



U.S. Army Corps of
Engineers

June 27, 2005

TRABUCO BOMBING RANGE PLANNING FOR PROJECT EXECUTION

Based On EM 200-1-2: Technical Project
Planning (TPP) Process

TPP Workshop Objectives

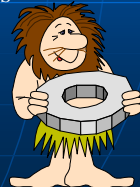


- Enhance Project Quality
- Accelerate Project Execution
- Reduce Project Costs

- ✓ Provide Overview of TPP Process
- ✓ Use of TPP Process, Concepts, and Tools
- ✓ Implementation of TPP Process on Trabuco Project


TPP Process

- Multi-Disciplinary Approach
- Focused on Site Closeout
- Requires Definition of Project Objectives
- Defines Constraints and Dependencies
- Data Needs based on Project Objectives
- Promotes Documentation
 - Planning Worksheets
 - Data Quality Objectives (DQOs)



What is the TPP Process?

- Phase I Identify Current Project
- Phase II Determine Data Needs
- Phase III Develop Data Collection Options
- Phase IV Design Data Collection Program

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- Project Objectives
 - Potential Roadblocks/Hurdles
 - Detailed DQOs
 - Progress to Site Closeout

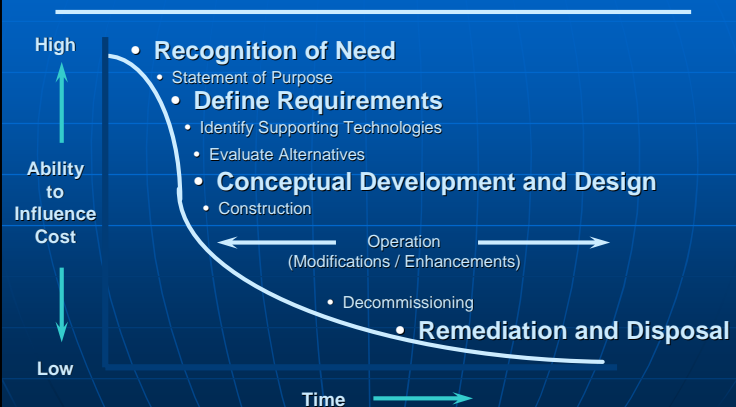
Documentation of Project Decisions, Performance

- Facilitates communication among current team and subsequent personnel changes
- Allows a comparison of project and technology performance including assessments of previous work completed and potential presumptive remedies by providing consistent baseline of operating parameters and conditions
- Provides contributions to the baseline for future data gathering and report preparation

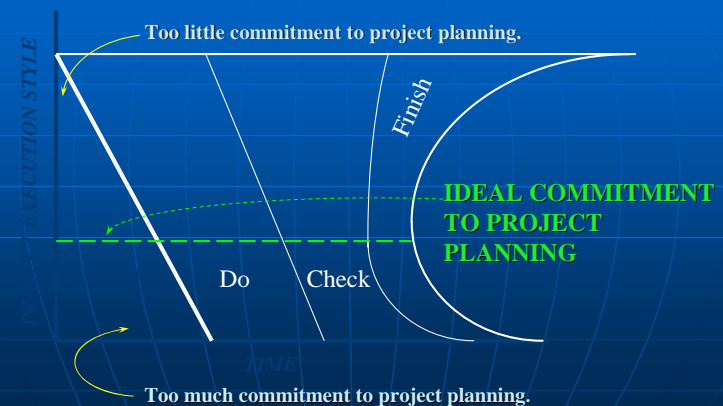
Documentation of Project Decisions, Performance

- Provides elements of remedial action completion report close-out documents required by CERCLA
- Supports improved cost comparisons and projections for consideration of alternatives
- Assists in future remedy selection by allowing a project manager to consider previous technology applications on sites with similar characteristics.

Cost Effects of TPP Process



Effective and Timely Planning



Phase I of TPP Process

IDENTIFY
CURRENT PROJECT

DETERMINE
DATA NEEDS

DEVELOP
DATA COLLECTION
OPTIONS

DESIGN
DATA COLLECTION
PROGRAM

Phase I Identify Current Project



- Prepare Team Information Package
 - Decision Makers, Data Users, Data Implementers
 - Customer Goals
 - Existing Site Information
- Identify Site Approach
 - Project Objectives
 - Regulator and Stakeholder Perspectives
 - Probable Remedies
- Identify Current Project
 - Constraints & Dependencies
 - Current Executable Stage
 - Phase I Worksheet
 - Site Specific Project Objectives



Technical Planning Team



- Decision Makers
- Data User Perspectives
- Data Implementer Perspectives
- Other Team Resources

Decision Makers

- Customer(s)
- Project Manager
- Landowner
- Regulator(s)
- Other Stakeholders

Data User Perspectives

- "Risk"
- "Compliance"
- "Remedy"
- "Responsibility"



Data User Perspectives

- "Risk – Munitions and Explosives of Concern (MEC)"



Evaluates and communicates current and future impact to public safety and human use of the environment associated with site conditions, site investigations and site remediation

Data User Perspectives

- "Risk – HAZARDOUS, TOXIC, AND RADIOLOGICAL WASTE (HTRW)"



Evaluates potential risks to human health and the environment associated with site conditions, site investigations and site remediation

Data User Perspectives

- "Compliance"



Evaluates, monitors, and ensures legal and regulatory compliance

Data User Perspectives

- "Remedy"



Identifies, designs, constructs, operates, and maintains site remediation

Data User Perspectives

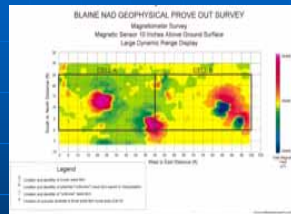
- "Responsibility"



Focuses on apportionment of financial responsibility and liability between potentially responsible parties

Data Implementer Perspectives

- "Sampling/Clearance"



- "Analysis"



Customer's Goals (preliminary)

- Concept of "Site Closeout"



- Project and Site Schedule
i.e., (short-and long-term)



- Budget for the Site
i.e., this (FY and others)



Identify Stakeholder Perspectives

Continued protection

Additional Response

Long Term Monitoring

- Regulator
- Community Interests

Site Closeout Statement

- Focus efforts from the current site status and condition through any necessary remediation, operation and maintenance, or monitoring efforts
- Developed and embraced by all team members

Site Closeout Statement



- Important to document as revisions occur
- Fuzzy picture when project begins, becomes clearer as project matures

MEC Site Closeout Statement



- Value differing viewpoints
- Current and future land use
- Can't guarantee a "clean site"
- Local initiatives
- Community support
- Recurring reviews
- Continuing DOD commitment

MEC Site Data

- Physical Nature of the Site
 - The natural, environmental and man-made features of a site that may affect, or be affected by, the use, detection, recovery or disposal of MEC
 - Nature and Extent of UXO
 - The distribution, density, characteristics and changes of UXO at the site

MEC Site Data

- Regulatory Framework
 - The laws, regulations, guidance and principles that affect the use, detection, recovery or disposal of MEC at a site (includes understanding Explosives Safety Submission)
 - Evaluate existing and identify new requirements

MEC Site Data

- Demographics and Land Use
 - The distribution, density, characteristics and changes of a human population and their effects on the way land is used at the site

Summary of Phase I

- KEY CONCEPTS
 - Technical Planning Team
 - Project Objectives
 - Constraints and Dependencies
- ACTIVITIES
 - Determine Site Approach
 - Identify Current Project
- PRODUCTS
 - Phase I Worksheet
 - Overall Site Approach
 - Current Project
 - Site Specific Project Objectives

Phase II of TPP Process

IDENTIFY
CURRENT PROJECT

DETERMINE
DATA NEEDS

DEVELOP
DATA COLLECTION
OPTIONS

DESIGN
DATA COLLECTION
PROGRAM

Phase II Determine Data Needs



- Determine Data Needs
 - Data User's Roles
 - Use of Existing Data
 - Additional Data Required to Satisfy Project Objectives Based on Conceptual Site Model
- Document Data Needs
 - Data User Perspective
 - Contaminant/Characteristic of Interest
 - Media of Interest
 - Sampling/Clearance Locations and Depths
 - Number of Samples/Acres
 - Concentration of Interest/Other Criteria



“Why did we collect so much Data?”
“Did we collect the data that I need?”



Data User's Perspectives



- Risk
Exposure Area of Interest
- Compliance
Compliance Points/Areas
- Remedy
Remediation Areas of Interest
- Responsibility
Responsibility Areas of Interest

Define Data Needs

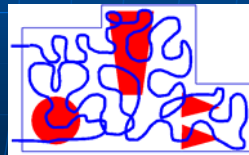
- Evaluate Usability of Existing Data
- Identify Data Gaps

Define Data Needs

- Environmental Data Needs
- Site Information Needs (e.g., historic information, vegetation, terrain, utility locations, site access, critical habitats sensitive environments, and zoning)

Define MEC Data Needs

- Sampling/Clearance Approach
- Total Acreage Covered
- Geophysical Instruments
- Field Modifications
 - Rationale
 - Communication
 - Authorization



MEC Site Data

- Physical Nature of the Site
- Nature and Extent of UXO
- Regulatory Framework
- Demographics and Land Use

Define Data Needs

- Number of Samples/Acres Cleared
- Data Collection Considerations
 - Recognize Field Screening and Field Analytical Opportunities
 - Expedited Site Characterization
 - Dynamic Work plans

Documenting Data Needs

- "Who" needs the data
- "What" data is needed
- "What" project objectives will the data help to satisfy
- "What" is the data use(s) intended
- "What" number of samples/acres are required *to satisfy the intended use(s)*
- "What" is the reference concentration of interest (or other performance criteria)
- "Where" is the area/location/depth of interest

Summary of Phase II

- KEY CONCEPTS
 - Data User Perspectives
- ACTIVITIES
 - Determine Data Needs
 - Document Data Needs
- PRODUCTS
 - Data Needs Worksheets

Phase III of TPP Process

IDENTIFY
CURRENT PROJECT




DETERMINE
DATA NEEDS

DEVELOP
DATA COLLECTION
OPTIONS

DESIGN
DATA COLLECTION
PROGRAM

Phase II - Develop Data Collection Options



- Plan Sampling/Clearance and Analysis Approach
 - Review Phase I MFR
 - Review Phase II Data Need Worksheets
- Develop Data Collection Options
 - "Basic" 
 - "Optimum" 
 - "Excessive" 
- Document Data Collection Options
 - Sampling/Clearance Method
 - Analysis Method



Plan Sampling and Analysis Approaches

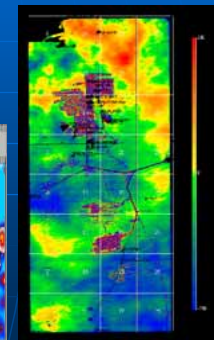
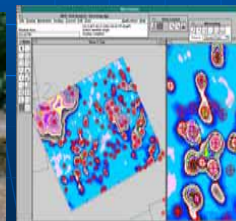
- Develop and Document Sampling/Clearance Strategies
- Develop and Document Analysis Strategies

Develop and Document Sampling Strategies

- Sampling Strategy Constraints
 - terrain
 - vegetation
- Lane Spacing
- Data Density
- Test Plot Performance & Acceptance
 - geophysical toolbox

Develop and Document Analysis Strategies

- Screening Data
- Definitive Data



Refine Plans Within Project Constraints

- Budget
- Schedule
- Temporal

Data Collection Program Design

- Present Options to Customer and Select Data Collection Option
 - Schedule
 - Budget
 - Technical Constraints and Uncertainties
 - Regulatory Factors
- Refine Data Collection Program Option to Meet Customer's Constraints
 - Consider Phasing or Screening Activities
 - Modify Selected Sampling/Clearance or Analysis Methods for Some Data

Data Collection Options



- "Excessive"
- "Optimum"
- "Basic"



Documenting Data Collection Options

- "How" many samples/acres
- "Where" to take samples/clear land
- "What" location/navigation methods
- "What" analysis methods
- "What" is associated with each option
 - Customer/regulator imposed requirement(s)
 - Cost benefits and premiums
 - Technical limitations

Summary of Phase III

- KEY CONCEPTS
 - Data Implementer Perspectives
 - Data Collection Options
- ACTIVITIES
 - Identify Data Collection Options
 - Document Data Collection Options
- PRODUCTS
 - Sampling/Clearance & Analysis Planning Worksheets
 - Summary Table of Data Collection Options

Phase IV of TPP Process

IDENTIFY
CURRENT PROJECT

DETERMINE
DATA NEEDS

DEVELOP
DATA COLLECTION
OPTIONS

DESIGN
DATA COLLECTION
PROGRAM

Phase IV - Finalize Data Collection Program



- Finalize Data Collection Program
 - Customer Communication & Participation
 - Participation by Regulators & Other Stakeholders
- Document Data Collection Program
 - Project-Specific DQO Statements
 - Technical Basis for SOW, Work Plans, QAPP
 - Detailed Cost Estimate

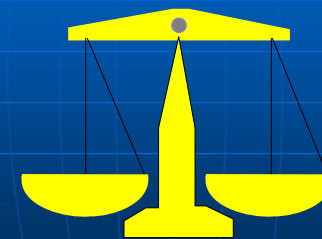
Phase II
Data Need
Requirements



Phase I
Project Objective(s)

Phase III
Sampling/Clearance &
Analysis Methods

Data Quality



*Scientific
Defensibility*

*Practical
Economics*

What is Data Quality?

- *Defined* by "Owning" Data User
 - Based on Intended Use(s) of the Data
 - Based on Accepted Practices (science, engineering, legal)
- *Achieved* by Entire Team (not solely by data implementers)

DQO Statements Describe:



- Intended Data Use
 - Project Objective
- Data Need Requirements
- Appropriate Sampling/Clearance & Analysis Methods to Achieve Acceptable Data Quality



DQO

DQO Preparation

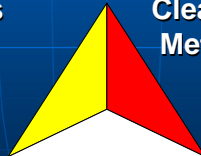


- Prepare a DQO for Each Component
- Compile Information to Prepare DQOs

Phase II - Data Need Requirements

Phase III – Sampling/Clearance & Analysis Methods

Phase I - Intended Data Use (Project Objective(s))



DQO Statements Describe:



- Intended Data Use(s)
 - Data user perspective
 - Project objective satisfied

DQO Statements Describe:



■ Data Needed

- Data user perspective(s)
- Contaminant or characteristic of interest
- Media of interest
- Required sampling/clearance areas or locations and depths
- Number of samples required
- Performance requirements

DQO Statements Describe:



■ Appropriate Sampling/Clearance & Analysis Methods

Summary of Phase IV

■ KEY CONCEPT

- Data Quality Objectives (DQOs)

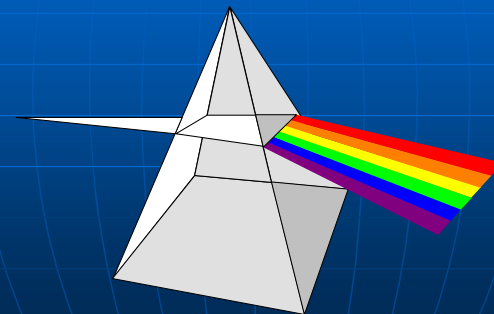
■ ACTIVITIES

- Select Data Collection Plan
- Document Data Collection Plan

■ PRODUCTS

- Documented Data Collection Program
- Detailed DQOs
- Performance Measures

Site Closeout Focus with TPP Process



TPP Process and Products

IDENTIFY
CURRENT PROJECT

- Overall Site Approach
- Current Project
- Project Objectives
- Data Needs

DETERMINE
DATA NEEDS

DEVELOP
DATA COLLECTION
OPTIONS

- Sampling & Analysis
- Data Collection Options
- Detailed DQOs
- Progress to Site Closeout

DESIGN
DATA COLLECTION
PROGRAM