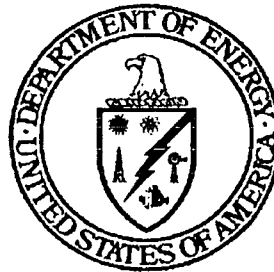


Multi-Purpose Canister Environmental Impact Statement

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MPC EIS Presentation Topics

- **MPC EIS Process and Schedule**
- **MPC EIS Overview**
- **Preliminary Technical Approach**
 - Key environmental analyses
 - Technical information needs



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MPC EIS Process and Schedule

Scoping	Oct 94-Jan 95
Implementation Plan	Summer 95
Draft EIS	Fall 95
Comment period	Winter 95
Final EIS and Record of Decision	Fall 96



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MPC EIS “Need for Agency Action”

- **DOE is responsible for managing spent nuclear fuel from civilian nuclear power plants**
- **Alternative technology systems are available**
- **DOE needs to select, fabricate, and deploy one or more such systems**



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MPC EIS Purpose

- **Integrate environmental considerations into decision on cask/canister system**

- **Provide for public participation**



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MPC EIS Proposed Action

- **To fabricate and deploy a Multi-Purpose Canister-based system for spent nuclear fuel**



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MPC EIS Alternatives to the Proposed Action

- **No action: Current technology canister/cask system**
- **Current technology supplemented by a high-capacity rail transportation cask**
- **System using transportable storage casks**



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Proposed Contents of MPC EIS

EIS will focus on comparison of environmental impacts of the MPC-based system and alternatives

- **Environmental impacts of fabrication**
- **Environmental impacts of use:**
 - At-reactor
 - Transportation
 - Monitored Retrievable Storage (MRS)
 - Repository Surface Operations



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Overview of MPC EIS Preliminary Technical Approach

- **Non-site-specific impact analyses of cask/canister fabrication, storage at MRS, and repository surface operations**
- **Key analyses of at-reactor impacts based on reactor-specific data**
- **Transportation analysis:**
 - Existing models
 - Bounding impact analysis within Nevada



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Comparison of Fabrication Impacts

- **Key Analyses:**

- Health and safety: Radiological and non-radiological (industrial) impacts
- Consumption of material: Use of materials such as stainless steel, depleted uranium, and borated metals
- Emissions: Air, water, and waste emissions
- Socioeconomic: Employment impacts on economy, housing, and public services



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Comparison of Fabrication Impacts (cont.)

- **Technical Information Needs:**
 - Description of cask/canister manufacturing processes for each alternative
 - Projected cask/canister production rate
 - Representative accident/injury rates
 - Estimated employment levels for potential manufacturing facility



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Comparison of At-Reactor Impacts

- **Key Analyses:**

- Health and safety: Calculate routine operation and accident impacts
 - ◆ Radiological dose
 - ◆ Non-radiological/industrial injuries and fatalities
- Waste generation:
 - ◆ Low-level radioactive
 - ◆ Hazardous and non-hazardous



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Comparison of At-Reactor Impacts (cont.)

- **Technical Information Needs:**
 - Description of cask/canister handling operations for each alternative
 - Reactor-specific projected dry storage requirements and facility capabilities
 - Reactor-specific population and meteorological data
 - Description of fuel handling accidents and abnormal events



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Comparison of Transportation Impacts

- **Key Analyses:**

- Radiological dose to collective populations and maximally exposed individuals
 - ◆ RADTRAN 4 to determine collective population dose for routine exposure and accident scenarios
 - ◆ RISKIND used for “bounding” accident and maximally exposed individuals calculations
- Non-radiological transportation accident injuries and fatalities



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Comparison of Transportation Impacts (cont.)

- **Technical Information Needs:**
 - Determination of modal mix for each alternative
 - Locations of reactors, MRS facility, and repository
 - Projected number of spent nuclear fuel shipments as a function of time for each reactor site
 - Population data along each route



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Comparison of MRS Impacts

- **Key Analyses:**

- Health and safety: Calculate routine operation and accident impacts
 - ◆ Radiological dose
 - ◆ Non-radiological/industrial injuries and fatalities
- Waste generation:
 - ◆ Low-level radioactive
 - ◆ Hazardous and non-hazardous



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Comparison of MRS Impacts (cont.)

- **Technical Information Needs:**
 - Description of handling operations at an MRS facility for each cask/canister alternative
 - Generic/representative population and meteorological data
 - Description of spent nuclear fuel handling accidents and abnormal events
 - Projected cask/canister receipt rate



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Comparison of Repository Surface Operations Impacts

- **Key Analyses:**
 - Health and safety: Calculate routine operation and accident impacts
 - ◆ Radiological dose
 - ◆ Non-radiological/industrial injuries and fatalities
 - Waste generation:
 - ◆ Low-level radioactive
 - ◆ Hazardous and non-hazardous



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Comparison of Repository Surface Operations Impacts (cont.)

- **Technical Information Needs:**
 - Description of surface facility handling operations for each cask/canister alternative
 - Generic/representative population and meteorological data
 - Description of spent nuclear fuel handling accidents and abnormal events
 - Projected cask/canister receipt rate
 - Scenarios for MPC opening at repository



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Summary

- **MPC EIS public scoping completed January 6, 1995**
- **Technical approach presented today represents preliminary thinking**
- **Final technical approach will be included in MPC EIS Implementation Plan**