



# Decision-Making Framework for Cleanup of Sites Contaminated with LNAPLs

NAPL  
Cleanup  
Alliance

Draft Annotated Outline

Rev.1 (4/01/02)

Presented in Sacramento CA

April 16, 2002



## Today's Objectives

### NAPL Cleanup Alliance

- 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



## PREAMBLE

### NAPL Cleanup Alliance

- 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



## PREAMBLE

### NAPL Cleanup Alliance

- 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



# Document Outline

## NAPL Cleanup Alliance

- 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



# I. Current Conditions

## NAPL Cleanup Alliance

- Assumptions
- Existing Regulatory Requirements
- Current NAPL Management Program



## II. Current Conditions continued...

### NAPL Cleanup Alliance

- 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



## II. Determining NAPL Management Goals and Endpoints

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





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

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



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

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- Regulatory Issues
  - Temporal Issues
  - Substantive Issues



## IV. Techniques for Reaching Consensus

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- Introduction
- Principles and Practices
- Case Studies
- Conclusions



## V. Long-Term NAPL Management Plan

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