



## **Tier 2 – Enhancing a Tribal Response Program**

# **Module 9: Tribal Cleanup Standards**

**How a Tribe can determine and set cleanup standards for a cleanup on Tribal lands.**

**[TribalTAB.org](https://TribalTAB.org)**

# Quality Assurance Project Plans (QAPPs)

A key component in obtaining quality site work for brownfield assessment, planning and cleanups.

The QAPP will present an organized and systematic description of the ways in which Quality Assurance and Quality Control will be applied to environmental data.



# **Goal: Quality Assurance of Brownfields Site Assessments and Cleanups**





# Objectives of this training:

Increase your knowledge of Quality Assurance Project Plans (QAPPs):

- ❖ What is a QAPP?
- ❖ Why do you need a QAPP?
- ❖ How is a QAPP developed?



# Objectives of this training:

- ❖ What information is required in a QAPP?
- ❖ Who writes the QAPP?
- ❖ Your role and responsibility in the QAPP development, review, and approval process.



# What is a QAPP?

A brownfield site investigation typically includes collection and analysis of environmental media such as soil or water.

A QAPP is a document that describes the technical and quality control activities of environmental data gathering that should be implemented to ensure that the results of the work performed will satisfy the **data user's** needs.

**YOU and the Tribe are the data user!**



# Why should I have a QAPP?

QAPPs are required\* for all EPA-funded projects and tasks involving environmental data gathering to include:

- ❖ Brownfields ASTM Phase II Environmental Site Assessments
- ❖ Brownfield Cleanup Processes
- ❖ Brownfields Cleanup Verification

*\*Non-EPA organizations which receive EPA funds need to satisfy those requirements defined in the Code of Federal Regulations.*



# Why should I have a QAPP?

- ❖ Ensure the right data is gathered correctly the first time.
- ❖ Reduce time and costs of site investigations.
- ❖ Ensure detection levels and accuracy of data is adequate to support Tribal decision making.
- ❖ Provide confidence in the results of sampling efforts.
- ❖ Comply with Grant Terms and Conditions, as well as Regulations.
- ❖ It is a good idea!!





# Applicable Regulations for QA Documentation

48 CFR 46	Quality Management Plan (or equivalent) and a QA Project Plan (or equivalent)
40 CFR 30	Quality Management Plan and a QA Project Plan
40 CFR 31	Quality System must conform to the American National Standard (ANSI/ASQC-E-4, 1994). Submit a Quality Manual and a QA Project Plan
40 CFR 35	Comply with 40 CFR 31



# US EPA QAPP Guidance\*

The U.S. EPA QAPP Standard: [Quality Assurance Project Plan \(QAPP\) | US EPA](#)  
QAPP Standard Frequently Asked Questions: [Environmental Quality Assurance Project Plan Standard Frequently Asked Questions](#)

Optimized UFP-QAPP Worksheets: [Optimized UFP-QAPP Worksheets](#)

Uniform Federal Policy for Quality Assurance Project Plans: [Uniform Federal Policy for Quality Assurance Project Plans: Evaluating, Assessing, and Documenting Environmental Data Collection and Use Programs - Part 1: UFP-QAPP Manual](#)

**KSU TAB QAPP Guide:** [3908.4\\_QAPP2019.pdf](#)

*\*Consult your EPA Region for additional or supplemental QAPP Guidance and/or a QAPP Review Checklist.*



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# **Value and Purpose of a U.S. EPA Approved QAPP: Doing the Right Things the Right Way the First Time!**

# 3 Basic Stages in Developing a QAPP:

- ❖ Problem Identification
- ❖ Planning and Preparing
- ❖ Finalizing the Plan





# Problem Definition/Background

## **Why is Environmental Data needed?**

Typically for brownfields it is for:

- ❖ Conducting an ASTM Phase II Environmental Site Assessment to determine what and how much contamination exists on a site.
- ❖ Conducting a Brownfield Site Cleanup.
- ❖ Conducting Cleanup Verification.
- ❖ Possible post cleanup monitoring of site conditions.



# QAPP Planning and Preparation

## A Team Effort:

- ❖ You & Environmental Staff
- ❖ Contractor
- ❖ Other Tribal staff(s)
- ❖ Tribal Leadership/Committees
- ❖ Technical Assistance
- ❖ Other sources (state?)
- ❖ U.S. EPA



# Project/QAPP Development

- ❖ Determine the scope of the project(s)
- ❖ Assemble a team and/or hire a contractor
- ❖ Determine Data Quality Objectives (DQOs)
- ❖ **Write the Plan**
- ❖ Submit the Plan to U.S. EPA for review and approval
- ❖ Once approved, distribute the plan as needed
- ❖ Start work, following the plan
- ❖ Revise when needed, get approval, then re-distribute the plan



# Different Types of QAPP

**Site/Project Specific QAPP:** those projects for which the environmental data gathering is task, site or project specific.

**Generic or Programmatic QAPP:** those projects for environmental data operations conducted at multiple locations and/or over a long period of time.

**NOTE: Some projects have both**





# Contents & Format of QAPP

## The typical QAPP may include:

- ❖ Field Sampling Plan\*: sampling design and rationale
- ❖ Sampling and analytical methods
- ❖ Sample handling and custody requirements
- ❖ QA/QC requirements for field and laboratory equipment
- ❖ Data documentation, format and management (software used)

*\*Note: U.S. EPA Regions have varying requirements for the FSP to be within the QAPP or a separate document.*



# Contents & Format of QAPP

The specific QAPP format and contents can vary by U.S.EPA Region.

**Consult your Regional office** for specific guidance and requirements.



# QAPP Review

For EPA-funded projects (i.e., Brownfield 128(a) or 104(k) Grants) the grantee reviews the plan as well as the U.S. EPA Regional Office.

The Grantee/Organization (Tribe) may work with their contractor to develop the QAPP that meets their needs.



# Review QAPP to ensure that:

- ❖ The plan is accurate and complete (and is for your site!)
- ❖ **The Data Quality Objectives (DQOs) meet the need of the Tribe\***
- ❖ Sufficient data will be collected using appropriate measurement and data acquisition methods
- ❖ There is a process to identify any limitations on the data use

*\* See DQO Discussion later*





# Tribal Reviewers should:

- ❖ Be timely in their review.
- ❖ Have a process established to deal with any revisions needed.
- ❖ Have appropriate training and expertise in technical areas and/or a contractor with the necessary expertise and recognize where they need advice.
- ❖ Develop a SOP for working on multiple sites.



# QAPP Approval

Indicates that the QAPP is accurate and complete, and that it provides:

- ❖ Sufficient detail to identify the project's technical and quality objectives.
- ❖ Sufficient data to make Tribal decisions on the actions necessary and the short & long-term reuse of the site.



# QAPP Implementation

- ❖ Data collection may not be started until the QAPP has been reviewed, approved and signed.
- ❖ The QAPP should be implemented as approved.
- ❖ A person should be designated to ensure the approved QAPP is utilized.



# Revisions - After Approval

When changes are needed, the QAPP should be revised and re-approved by the approving official(s) prior to the change being made.





# Regular Reviews or Updates

**Generic QAPP** for multi-year or multi-site projects should be reviewed periodically and revised when necessary.

A Generic QAPP may also need site specific plans and/or supporting documents.



# Example QAPP - Checklist

Consult your EPA Regional office and/or technical assistance providers for examples of QAPPs for similar projects and QAPP checklists.



# What is a Quality Management Plan?

The data Quality Management Plan (QMP) describes the policies, objectives, principles, organizational authority, responsibilities, accountability, and implementation plan of the organization for data management and quality. Organizations must ensure that data collected for the characterization of environmental processes and conditions are of the appropriate type and quality for their intended use and that environmental technologies are designed, constructed, and operated according to defined expectations.

**Consult your EPA Region for the current EPA requirements and guidance for QMPs.**



# QAPP: Data Quality Objectives (DQOs)





# What are DQOs?

They are a way for the QAPP writer to understand the objectives of the sampling, what data is needed, and what data quality is needed to make what decisions.





# How are DQOs used?

- ❖ A sampling and QAPP planning tool
- ❖ Cost management tool
- ❖ Decision identification
- ❖ Clarify goals
- ❖ Contingency planning



# Who Develops DQOs?

**The QAPP writer with input from the Brownfields Grantee Team:**

- ❖ You & Environmental Staff
- ❖ Contractor
- ❖ Other Tribal staff(s)
- ❖ Tribal Leadership
- ❖ Technical Assistance
- ❖ Other sources (state?)
- ❖ U.S. EPA



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# **How are DQOs developed?**

**DQOs are developed by going through 7 basic steps**

# Step 1: QAPP Problem Statement

- ❖ Confirm presence and level of contamination?
- ❖ Contamination exceeds background?
- ❖ Cleanup needed for reuse of the site?
- ❖ Cleanup confirmation?
- ❖ Interim or long-term monitoring parameters?



# Step 2: Identify the Decisions Needed or Questions to Answer

- ❖ Land acquisition?
- ❖ Land use or reuse planning ?
- ❖ Level of cleanup needed for planned reuse?
- ❖ Confirm if the cleanup met goals?
- ❖ Safe ground water use?
- ❖ Institutional controls needed?





# Step 3: Describe Inputs to the Decision(s)

- ❖ Confirm suspected contaminants?
- ❖ Extent/area/depth of contamination?
- ❖ Sampling or analytical costs?
- ❖ State requirements?
- ❖ Background levels?
- ❖ Community concerns?



# Step 4: Define the Boundaries of the Study Area

- ❖ Property lines known?
- ❖ Property access?
- ❖ One or multiple contaminated areas?
- ❖ Media boundaries?
- ❖ Depth of sampling?



# Step 5: Develop a Decision Rule(s)

- ❖ Required format or program?
- ❖ Minimum detection levels?
- ❖ Action/toxicity levels to be used? (MCLs, RSLs, state levels, etc.)



# Step 6: Specify Limits on Uncertainties

- ❖ Degree of accuracy needed?
- ❖ Field data vs modeling?
- ❖ All data needs to be met?
- ❖ Community acceptability?



# Step 7: Optimize the Study Design

- ❖ Time & budget realistic?
- ❖ Need to refine scope?
- ❖ Need to phase field work for different areas, media, or season?

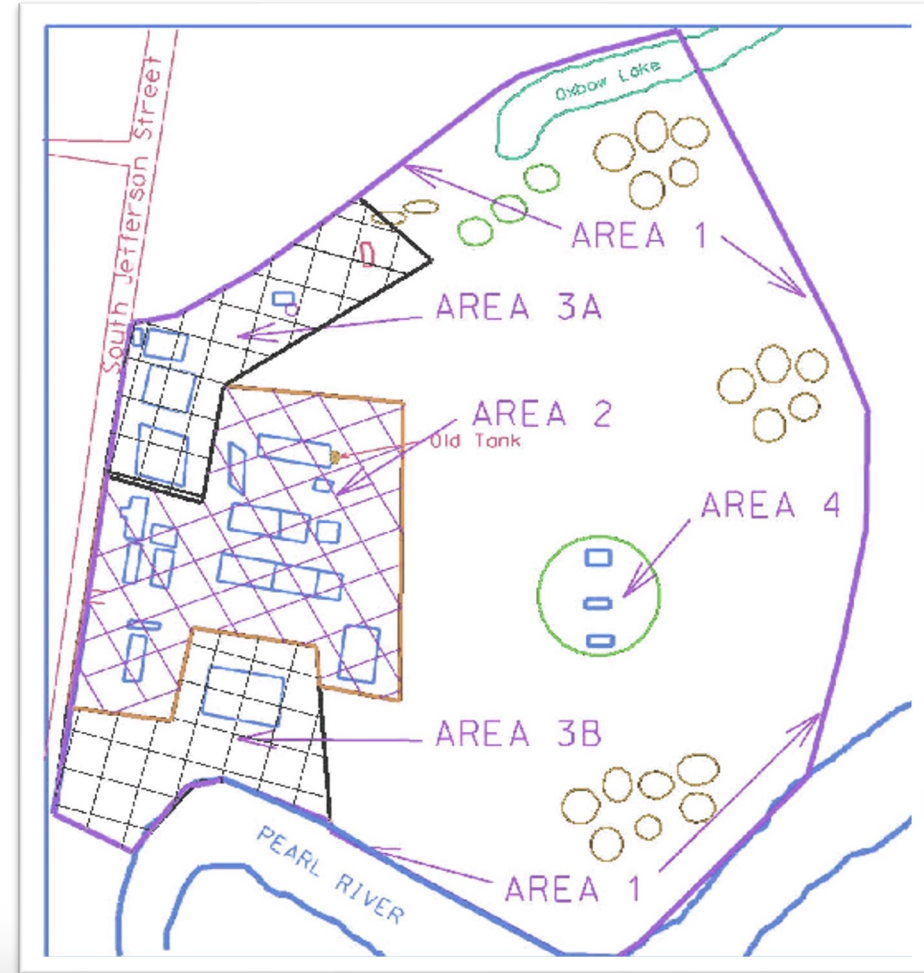




# Assessment DQO Strategies:

**You can have Multiple DQOs for large complex sites with multiple sources and/or mixed future land uses.**

- ❖ Area 1 - Former Landfill and debris/tar pile areas
- ❖ Area 3A - Former Asphalt Plant
- ❖ Area 4 - Former Petroleum Tank Farm



# 128(a) Guidance

**Consult the latest U.S. EPA Guidance:** U.S. EPA Office of Brownfields Land Revitalization issues an annual 128(a) funding guidance each Fall\*:

*“Funding Guidance for State & Tribal Response Programs, Fiscal Year 20xx”*

NOTE: This guidance is supplemented by the EPA Regions

\*See Funding Guidance Link: [State and Tribal Response Program | US EPA](#)



# We Would Like to Hear From You

Questions about this Module or need other  
brownfields assistance?

Contact the Tribal TAB team at  
[Tribal-TAB@ksu.edu](mailto:Tribal-TAB@ksu.edu)



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