



Decision-Making Framework for Cleanup of Sites Contaminated with LNAPLs

**NAPL
Cleanup
Alliance**

Draft Annotated Outline

Rev.2 (1/03)

Presented in Austin TX

January 23, 2003



Today's Objectives

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- Obtain input from NAPL Alliance core team and invited guests on Framework Outline
- Outline modified based upon Sacramento meeting comments
- Ready to begin text writing, but outline still evolving
- Interest in testing at Casper in parallel with writing text ?
- Provide “reality check” in terms of usefulness



Document Outline

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- Introduction and Objectives
- Determining NAPL Management Goals and Endpoints
- Approaches to Long-Term NAPL Management
- Long-Term NAPL Management Plan
- Appendices: Current Conditions Checklist, Supplemental Data Investigation Checklist, Case Studies





Introduction and Objectives

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- 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



Introduction and Objectives continued....

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- 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





II. Determining NAPL Management Goals and Endpoints

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- Developing Goals
 - Definition, the process, principles and practice, what they must consider, example goals
- Developing Endpoints
 - Definition, examples, metrics and how to measure





III. Approaches to Long-Term NAPL Management

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- Introduction
 - Applicable technologies
- The Technology Selection Process
 - Screening Criteria
 - Remedial Technologies Considered and Selected
 - Phased and Targeted NAPL Data Collection
 - Monitoring to Measure Progress





IV. Long-Term NAPL Management Plan

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





A. Current Conditions

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- Existing Regulatory Requirements
- Current NAPL Management Program
- Site Conditions
 - Hydrological setting, geological setting, LNAPL distribution & characteristics, measurement tools, fluid properties, history of plume extent, recovery history, off-site impacts, land use and ownership





B. Supplemental Data Investigation

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- Phased and Targeted LNAPL Data Collection
- Monitoring Programs
- Regulatory Issues
- Substantive Issues





C. Case Studies

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- Former Texaco Refinery, Casper WY
- Conoco Refinery, Denver CO
- Guadalupe Oil Field, San Luis Obispo?
- Former Amoco Refinery, Casper WY?
- Others?





Next Steps

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- Core Team and visitors review outline revision 2 and provide comments 2/15/03
- Initiate preparation of flow charts, tables, and other graphics 2/01/03
- Initiate preparation of full text 2/21/03
- Parallel testing at Casper?
- Complete draft document 5/03

