



Fort George G. Meade

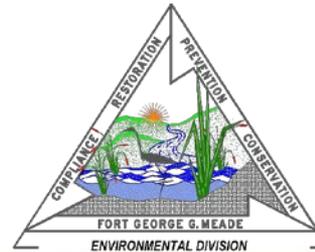
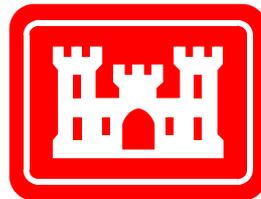


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Restoration Advisory Board (RAB) Meeting January 21, 2016

Uniform Federal Policy for Quality Assurance Project Plans (UFP-QAPP)

AECOM



ARMY STRONG.



What is a UFP-QAPP?

- A document that presents the approach to an environmental investigation of a site or sites where a release is suspected to have occurred.
- It presents the locations, chemical analysis, and rationale for sample collection.
- It presents the objectives for the investigation.
- It presents quality assurance/quality control (QA/QC) procedures to follow in the field and in the laboratory to assure the highest quality data.



Purpose

- The UFP-QAPP was developed to provide procedures and guidance for consistently implementing the national consensus standard American National Standards Institute/American Society for Quality E-4, *Quality Systems for Environmental Data and Technology Programs*, for the collection and use of environmental data at Federal facilities.



And to Fulfill the Purpose:



- A consensus quality systems document prepared by the Intergovernmental Data Quality Task Force (IDQTF)
- The IDQTF was a working group made up of representatives from the
 - U.S. Environmental Protection Agency (EPA),
 - the Department of Defense (DoD), and
 - the Department of Energy (DOE).



Requirements



- According to the DoD Environmental Field Sampling Handbook (April 2013):
 - Defense Environmental Restoration Program projects must utilize the UFP-QAPP.
- April 2006 Memorandum Issued by the Assistant Deputy Under Secretary of Defense for Environment, Safety and Occupational Health:
 - Requesting DoD components begin immediate implementation of the UFP-QAPP.
- It is the USEPA's intent that the QAPP be the premier planning document for an entire project.





Traditional Planning Documents



- Work Plan
- Field Sampling Plan (FSP)
- QAPP
- Health and Safety Plan (not discussed further)
 - QAPP have been around since the 1980's.



Traditional Work Plan Components



- Introduction
- Site Background and Physical Setting
- Initial Evaluation
- Work Plan rationale
- RI/FS Tasks
- Costs and Key Assumptions
- Schedule
- Project Management



Traditional Field Sampling Plan Components



- Site Background
- Sampling Objectives
- Sample Location and Frequency
- Sample Designation
- Sampling Equipment and Procedures
- Sample handling and Analysis





Traditional QAPP Components



- Title Page
- Project Description
- Project Organization and Responsibilities
- Quality Assurance Objectives for Measurement
- Sampling Procedures
- Calibration Procedures
- Analytical Procedures
- Data Reduction, Validation, and Reporting
- Internal Quality Control
- Performance and System Audits
- Preventive Maintenance
- Procedures used to assess data (precision, accuracy, completeness)
- Corrective actions



UFP-QAPP Objectives



- To combine the work plan, FSP, and QAPP into one document with a structured format.
- To the extent practicable, the UFP-QAPP is comprehensive and does not refer to or rely on separate work plans.
- By minimizing the existence of separate work plans, consistency across different project elements are best-maintained and administrative efforts relating to documents review/revision are optimized.
- The UFP-QAPP was ready for use in 2005.



UFP-QAPP Work Sheets



- Originally there were 37 worksheets.
- In 2010, the IDQTF established a subgroup to make recommendations for optimizing the worksheets. The optimization effort was performed with the following objectives:
 - Eliminate redundancy of information contained in certain worksheets;
 - Increase the ease of worksheet population, review, and use;
 - Clarify and promote the use of the systematic planning process and the implementation of a graded approach; and
 - Promote consistency in the use of QA/QC terminology and procedures among the Federal agencies.
- This reduced the number of Work Sheets to 28



UFP-QAPP TOC



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- QAPP WS #1 & 2: Title and Approval Page
- QAPP WS #3 & 5: Project Organization and QAPP Distribution
- QAPP WS #4, 7 & 8: Personnel Qualifications and Sign-off Sheet
- QAPP WS #6: Communication Pathways
- QAPP WS #9: Project Planning Session Summary
- QAPP WS #10: Conceptual Site Model
- QAPP WS #11: Project/Data Quality Objectives
- QAPP WS #12: Measurement Performance Criteria
- QAPP WS #13: Secondary Data Uses and Limitations
- QAPP WS #14 & 16: Project Tasks & Schedule
- QAPP WS #15: Project Action Limits and Laboratory-Specific Detection/Quantitation Limits
- QAPP WS #17: Sampling Design and Rationale
- QAPP WS #18: Sampling Locations and Methods
- QAPP WS #19 & 30: Sample Containers, Preservation, and Hold Times
- QAPP WS #20: Field QC Summary
- QAPP WS #21: Field Standard Operating Procedures (SOPs)
- QAPP WS #22: Field Equipment Calibration, Maintenance, Testing, and Inspection
- QAPP WS #23: Analytical SOP's
- QAPP WS #24: Analytical Instrument Calibration
- QAPP WS #25: Analytical Instrument and Equipment Maintenance, Testing, and Inspection
- QAPP WS #26 & 27: Sample Handling, Custody, and Disposal
- QAPP WS #28: Analytical Quality Control and Corrective Action
- QAPP WS #29: Project Documents and Records
- QAPP WS #31, 32 & 33: Assessments and Corrective Action
- QAPP WS #34: Data Verification and Validation Inputs
- QAPP WS #35: Data Verification Procedures
- QAPP WS #36: Data Validation Procedures
- QAPP WS #37: Data Usability Assessment





Work Sheet Breakdown – General Site Information



- QAPP WS #1 & 2: Title and Approval Page
- QAPP WS #3 & 5: Project Organization and QAPP Distribution
- QAPP WS #4, 7 & 8: Personnel Qualifications and Sign-off Sheet
- QAPP WS #6: Communication Pathways
- QAPP WS #9: Project Planning Session Summary
- QAPP WS #14 & 16: Project Tasks & Schedule



Work Sheet Breakdown – Chemistry QA/QC



- QAPP WS #12: Measurement Performance Criteria
- QAPP WS #13: Secondary Data Uses and Limitations
- QAPP WS #15: Project Action Limits and Laboratory-Specific Detection/Quantitation Limits
- QAPP WS #19 & 30: Sample Containers, Preservation, and Hold Times
- QAPP WS #23: Analytical SOPs
- QAPP WS #24: Analytical Instrument Calibration
- QAPP WS #25: Analytical Instrument and Equipment Maintenance, Testing, and Inspection
- QAPP WS #26 & 27: Sample Handling, Custody, and Disposal
- QAPP WS #28: Analytical Quality Control and Corrective Action
- QAPP WS #31, 32 & 33: Assessments and Corrective Action
- QAPP WS #34: Data Verification and Validation Inputs
- QAPP WS #35: Data Verification Procedures
- QAPP WS #36: Data Validation Procedures
- QAPP WS #37: Data Usability Assessment



Work Sheet Breakdown – Field Work Quality Control



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- QAPP WS #20: Field QC Summary
- QAPP WS #21: Field SOPs
- QAPP WS #22: Field Equipment Calibration, Maintenance, Testing, and Inspection
- QAPP WS #29: Project Documents and Records





Work Sheet Breakdown – Field Work



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- QAPP WS #10: Conceptual Site Model
- QAPP WS #11: Project/Data Quality Objectives
- QAPP WS #17: Sampling Design and Rationale
- QAPP WS #18: Sampling Locations and Methods

Includes types and numbers of samples, sample locations, and rationale

**QAPP Worksheet #10:
Conceptual Site Model**

1.0 INTRODUCTION

This worksheet presents the project's conceptual site model (CSM) to assist in the development of DQOs. The CSM succinctly conveys what is currently known about the site and addresses the following topics:

- Background information, i.e., site history (unless this information is presented in an Executive Summary)
- Sources of known or suspected hazardous waste;
- Known or suspected contaminants or classes of contaminants;
- Primary release mechanism;
- Secondary contaminant migration;
- Fate and transport considerations;
- Potential receptors and exposure pathways;
- Land use considerations;
- Key physical aspects of the site (e.g., site geology, hydrology, topography, climate); and
- Current interpretation of nature and extent of contamination to the extent that it will influence project-specific decision-making.

2.0 REPRESENTATIVE CSM

Figure WS#10-1 presents a representative CSM that influenced the scoping of the prior investigations that have been completed. The planned future sampling and analysis that is the subject of this QAPP is based on evaluations of the prior monitoring results for each site and consensus recommendations for additional sampling and analysis which is the subject of the present QAPP.

3.0 SITE-SPECIFIC CSM INFORMATION SOURCES

QAPP Worksheet #12: Measurement Performance Criteria
(UFP-QAPP Manual Section 2.6.2)
(EPA 2106-G-05 Section 2.2.6)

Laboratory: Eurofins/ALS
Matrix: Soil
Analytical Group: VOC by SW-846 8260B
Concentration Level: Low

Sampling Procedure	Analytical Method/SOP ELLE/ALS	<u>Data Quality Indicators (DQIs)</u>	<u>Measurement Performance Criteria</u>	QC Sample and/or Activity Used to Assess Measurement Performance	QC Sample Assesses Error for Sampling (S), Analytical (A) or Both (S&A)
Soil sampling	SW-846 8260B/ 2-21/02-8260	Precision	RPD <50	Field Duplicates	S & A
Soil sampling	SW-846 8260B/ 2-21/02-8260	Accuracy/Bias	% recovery as follows: See QSM 5.0	Surrogate Spike (organics)	A
Soil sampling	SW-846 8260B/ 2-21/02-8260	Accuracy/Bias	Recovery limits see DoD QSM 5.0 and RPD<20	MS/MSD	A
Soil sampling	SW-846 8260B/ 2-21/02-8260	Accuracy/Bias	Recovery limits see DoD QSM 5.0 and RPD<20	LCS	A
Soil sampling	SW-846 8260B/ 2-21/02-8260	Accuracy/Field Contamination	No detected target compounds	Field Blank	S & A
Soil sampling	SW-846 8260B/ 2-21/02-8260	Accuracy/Lab Contamination	No detected target compounds	Method Blank	A
Soil sampling	SW-846 8260B/ 2-21/02-8260	Accuracy/Transport Container	No detected target compounds	Trip Blank	A
Soil sampling	SW-846 8260B/ 2-21/02-8260	Accuracy/Holding Time	<14 days until extraction	Reported Sample Data	A
Soil sampling	SW-846 8260B/ 2-21/02-8260	Completeness	Presentation of samples and analyses requested on COC in lab reports and EDD	Reported Sample Data	S & A
Soil sampling	SW-846 8260B/ 2-21/02-8260	Sensitivity	Detection limits ≤to PALs	Detection limits	A



UFP-QAPP for Fort Meade



- A UFP-QAPP has been prepared for Supplemental Site Investigation and Remedial Investigation/ Feasibility Study Sites at Fort Meade and will be ready in Draft form in Spring 2016.



UFP-QAPP Addendums for Fort Meade



- QAPP Addendum will be prepared for:
 - Cell 3 Geophysics and Test Pits – Fast track to delineate boundaries of Cell 3 – Draft January 2016
 - Architect of the Capitol Lead Soil Remediation – Draft March 2016
 - Cell 3 RI Plan – Dependent upon results of boundary delineation – Draft July 2016
 - Cell 3 Soil Cover Maintenance – Dependent upon results of boundary delineation and RI/FS – Draft Fall 2017
 - Closed Sanitary Landfill (CSL) Pilot Test – Dependent upon CSL Record of Decision – Draft Late 2016
 - CSL RIP Design – Dependent upon CSL Pilot Test – Draft Summer 2017



ANY
QUESTIONS
?





Acronyms and Abbreviations



- AECOM – AECOM Technical Services, Inc.
- CSL – Closed Sanitary Landfill
- DoD – Department of Defense
- DOE – Department of Energy
- EPA – U.S. Environmental Protection Agency
- FSP – Field Sampling Plan
- IDQTF – Intergovernmental Data Quality Task Force
- QA/QC – quality assurance/quality control
- RAB – Restoration Advisory Board
- SOP – Standard Operating Procedure
- UFP-QAPP – Unified Federal Policy - Quality Assurance Project Plan



Points of Contact



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