



Munitions Response Quality Assurance Project Plan Toolkit: Module 2

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MR-QAPP Toolkit Overview



Based on Uniform Federal Policy for Quality Assurance Project Plans (UFP-QAPP, IDQTF, 2005)

- Implements a systematic planning process (SPP)
 - Black text** = minimum recommended requirements
 - Blue text** = examples
 - Green text** = instructions
- Illustrates
 - Use of the Conceptual Site Model throughout the project
 - Process for conducting the Data Usability Assessment (DUA), a critical component of data analysis and decision-making
- Examples use multiple geophysical technologies, to illustrate the applications of each
- The MR toolkit does not address sampling for Munitions Constituents

Background: DoD-EPA UXO Management Principles (March 2000)

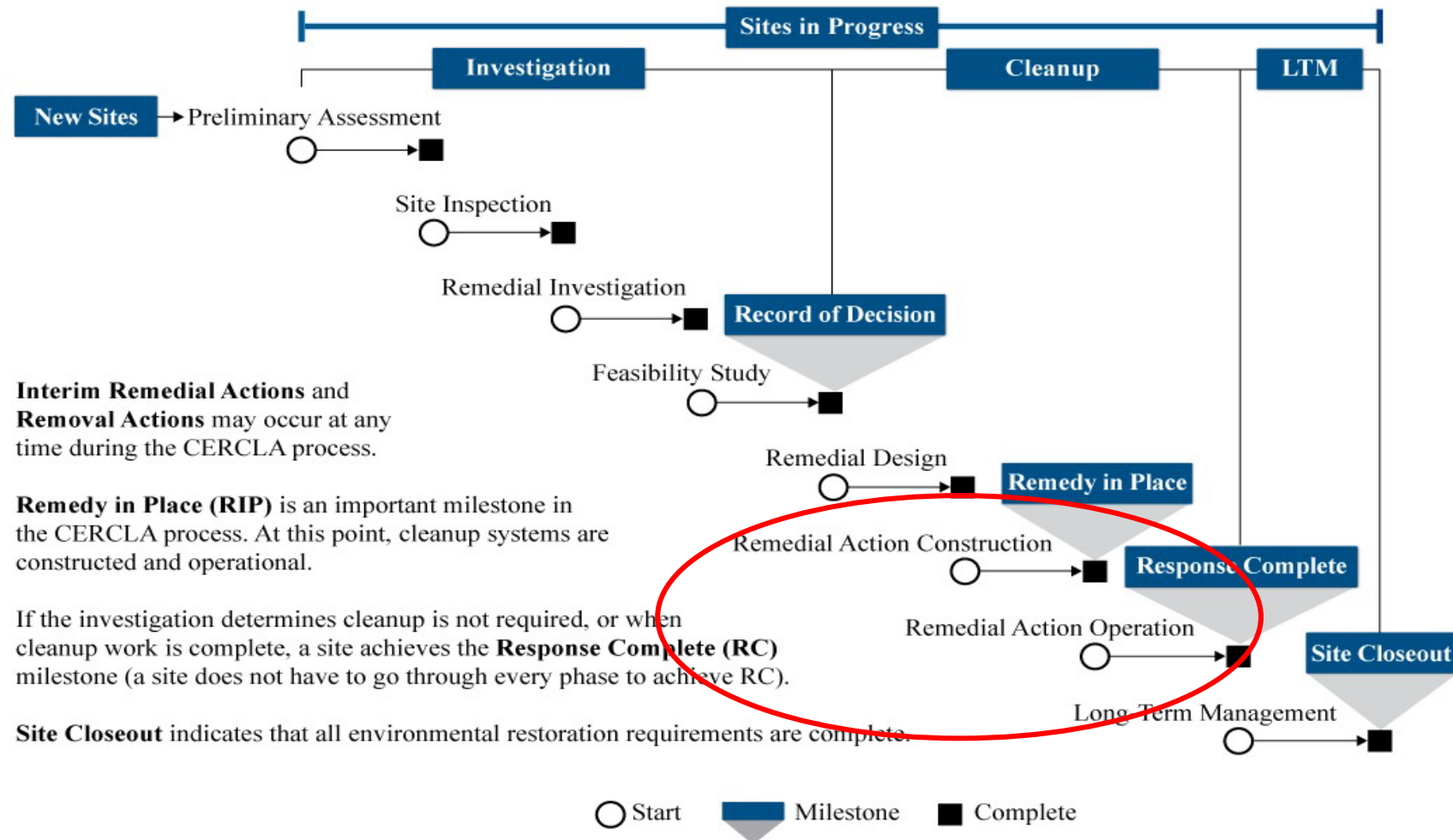


Applies to Response Actions at Munitions Response Sites (MRS)

- DoD will conduct response actions i/a/w CERCLA and the National Contingency Plan (NCP)
- DoD/EPA are committed to substantive involvement of regulators and stakeholders throughout response process
- A permanent data record and audit trail are required
- The most appropriate and effective detection technologies should be selected for each site



The CERCLA Process and Milestones



Weight-of-Evidence Decision-Making



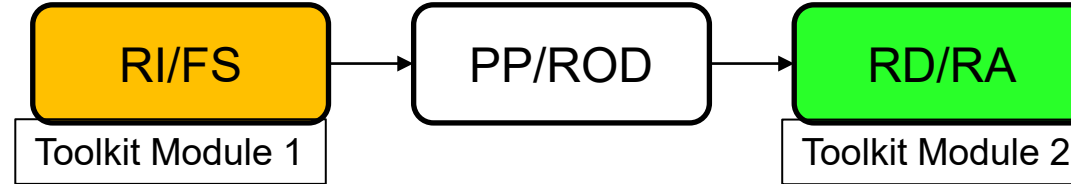
- Unlike traditional chemical cleanups, MRS do not have a clearly defined endpoint based on acceptable risk
- A weight-of-evidence (WoE) approach is a familiar concept found in scientific and regulatory literature; specifically for the purpose of assessing risk
- Decision-making using the WoE approach involves consideration of **multiple lines of evidence** incorporated into the CSM
 - Avoids relying solely on any one piece of information
 - Allows informed, defensible decisions on MRS

RI vs RA



- RI collects evidence to build and refine the preliminary CSM
 - Projection of what the site looks like
- ROD relies on the CSM to support cleanup decisions
 - CSM of known and sufficient quality from the RI
- Cleanup relies on the CSM for design assumptions
 - RA technical approach from the ROD CSM
 - Continuous evaluation of new information that may either confirm or change the CSM

The Remedial Action QAPP



- Transition from investigation to cleanup
- Cleanup decision has been made in the ROD
- Implementing the selected remedy
- What are RA data needs?
 - Data to successfully execute the remedy
 - Demonstrate selected remedy implemented correctly
 - Demonstrate remediation goals achieved

Start with the end in mind

RA Quality Considerations



- Decisions are final – there is no next step
- DQO process drives MPCs
 - More careful measures of quality and data checks = stricter MPCs
 - Weight of Evidence relies on MPCs to demonstrate RA goals were met
- Documented and defensible data
- Demonstrate success of each step
 - Data Usability Assessment



Summary

- Different type of decision in RA vs RI
- Weight-of-Evidence decision making is utilized
- Data usability assessment is a crucial step
- Decisions are final – there is no next step