
Decision Guidelines for Managing Nuclear Material

Stan Haynes, Warren Strong
Sandia National Laboratories

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Decision Guidelines for Material Disposition

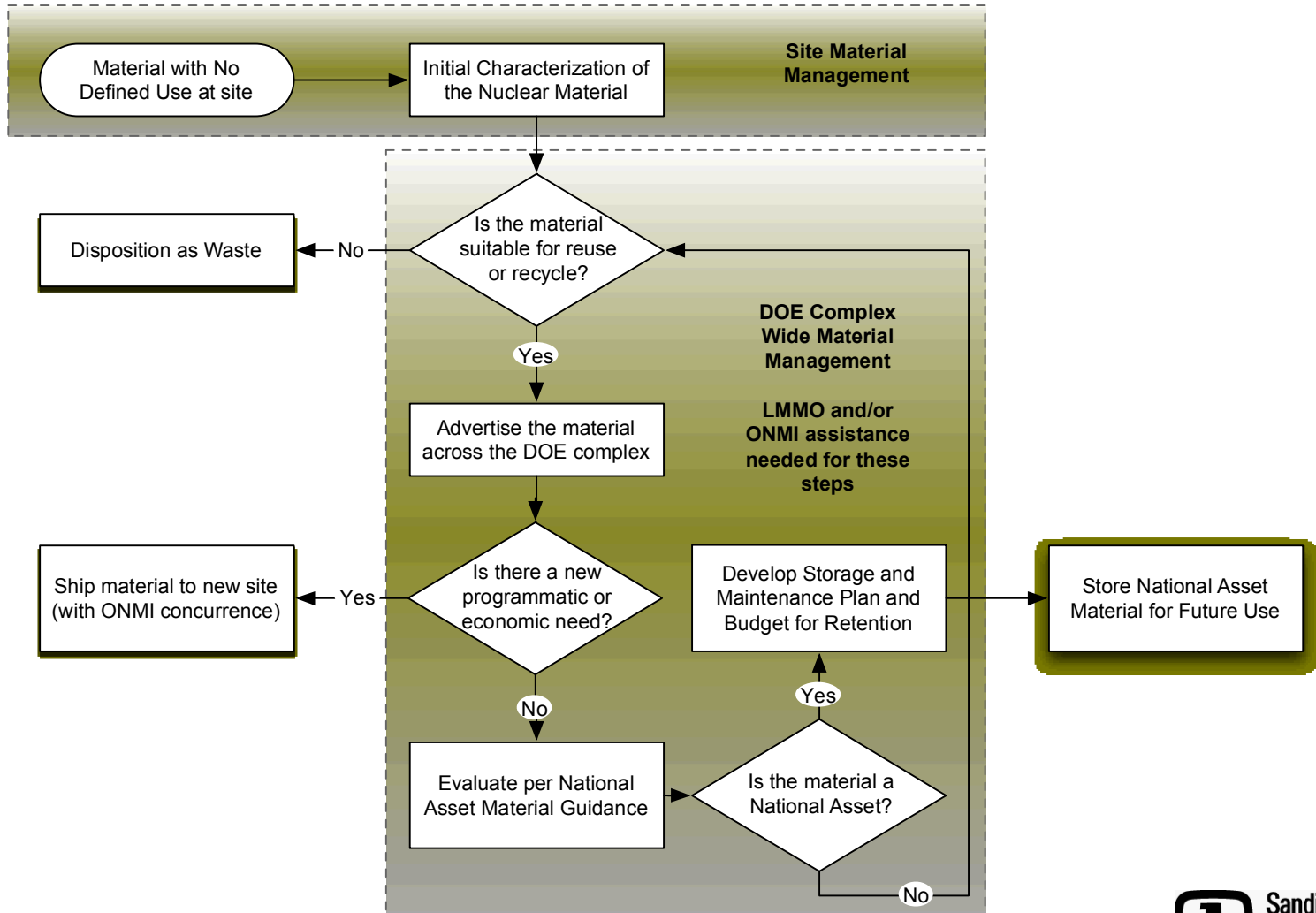
- **Develop a standardized process for disposition of nuclear material**
 - **Current approach is expert based and often site specific**
- **Establish a framework for future guidance development**
 - **Develop major decision points for material disposition**



Phase I – Develop Framework for Disposition

- **Can the material be used?**
 - New programmatic use
 - Reuse/Recycle
 - Economic resale
- **Should the material be retained?**
 - Retention as a National Asset Material (NAM)
- **Should the material be disposed?**

Process Overview





Site Material Management

- **Annual Inventory Assessment**
 - Review inventory with responsible program
 - For material with a defined use, no further action
- **Evaluate needs at site**
 - Transfer to new program
- **No programmatic or defined use at the site**
 - Enter the disposition process



Site Material Characterization

- **Quantity**
 - Isotopic constituents
- **Purity**
 - Contaminants
 - Irradiation
- **Form**
 - Chemical/physical properties
- **Provide a proposed disposition path**
 - Site knowledge of material and history
 - Input from DOE programs or sites



Suitability for Recycle/Reuse

- **ONMI and/or the Lead Material Management Organization(LMMO) assist in determination**
 - **Based on characterization information**
 - Determine material value
 - Need at other site
 - Determine if the material can be sold or bartered
 - Aid the field element in determining potential uses
 - **Evaluate the need for Economic Discard Limits**
 - Work with LMMO to establish material specific limits
 - May change based on DOE needs



ONMI Responsibilities

- **Advertise material**
- **Coordinate potential sale or barter of the material**
 - Down-blending
 - Commercial use
 - Isotope production
- **National asset material (NAM) determination**
 - For high value material site may recommend consideration as a NAM
 - ONMI makes final decision to pursue identification as NAM



Final Material Disposition

- **Transfer local site programmatic ownership**
- **With ONMI concurrence, ship to new site**
- **Store material as NAM**
- **Disposal as waste**
 - **Site works with its radioactive waste management organization**
 - **Termination of Safeguards**
 - **For attractiveness D and higher**
 - **Reviewed by cognizant program office and ONMI**
 - **ONMI identifies material has no programmatic value to DOE**



Future Consideration for Disposition Guidance

- **No Defined Use**
 - Local site versus DOE complex
- **National asset determination**
 - Characteristics that drive consideration for national asset
- **Material characterization**
 - What is necessary for advertising material
 - What is needed for discard
- **Economic discard limits**
 - Materials to consider
 - Local field office determination
- **Termination of safeguards**
 - Clarify process based on attractiveness level



Phase II

- **Economic Discard Limits**
 - Allows local sites to establish disposition path
 - More efficient disposition process
 - Reduces burden on LMMO and ONMI
- **Material Characterization**
 - Develop approach to meet disposition requirements
- **Termination of Safeguards**
 - Establish process for attractiveness level E material
 - Establish review and approval steps for attractiveness D and higher material



Conclusion

- **Standardized process drafted**
- **Supports the ONMI goal**
 - **Fills the guidance gap for disposition process for lifecycle management**