

APPROACH OF THE INTERAGENCY REVIEW GROUP

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ABSTRACT

The mandate, organization, and findings of the Interagency Review Group on Nuclear Waste Management are reviewed and discussed. Findings of both a technical and institutional nature are further analyzed in terms of their development into tentative policy recommendations. Finally, plans for the implementation of these recommendations are discussed with a view towards the establishment of a national waste management policy.

**Draft Report
(For Public Review)
of the**

**Interagency Review Group
on Nuclear Waste Management**

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***“The Waste Generated by Nuclear
Power Must be Managed so as to
Protect Current and Future
Generations.”***

**President Carter
National Energy Plan
April, 1977**

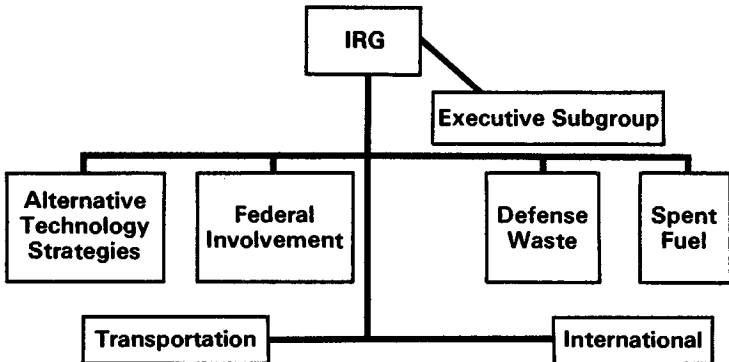
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President Carter's Mandate

"... To formulate recommendations for establishment of an administration policy with respect to long-term management of nuclear wastes and supporting programs to implement this policy."

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Organization



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Waste Types

- U Mill Tailings
- Low-Level
- Transuranic (TRU)
- High-Level
- Discarded Spent Fuel
- Decontamination and Decommissioning

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IRG Participants

<u>White House Councils and Offices</u>	<u>Departments</u>	<u>Agencies, Administrations and Commissions</u>
Environmental Quality	Energy	Environmental Protection
National Security	Commerce	Arms Control and Disarmament
Domestic Affairs and Policy	Interior	National Aeronautics and Space
Management and Budget	State	Nuclear Regulatory ^{1/}
Science and Technology Policy	Transportation	

^{1/} Invited to Participate As They Judge Appropriate

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IRG Products

- **IRG Subgroup Reports**
- **Summary Report of Public and Small Group Meetings**
- **Draft IRG Report for Public Review**
- **Final Report**
- **Presidential Decision Paper**
- **Legislative Proposals**
- **Budgetary Impact**

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Public Participation in IRG

- **Small Group Meetings: Industry, Public Interest Groups, Environmental Organizations, Congress, States, Local Government, Indian Nations, Scientific and Technical Community, Transporters**
- **Public Meetings in San Francisco, Denver, Boston**
- **Public Comment on Draft IRG Subgroup Reports**
- **Public Review of Draft IRG Report**

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Overall Objective

To provide assurance that existing and future nuclear waste from military and civilian activities can be isolated from the biosphere and pose no threat to public health and safety.

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Key Subobjectives

- **Technical Options Must Meet Relevant Criteria; Zero Risk Cannot be Assured; Risks Should be Within Pre-Established Standards**
- **Responsibility Should not be Deferred to Future Generations; System Should not Depend on Long-Term Institutions**
- **Capability Must Exist to Deal with a Wide Range of Alternative Futures**
- **Storage and Disposal Costs Should be Paid by the Generator and Borne by the Beneficiary**

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Key Technical Findings - I

- **Need for Systems Approach**
- **Scientific Knowledge Adequate to Proceed With Site Characterization**
- **Successful Isolation of Wastes Appears Feasible for Periods of Thousands of Years**
- **Detailed Studies of Specific Sites in Different Geologic Environments Should Begin Immediately**
- **Both TRU and HLW Present Comparable Long-Term Problems**
- **Reprocessing is not Required for Disposal**

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Key Technical Findings - II

- **Technologies Exist for Management and Disposal of LLW, U Mill Tailings and Waste from D&D. Existing Practice Must be Improved Considerably. Siting Must be Improved and R&D Accelerated.**
- **By Virtue of Their Presence at the Surface, Actinides in U Mill Tailings may Constitute a Greater Problem than Those in Deeply Buried HLW and TRU Waste.**

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Tentative Policy Recommendations

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Licensing Options

- 1. The Status Quo, as Contained in Existing Legislation**
- 2. An Extension to Incorporate New DOE Facilities for Disposal of TRU Waste and Nondefense Low Level Waste, or**
- 3. Further Extension to all New DOE Post-Reprocessing Facilities and Interim Storage as Well as Disposal of Waste From Defense and Non-defense Programs**

All IRG Members Recommend Extending Licensing at Least as Far as Option 2

Some IRG Members Believe a Further Extension May be Warranted

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Interim Strategic Planning Basis

"Because near-term waste management programs must be developed, priorities assigned to their various components, and R&D activities planned prior to completion of the NEPA process and selection of a strategy, an interim strategic planning basis is required to guide these activities."

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Key Characteristics of a Near Term Interim Strategic Planning Basis for HLW - I

- **First Disposal Facilities will be Mined Repositories
Several Geologic Environments Possessing a Wide Variety of
Geologic Media will be Examined**
- **R&D and Site Characterization of a Broad Range of Media and
Environments Should be Promptly Increased**
- **R&D on Nearer-Term Alternatives to Mined Repositories (I.E.,
Deep Ocean Sediments and Very Deep Holes) Should be Given
Funding Support so They Might Become Potential Competitors**
- **Rock Melting, Space Disposal and Transmutation Funding
Should be Limited to Feasibility and Design Work**

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Key Characteristics of a Near Term Interim Strategic Planning Bases for HLW-II

- **Reserve Potential Sites for Future Use**
- **Create the Option for at Least Two
(Possibly Three) Operational Repositories by
the End of the Century**
- **Locate Repositories Regionally**

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HLW III Intermediate Scale Facilities (ISF)

- **Site one or More ISF's in Different Media
Geologic Environments**
- **All ISF's Should be Licensed**
- **A licensed ISF Could be in Operation by 1986**

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Key Characteristics of a New Term Interim Strategic Planning Basis for HLW Disposal - IV

- | | <u>Estimated
Initial Operation</u> |
|--|--|
| ● Two Key Options:
Near-Term Programs Plan for an Early Choice of a First Repository Site from Potential Sites covering a Limited Range of Geological Environments | 1988-1992 |
| ● Near-Term Programs Assume that Choice of First Repository Site will Await Availability of a Set of Potential Sites Covering a Broader Range of Geological Environments | 1992-1995 |

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Interim Storage & Reprocessing of Defense HLW

- **DOE Should Accelerate R&D Oriented Toward Improving Immobilization and Waste Forms and Review Current Immobilization Programs in Light of the Latest Views of the Technical and Scientific Community**
- **Remedial Action, Including Immobilization of the Waste, Should Begin as Soon as Possible**

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Interim Strategic Planning Basis for TRU Waste Disposal

- **Adopt Concept of an Early TRU Repository**
- **Decisions on Possible Exhumation of Buried TRU Waste Should be Reached by 1982, Following Environmental Review**

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Institutional Issues

“The Resolution of Institutional Issues. . . is Equally Important as the Resolution of Outstanding Technical Issues and Will Require Major Federal Action”

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Public Participation

- **The President Should Encourage, Direct and/or Coordinate a Program to**
 - Update Status-of-Knowledge and Inform Public
 - Increase Interaction Between Federal Program Managers and External Organizations
 - Support Private Sector Efforts to Generate Increased Social and Technical Understanding and Agreement on Issues

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Federal/State Relationships

- **Establish Executive Planning Council**
- **Key Purposes are to**
 - Identify Joint Federal/State Planning Activities
 - Develop Regional Waste Disposal Facility Siting Plans
 - Support State "Consultation and Concurrence" Activities
- **Increase State Involvement in NEPA and Regulatory Processes**

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Policy Recommendations on Other Waste Forms

Spent Fuel

- **Implementation of the President's Spent Fuel Policy Should be Pursued Vigorously and Appropriate Legislation Submitted to Congress**
- **Needed AFR Capacity can be Provided in 1982-4 Period, Depending on Approach Selected**

LLW

- **DOE Assume Responsibility for Developing a National Plan for LLW, with Input from Federal Agencies, States, Industry and the Public**
- **States be Provided the Option to Retain Management Control of Existing Sites or to Transfer Them to the Federal Government**

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Transportation

- **Expand Federal Agency/Carrier Cooperation**
- **Publicize Excellent Safety Record - Collect Further Data**
- **Develop Coordinated Program for Testing Packaging Systems Under Accident Conditions**
- **Work with States to Establish Federal/State/Local Responsibilities for Routing**
- **Look to Industry to Provide Needed Increase in Casks/Vehicles**

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Implementation Plans

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Implementation Recommendations - I

DOE to:

- Assume Primary Responsibility for Developing and Integrating Overall Program Planning and Interfacing with Regulatory Program
- Update, Beginning in 1981, the Comprehensive Nuclear Waste Management Plan
- Develop Detailed Plans for Implementation of NEPA, Program R&D and D&D of Surplus Federal Facilities

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Implementation Recommendations - II

EPA to:

- Accelerate Setting Standards
- Prepare Guidance Paper by 1979, in Advance of Standards, Indicating EPA's Final Proposed Approach in Developing Specific Standards for Various Waste Types

DOE to:

- Lead in Devising Actions Needed to Apply New Standards to Previously Disposed of Waste

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Proposed Legislation

- Licensing Extension
- Establishment of Executive Planning Council
- Implementation of President's Spent Fuel Policy
- Support of Federal Ownership of LLW Burial Sites

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Additional IRG Report Items

- **Work Plans**

- **Appendices**

- **Scope and Magnitude of Waste Management Requirements**
- **Risk Assessment Case Studies**
- **International Waste Management Programs**

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Nuclear Waste Management Policy

- **Defense and Commercial Wastes Exist**
- **Program to Manage Wastes Safely is Independent of Other Nuclear Issues**
- **Nuclear Waste Management is a National Responsibility**

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