2.1 Step IIa Validation Activities 5.2.2.2 Step IIb Validation Activities 5.2.3 Step III: Usability Assessment 5.2.3.1 Data Limitations and Actions from Usability Assessment 5.2.3.2 Activities	- Verification (Step I) Process Table - Validation (Steps IIa and IIb) Process Table - Validation (Steps IIa and IIb) Summary Table - Usability Assessment	
5.3 Streamlining Data Review 5.3.1 Data Review Steps To Be Streamlined 5.3.2 Criteria for Streamlining Data Review 5.3.3 Amounts and Types of Data Appropriate for Streamlining		

QAPP Worksheet #3
(UFP-QAPP Manual Section 2.3.1)
List those entities to whom copies of the approved QAPP, subsequent QAPP revisions, addenda, and amendments.

Title:
Revision Number:
Revision Date:
Page ___ of ___

Distribution List

QAPP Recipients	Title	Organization	Telephone Number	Fax Number	E-mail Address	Document Control Number

QAPP Worksheet #4
(UFP-QAPP Manual Section 2.3.2)
Have copies of this form signed by key project personnel from each organization to indicate that they have read the applicable sections of the QAPP and will perform the tasks as described. Ask each organization to forward signed sheets to the central project file.

Title:
Revision Number:
Revision Date:
Page ___ of ___

Project Personnel Sign-Off Sheet

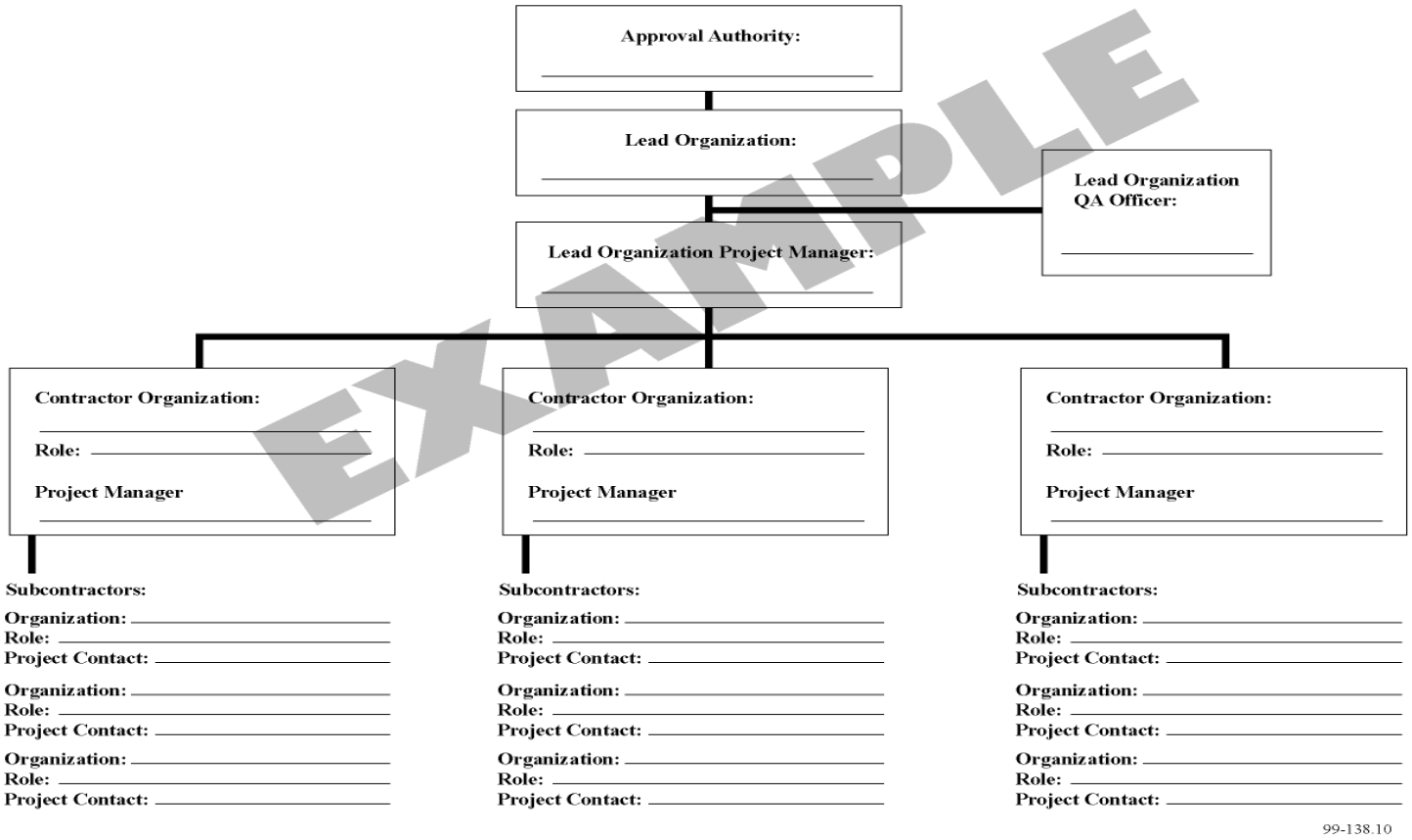
Organization:_____

Project Personnel	Title	Telephone Number	Signature	Date QAPP Read

QAPP Worksheet #5
(UFP-QAPP Manual Section 2.4.1)
Identify reporting relationships between all organizations involved in the project, including the lead organization and all contractor and subcontractor organizations. Identify the organizations providing field sampling, on-site and off-site analysis, and data review services, including the names and telephone numbers of all project managers, project team members, and/or project contacts for each organization.

Title:
Revision Number:
Revision Date:
Page ___ of ___

Project Organizational Chart



QAPP Worksheet #6
(UFP-QAPP Manual Section 2.4.2)
Describe the communication pathways and modes of communication that will be used during the project, after the QAPP has been approved. Describe the procedures for soliciting and/or obtaining approval between project personnel, between different contractors, and between samplers and laboratory staff. Describe the procedure that will be followed when any project activity originally documented in an approved QAPP requires real-time modification to achieve project goals or a QAPP amendment is required. Describe the procedures for stopping work and identify who is responsible.

Communication Pathways

Communication Drivers	Responsible Entity	Name	Phone Number	Procedure (Timing, Pathways, etc.)

QAPP Worksheet #7
(UFP-QAPP Manual Section 2.4.3)
Identify project personnel associated with each organization, contractor, and subcontractor participating in responsible roles. Include data users, decision-makers, project managers, QA officers, project contacts for organizations involved in the project, project health and safety officers, geotechnical engineers and hydrogeologists, field operation personnel, analytical services, and data reviewers. Identify project team members with an asterisk (*). Attach resumes to this worksheet or note the location of the resumes.

Personnel Responsibilities and Qualifications Table

Name	Title	Organizational Affiliation	Responsibilities	Education and Experience Qualifications

QAPP Worksheet #8
(UFP-QAPP Manual Section 2.4.4)
Provide the following information for those projects requiring personnel with specialized training. Attach training records and/or certificates to the QAPP or note their location.

Title:
Revision Number:
Revision Date:
Page ___ of ___

Special Personnel Training Requirements Table

Project Function	Specialized Training – Title or Description of Course	Training Provider	Training Date	Personnel/Groups Receiving Training	Personnel Titles/ Organizational Affiliation	Location of Training Records/Certificates[1]

[1]If training records and/or certificates are on file elsewhere, document their location in this column. If training records and/or certificates do not exist or are not available, then this should be noted.

QAPP Worksheet #9
(UFP-QAPP Manual Section 2.5.1)
Complete this worksheet for each project scoping session held. Identify project team members who are responsible for planning the project.

Title:
Revision Number:
Revision Date:
Page ___ of ___

Project Scoping Session Participants Sheet

Project Name_____ **Projected Date(s) of Sampling**_____ **Project Manager**_____	**Site Name**_____ **Site Location**_____

Date of Session:
Scoping Session Purpose:

Name	Title	Affiliation	Phone #	E-mail Address	Project Role

Comments/Decisions:_____

_____

Action Items: _____

_____

Consensus Decisions: _____

_____

QAPP Worksheet #10
(UFP-QAPP Manual Section 2.5.2)
Clearly define the problem and the environmental questions that should be answered for the current investigation and develop the project decision "If..., then..." statements in the QAPP, linking data results with possible actions. The prompts below are meant to help the project team define the problem. They are not comprehensive.

Title:
Revision Number:
Revision Date:
Page ___ of ___

Problem Definition

The problem to be addressed by the project:

The environmental questions being asked:

Observations from any site reconnaissance reports:

A synopsis of secondary data or information from site reports:

The possible classes of contaminants and the affected matrices:

The rationale for inclusion of chemical and nonchemical analyses:

Information concerning various environmental indicators:

Project decision conditions ("If..., then..." statements):

QAPP Worksheet #11
(UFP-QAPP Manual Section 2.6.1)
Use this worksheet to develop project quality objectives (PQOs) in terms of type, quantity, and quality of data determined using a systematic planning process. Provide a detailed discussion of PQOs in the QAPP. List the PQOs in the form of qualitative and quantitative statements. These statements should answer questions such as those listed below. These questions are examples only, however; they are neither inclusive nor appropriate for all projects.

Title:
Revision Number:
Revision Date:
Page ___ of ___

Project Quality Objectives/Systematic Planning Process Statements

Who will use the data?
What will the data be used for?
What type of data are needed? (target analytes, analytical groups, field screening, on-site analytical or off-site laboratory techniques, sampling techniques)
How "good" do the data need to be in order to support the environmental decision?
How much data are needed? (number of samples for each analytical group, matrix, and concentration)
Where, when, and how should the data be collected/generated?
Who will collect and generate the data?
How will the data be reported?
How will the data be archived?

QAPP Worksheet #12
(UFP-QAPP Manual Section 2.6.2)
Complete this worksheet for each matrix, analytical group, and concentration level. Identify the data quality indicators (DQIs), measurement performance criteria (MPC), and QC sample and/or activity used to assess the measurement performance for both the sampling and analytical measurement systems. Use additional worksheets if necessary. If MPC for a specific DQI vary within an analytical parameter, i.e., MPC are analyte-specific, then provide analyte-specific MPC on an additional worksheet.

Title:
Revision Number:
Revision Date:
Page ___ of ___

Measurement Performance Criteria Table

Matrix	
Analytical Group[1]	
Concentration Level	

Sampling Procedure[2]	Analytical Method/SOP[3]	Data Quality Indicators (DQIs)	Measurement Performance Criteria	QC Sample and/or Activity Used to Assess Measurement Performance	QC Sample Assesses Error for Sampling (S), Analytical (A) or both (S&A)

[1]If information varies within an analytical group, separate by individual analyte.
[2]Reference number from QAPP Worksheet #21 (see Section 3.1.2).
[3]Reference number from QAPP Worksheet #23 (see Section 3.2).

QAPP Worksheet #13
(UFP-QAPP Manual Section 2.7)
Identify all secondary data and information that will be used for the project and their originating sources. Specify how the secondary data will be used and the limitations on their use.

Title:
Revision Number:
Revision Date:
Page ___ of ___

Secondary Data Criteria and Limitations Table

Secondary Data	Data Source (Originating Organization, Report Title, and Date)	Data Generator(s) (Originating Org., Data Types, Data Generation/Collection Dates)	How Data Will Be Used	Limitations on Data Use

QAPP Worksheet #14
(UFP-QAPP Manual Section 2.8.1)
Provide a brief overview of the listed project activities.

Title:
Revision Number:
Revision Date:
Page ___ of ___

Summary of Project Tasks

Sampling Tasks:

Analysis Tasks:

Quality Control Tasks:

Secondary Data:

Data Management Tasks:.

Documentation and Records:

Assessment/Audit Tasks:

Data Review Tasks:

QAPP Worksheet #15
(UFP-QAPP Manual Section 2.8.1)
Complete this worksheet for each matrix, analytical group, and concentration level. Identify the target analytes/contaminants of concern and project-required action limits. Next, determine the quantitation limits (QLs) that must be met to achieve the project quality objectives. Finally, list the published and achievable detection and quantitation limits for each analyte.

Title:
Revision Number:
Revision Date:
Page ___ of ___

Reference Limits and Evaluation Table

Matrix:
Analytical Group:
Concentration Level:

Analyte	CAS Number	Project Action Limit (applicable units)	Project Quantitation Limit (applicable units)	Analytical Method[1]		Achievable Laboratory Limits[2]	
				MDLs	Method QLs	MDLs	QLs

[1]Analytical MDLs and QLs are those documented in validated methods.
[2]Achievable MDLs and QLs are limits that an individual laboratory can achieve when performing a specific analytical method.

QAPP Worksheet #16
(UFP-QAPP Manual Section 2.8.2)
List all project activities as well as the QA assessments that will be performed during the course of the project. Include the anticipated start and completion dates.

Title:
Revision Number:
Revision Date:
Page ___ of ___

Project Schedule/Timeline Table

Activities	Organization	Dates (MM/DD/YY)		Deliverable	Deliverable Due Date
		Anticipated Date(s) of Initiation	Anticipated Date of Completion		

QAPP Worksheet #17
(UFP-QAPP Manual Section 3.1.1)
Describe the project sampling approach. Provide the rationale for selecting sample locations and matrices for each analytical group and concentration level.

Title:
Revision Number:
Revision Date:
Page ___ of ___

Sampling Design and Rationale

Describe and provide a rationale for choosing the sampling approach (e.g., grid system, biased statistical approach):

Describe the sampling design and rationale in terms of what matrices will be sampled, what analytical groups will be analyzed and at what concentration levels, the sampling locations (including QC, critical, and background samples), the number of samples to be taken, and the sampling frequency (including seasonal considerations) [May refer to map or Worksheet #18 for details]:

QAPP Worksheet #18
(UFP-QAPP Manual Section 3.1.1)
List all site locations that will be sampled and include sample ID number, if available. (Provide a range of sampling locations of ID numbers if a site has a large number.) Specify matrix and, if applicable, depth at which samples will be taken. Only a short reference for the sampling location rationale is necessary for the table. The text of the QAPP should clearly identify the detailed rationale associated with each reference. Complete all required information, using additional worksheets if necessary.

Title:
Revision Number:
Revision Date:
Page ___ of ___

Sampling Locations and Methods/SOP Requirements Table

Sampling Location/ID Number	Matrix	Depth (units)	Analytical Group	Concentration Level	Number of Samples (identify field duplicates)	Sampling SOP Reference[1]	Rationale for Sampling Location

[1]Specify the appropriate letter or number from the Project Sampling SOP References table (Worksheet #21).

QAPP Worksheet #19
(UFP-QAPP Manual Section 3.1.1)
For each matrix, analytical group, and concentration level, list the analytical and preparation method/SOP and associated sample volume, container specifications, preservation requirements, and maximum holding time.

Title:
Revision Number:
Revision Date:
Page ___ of ___

Analytical SOP Requirements Table

Matrix	Analytical Group	Concentration Level	Analytical and Preparation Method/SOP Reference[1]	Sample Volume	Containers (number, size, and type)	Preservation Requirements (chemical, temperature, light protected)	Maximum Holding Time (preparation/ analysis)

[1]Specify the appropriate reference letter or number from the Analytical SOP References table (Worksheet #23).

QAPP Worksheet #20
(UFP-QAPP Manual Section 3.1.1)
Summarize by matrix, analytical group, and concentration level the number of field QC samples that will be collected and sent to the laboratory.

Title:
Revision Number:
Revision Date:
Page ___ of ___

Field Quality Control Sample Summary Table

Matrix	Analytical Group	Concentration Level	Analytical and Preparation SOP Reference[1]	No. of Sampling Locations[2]	No. of Field Duplicate Pairs	Inorganic: No. of MS	No. of Field Blanks	No. of Equip. Blanks	No. of PT Samples	Total No. of Samples to Lab

[1]Specify the appropriate reference letter or number from the Analytical SOP References table (Worksheet #23).
[2]If samples will be collected at different depths at the same location, count each discrete sampling depth as a separate sampling location or station.

QAPP Worksheet #21
(UFP-QAPP Manual Section 3.1.2)
List all SOPs associated with project sampling including, but not limited to, sample collection, sample preservation, equipment cleaning and decontamination, equipment testing, inspection and maintenance, supply inspection and acceptance, and sample handling and custody. Include copies of the SOPs as attachments or reference all in the QAPP. Sequentially number sampling SOP references in the Reference Number column. The reference number can be used throughout the QAPP to refer to a specific SOP.

Title:
Revision Number:
Revision Date:
Page ___ of ___

Project Sampling SOP References Table

Reference Number	Title, Revision Date and/or Number	Originating Organization	Equipment Type	Modified for Project Work? (Y/N)	Comments

QAPP Worksheet #22
(UFP-QAPP Manual Section 3.1.2.4)
Identify all field equipment and instruments (other than analytical instrumentation) that require calibration, maintenance, testing, or inspection and provide the SOP reference number for each type of equipment. In addition, document the frequency of activity, acceptance criteria, and corrective action requirements on the worksheet.

Title:
Revision Number:
Revision Date:
Page ___ of ___

Field Equipment Calibration, Maintenance, Testing, and Inspection Table

Field Equipment	Calibration Activity	Maintenance Activity	Testing Activity	Inspection Activity	Frequency	Acceptance Criteria	Corrective Action	Responsible Person	SOP Reference[1]

[1]Specify the appropriate reference letter or number from the Project Sampling SOP References table (Worksheet #21).

QAPP Worksheet #23
(UFP-QAPP Manual Section 3.2.1)
List all SOPs that will be used to perform on-site or off-site analysis. Indicate whether the procedure produces screening or definitive data. Sequentially number analytical SOP references in the Reference Number column. Include copies of the SOPs as attachments or reference in the QAPP. The reference number can be used throughout the QAPP to refer to a specific SOP.

Title:
Revision Number:
Revision Date:
Page ___ of ___

Analytical SOP References Table

Reference Number	Title, Revision Date, and/or Number	Definitive or Screening Data	Analytical Group	Instrument	Organization Performing Analysis	Modified for Project Work? (Y/N)

QAPP Worksheet #24
(UFP-QAPP Manual Section 3.2.2)
Identify all analytical instrumentation that requires calibration and provide the SOP reference number for each. In addition, document the frequency, acceptance criteria, and corrective action requirements on the worksheet.

Title:
Revision Number:
Revision Date:
Page ___ of ___

Analytical Instrument Calibration Table

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action (CA)	Person Responsible for CA	SOP Reference[1]

[1]Specify the appropriate reference letter or number from the Analytical SOP References table (Worksheet #23).

QAPP Worksheet #25
(UFP-QAPP Manual Section 3.2.3)
Identify all analytical instrumentation that requires maintenance, testing, or inspection and provide the SOP reference number for each. In addition, document the frequency, acceptance criteria, and corrective action requirements on the worksheet.

Title:
Revision Number:
Revision Date:
Page ___ of ___

Analytical Instrument and Equipment Maintenance, Testing, and Inspection Table

Instrument/ Equipment	Maintenance Activity	Testing Activity	Inspection Activity	Frequency	Acceptance Criteria	Corrective Action	Responsible Person	SOP Reference[1]

[1]Specify the appropriate reference letter or number from the Analytical SOP References table (Worksheet #23).

QAPP Worksheet #26
(UFP-QAPP Manual Appendix A)
Use this worksheet to identify components of the project-specific sample handling system. Record personnel, and their organizational affiliations, who are primarily responsible for ensuring proper handling, custody, and storage of field samples from the time of collection, to laboratory delivery, to final sample disposal. Indicate the number of days field samples and their extracts/digestates will be archived prior to disposal.

Title:
Revision Number:
Revision Date:
Page ___ of ___

Sample Handling System

SAMPLE COLLECTION, PACKAGING, AND SHIPMENT
Sample Collection (Personnel/Organization):
Sample Packaging (Personnel/Organization):
Coordination of Shipment (Personnel/Organization):
Type of Shipment/Carrier:
SAMPLE RECEIPT AND ANALYSIS
Sample Receipt (Personnel/Organization):
Sample Custody and Storage (Personnel/Organization):
Sample Preparation (Personnel/Organization):
Sample Determinative Analysis (Personnel/Organization):
SAMPLE ARCHIVING
Field Sample Storage (No. of days from sample collection):
Sample Extract/Digestate Storage (No. of days from extraction/digestion):
Biological Sample Storage (No. of days from sample collection):
SAMPLE DISPOSAL
Personnel/Organization:
Number of Days from Analysis

QAPP Worksheet #27
(UFP-QAPP Manual Section 3.3.3)
Describe the procedures that will be used to maintain sample custody and integrity. Include examples of chain-of-custody forms, traffic reports, sample identification, custody seals, laboratory sample receipt forms, and laboratory sample transfer forms. Attach or reference applicable SOPs.

Title:
Revision Number:
Revision Date:
Page ___ of ___

Sample Custody Requirements

Field Sample Custody Procedures (sample collection, packaging, shipment, and delivery to laboratory):

Laboratory Sample Custody Procedures (receipt of samples, archiving, disposal):

Sample Identification Procedures:

Chain-of-custody Procedures:

QAPP Worksheet #28
(UFP-QAPP Manual Section 3.4)
Complete a separate worksheet for each sampling technique, analytical method/SOP, matrix, analytical group, and concentration level. If method/SOP QC acceptance limits exceed the measurement performance criteria, the data obtained may be unusable for making project decisions.

Title:
Revision Number:
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QC Samples Table

Matrix	
Analytical Group	
Concentration Level	
Sampling SOP	
Analytical Method/ SOP Reference	
Sampler's Name	
Field Sampling Organization	
Analytical Organization	
No. of Sample Locations	

QC Sample:	Frequency/Number	Method/SOP QC Acceptance Limits	Corrective Action	Person(s) Responsible for Corrective Action	Data Quality Indicator (DQI)	Measurement Performance Criteria

QAPP Worksheet #29
(UFP-QAPP Manual Section 3.5.1)
Identify the documents and records that will be generated for all aspects of the project including, but not limited to, sample collection and field measurement, on-site and off-site analysis, and data assessment.

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Project Documents and Records Table

Sample Collection Documents and Records	On-site Analysis Documents and Records	Off-site Analysis Documents and Records	Data Assessment Documents and Records	Other

QAPP Worksheet #30
(UFP-QAPP Manual Section 3.5.2.3)
Identify all laboratories or organizations that will provide analytical services for the project, including on-site screening, on-site definitive, and off-site laboratory analytical work. Group by matrix, analytical group, concentration, and sample location or ID number. If applicable, identify the subcontractor laboratories and backup laboratory or organization that will be used if the primary laboratory or organization cannot be used.

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Analytical Services Table

Matrix	Analytical Group	Concentration Level	Sample Locations/ID Numbers	Analytical SOP	Data Package Turnaround Time	Laboratory/Organization (Name and Address, Contact Person and Telephone Number)	Backup Laboratory/Organization (Name and Address, Contact Person and Telephone Number)

QAPP Worksheet #31
(UFP-QAPP Manual Section 4.1.1)
Identify the type, frequency, and responsible parties of planned assessment activities that will be performed for the project.

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Planned Project Assessments Table

Assessment Type	Frequency	Internal or External	Organization Performing Assessment	Person(s) Responsible for Performing Assessment (Title and Organizational Affiliation)	Person(s) Responsible for Responding to Assessment Findings (Title and Organizational Affiliation)	Person(s) Responsible for Identifying and Implementing Corrective Actions (CA) (Title and Organizational Affiliation)	Person(s) Responsible for Monitoring Effectiveness of CA (Title and Organizational Affiliation)

QAPP Worksheet #32
(UFP-QAPP Manual Section 4.1.2)
For each type of assessment describe procedures for handling QAPP and project deviations encountered during the planned project assessments.

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Assessment Findings and Corrective Action Responses

Assessment Type	Nature of Deficiencies Documentation	Individual(s) Notified of Findings (Name, Title, Organization)	Timeframe of Notification	Nature of Corrective Action Response Documentation	Individual(s) Receiving Corrective Action Response (Name, Title, Org.)	Timeframe for Response

QAPP Worksheet #33
(UFP QAPP Manual Section 4.2)
Identify the frequency and type of planned QA Management Reports, the project delivery dates, the personnel responsible for report preparation, and the report recipients.

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QA Management Reports Table

Type of Report	Frequency (daily, weekly monthly, quarterly, annually, etc.)	Projected Delivery Date(s)	Person(s) Responsible for Report Preparation (Title and Organizational Affiliation)	Report Recipient(s) (Title and Organizational Affiliation)

QAPP Worksheet #34
(UFP-QAPP Manual Section 5.2.1)
Describe the processes that will be followed to verify project data. Manual (Section 5.1). Describe how each item will be verified, when the activity will occur, and what documentation is necessary, and identify the person responsible. *Internal* or *external* is in relation to the data generator.

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Verification (Step I) Process Table

Verification Input	Description	Internal/ External	Responsible for Verification (Name, Organization)

QAPP Worksheet #35
(UFP-QAPP Manual Section 5.2.2)
Describe the processes that will be followed to validate project data. Validation inputs include items such as those listed in Table 9 of the UFP-QAPP Manual (Section 5.1). Describe how each item will be validated, when the activity will occur, and what documentation is necessary and identify the person responsible. Differentiate between steps IIa and IIb of validation.

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Validation (Steps IIa and IIb) Process Table

Step IIa/IIb	Validation Input	Description	Responsible for Validation (Name, Organization)

QAPP Worksheet #36
(UFP-QAPP Manual Section 5.2.2)
Identify the matrices, analytical groups, and concentration levels that each entity performing validation will be responsible for, as well as criteria that will be used to validate those data.

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Validation (Steps IIa and IIb) Summary Table

Step IIa/IIb	Matrix	Analytical Group	Concentration Level	Validation Criteria	Data Validator (title and organizational affiliation)

QAPP Worksheet #37
(UFP-QAPP Manual Section 5.2.3)
Describe the procedures/methods/activities that will be used to determine whether data are of the right type, quality, and quantity to support environmental decision-making for the project. Describe how data quality issues will be addressed and how limitations on the use of the data will be handled.

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Usability Assessment

Summarize the usability assessment process and all procedures, including interim steps and any statistics, equations, and computer algorithms that will be used:

Describe the evaluative procedures used to assess overall measurement error associated with the project:

Identify the personnel responsible for performing the usability assessment:

Describe the documentation that will be generated during usability assessment and how usability assessment results will be presented so that they identify trends, relationships (correlations), and anomalies: