



Decision-Making Framework for Cleanup of Sites Contaminated with LNAPLs

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Draft Annotated Outline

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Today's Objectives

- Involve states in Alliance activities
- Obtain input from state representatives and core team members on Framework Outline
- Encourage an interactive discussion
- Help define logic for using innovative technologies and approaches
- Provide “reality check” in terms of usefulness



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PREAMBLE

- Purpose of the Document: a framework to guide the approach for cleanup and long-term management of petroleum hydrocarbon-based LNAPLs in the subsurface at large complex sites
- RCRA focus, other state and federal regs
- Reasonable and practicable approaches
 - Goals and endpoints
 - Site characterization
 - Remediation and/or containment
 - Long-term management and monitoring



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PREAMBLE

- Applicable to sites that
 - have complex groundwater/LNAPL issues
 - have significant financial liability
 - are expected to require long-term remedial measures to get to negotiated endpoints



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Document Outline

- Current Conditions
- Determining NAPL Management Goals and Endpoints
- Technical and Regulatory Approaches to Long-Term NAPL Management
- Techniques for Reaching Consensus
- Long-Term NAPL Management Plan



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I. Current Conditions

- Assumptions
- Existing Regulatory Requirements
- Current NAPL Management Program



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II. Current Conditions continued...

- Site Conditions
 - Hydrogeology
 - Geology
 - NAPL Distribution
 - Groundwater and NAPL Properties
 - History of Plume Extent
 - Recovery History
 - Existing and Potential Off-Site Impacts
 - Land Use and Ownership



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II. Determining NAPL Management Goals and Endpoints

- Introduction
- Example Owner Goals
- Example State and Fed Agency Goals
- Example Other Stakeholder Goals
- Developing Endpoints



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III. Technical and Regulatory Approaches to Long-Term NAPL Management

- Technical Issues
 - Remedial Technologies Considered and Proposed
 - Technology Selection Process
 - Detailed Methods Selection
 - Phased and Targeted NAPL Data Collection
 - Monitoring Programs



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III. Technical and Regulatory Approaches to Long-Term NAPL Management

- Regulatory Issues
 - Temporal Issues
 - Substantive Issues



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IV. Techniques for Reaching Consensus

- Introduction
- Principles and Practices
- Case Studies
- Conclusions



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V. Long-Term NAPL Management Plan

- NAPL Management Plan
- Comprehensive Closure Plan
 - Cleanup Goals and Endpoints
 - Performance Monitoring Plan
 - Compliance Monitoring Plan