Overview of Remedial Design Process

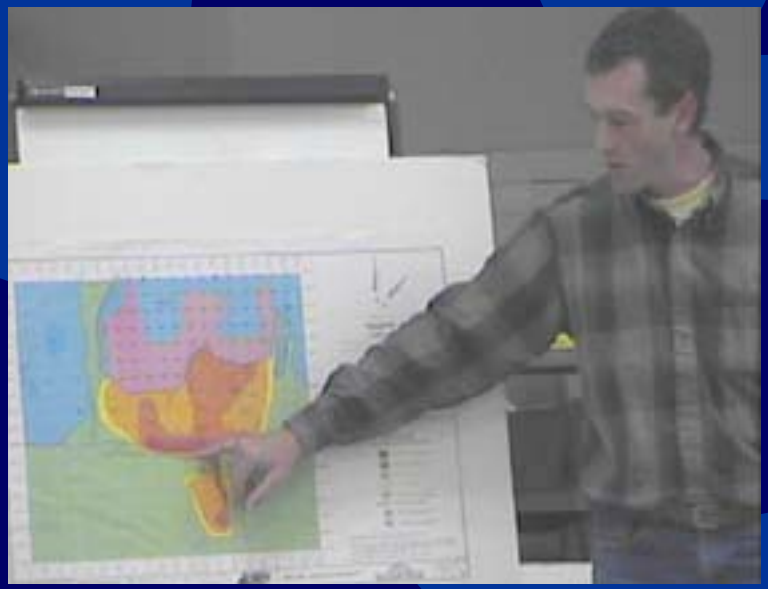
- Definition of RD
- Various leads may undertake RD
- Key components of RD

Scoping

- RD begins with project planning
- Scoping the RD involves several planning activities
  - » Establish the TRT
  - » Coordinate activities with the state
  - » Collect predesign information
  - » Prepare the project management plan
  - » Identify constraints on the project

Tasking the Designer

- Determination of the lead
- RPM's role
  - » Fund-lead
  - » Enforcement-lead
  - » USACE-lead
  - » State-lead
  - » Federal facility-lead
- Using standard tasks



Predesign Submittals and Treatability Studies

- Standard submittals before field work begins
  - » SMP
  - » HASP
  - » ERP
  - » FSP
  - » QAPP
- Treatability studies may be performed if necessary

Design Submittals: Preliminary Design Phase

- Design is 30 percent complete
- Components of the preliminary design
  - » Design criteria report
  - » Basis of design report
  - » Preliminary drawings and specifications
  - » Results of value engineering screening
  - » Preliminary RA schedule
  - » Preliminary RA and O&M cost estimates
- Review of preliminary design submittals

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Design Submittals: Intermediate Design Phase

- Design is 60 percent completed
- Optional phase
- Includes revision of deliverables
- Focus of review
  - » ROD requirements
  - » Biddability, constructability, operability
  - » Pollution controls
  - » Construction practices
  - » Accuracy of calculation

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Value Engineering

- A specialized cost-control technique
- VE screening identifies potentially high-cost design
- VE study performed concurrent with design elements

Prefinal and Final Design

- Incorporates final comments into the design submittal
- Final design must be certified by a licensed professional engineer
- Components of the prefinal and final designs

Post-design Activities

- RA solicitation
- Fund-lead requirements
  - » Obtain SSC
  - » Secure access to the site
  - » Develop an RA assignment for Fund-lead RAs
- PRP-lead requirements
- Federal facility-lead requirements

The RA Process

- RPM's role
- RA planning activities
- Procurement of RA contractor
- Preconstruction activities and RA submittals
- Construction
- Completion activities

Key Personnel in the RA

- RPM
- TRT
- Oversight contractor
- RA contractor
- Resident engineer or construction manager
- Construction contractor's supervisor

RA Implementation: Routine Activities

- Health and safety issues must be monitored
- Inspection and testing in accordance with the QA plan
- RA schedule used to monitor progress
- Progress is documented in various logs and reports
  - » On-site
  - » Progress reports
  - » Daily field logs

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RA Implementation: Near Completion Activities

- Prefinal construction conference held as each OU nears completion
- Prefinal inspection performed to identify deficiencies
- Final inspection ensures work is complete
- Settlement agreement reviewed at PRP-lead sites

Value Engineering During Construction

- VE is required by contracts
- RPM reviews the VE change proposal

RA Implementation: Demobilization

- Demobilization tasks:
  - Removal of material
  - Cleanup of debris
  - Disconnection of utilities
  - Completion of restoration or replacement
  - Transfer of equipment and property
  - Transfer of documents

RA Implementation: Remedial Action Report

- Prepared by the remedial action contractor 60 days after the final inspection
- Reviewed by the RPM
- Project completion report completed for PRP-lead sites

Overview of O&M and Post Construction Activities

- O&M begins when remedy is operational and functional
- Site closeout documents cleanup milestones
- Five-year reviews conducted at certain remedies to ensure protectiveness

Operation and Maintenance

- O&M activities include maintenance of treatment systems and final covers, monitoring of groundwater, and implementation of ICs
- O&M activities are initiated after determination that the remedy is operational and functional (O&F)
- O&M is funded, implemented and sustained by states or PRPs
  - » LTRA for groundwater and surface water restoration
- RPM responsibilities include oversight, optimization, and documentation of O&M activities

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Major Milestones in the Closeout of NPL Sites Under CERCLA

- Remedial action completion
- Construction completion
- Site completion
- Site deletion

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RA Completion for an OU

- Occurs when the designated EPA regional official approves the Interim or Final RA report
- Will require a separate RA completion for each phase if the OU is implemented in phases
- Will vary for different remedies
  - » Excavation and off-site disposal
  - » On-site treatment of wastes (other than groundwater or surface water restoration)
  - » Containment
  - » Groundwater and surface water restoration involving active treatment
  - » Groundwater and surface water restoration involving MNA

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Construction Completion

- Means that all physical construction (under removal or remedial authority) is complete at the entire site
- Has no legal or financial significance
- Is achieved when the designated regional official signs the PCOR or FCOR and EPA HQs concurs
- Applies only to sites on the final NPL

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Site Completion

- Signifies the end of all response actions at NPL sites
- Must meet specific criteria
- Requires an FCOR for documentation
- Enables site to be eligible for site deletion

Site Deletion

- NCP requirements dictate the deletion process
- NPL deletion criteria in § 300.425(e)
- Sites in O&M may be deleted
- NPL deletion through RCRA deferrals
- The deletion process

Partial Deletion

- Partial Deletion Rule and NCP requirements dictate the process
- Partial deletion process is similar to full deletion, except for:
  - Mapping requirements
  - Documentation requirements

Five-Year Reviews

- Statutory requirement for five-year review
- Purpose of five-year review
- Five-year review process
- Site deletion is independent and unaffected by the five-year review requirement

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Records Management

- Promotes efficiency in compiling and retrieving Superfund information
- Ensures that document storage space is adequate and secure
- Promotes compliance with relevant laws and regulations

Roles and Responsibilities in Records Management

- Role of HQ: Overall program goal setting and oversight
- Role of regional records manager: Day-to-day management of the system
- Role of RPM: Provision of latest site-specific documentation
- Role of records center staff: Day-to-day support of the system

Types of Records and Files to be Maintained

- Site files
- AR
- Litigation support documentation
- Cost documentation
- Documentation of damage to natural resources

In Review

- Remedial actions at NPL sites are designed to provide permanent solutions from the release of hazardous substances
- CERCLA establishes goals and management principles for remedial actions
- Remedial actions generally involve six major phases
- The RPM is responsible for directing and coordinating the remedial process

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