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A CoC Holders Perspective on Links Between Storage, Transport, and Storage at a ISF Again

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Renewed Interest in Consent Based Centralized Interim Storage in US



- ▶ **Introduction**
- ▶ **Process to ship a canister from a ISFSI**
- ▶ **Additional evaluations of canister to demonstrate transported canister acceptable at ISF site**
- ▶ **Storage at an Interim Storage Facility**
- ▶ **Aging Management**

Interim Storage Facility for Canisterized SNF

► Centralized Location for Dry Storage of UNF

- ◆ Several NUHOMS® System HSM/DSC models
- ◆ Several NAC System canisters and VCCs
- ◆ Site Specific License for Storage under 10CFR Part 72
- ◆ Canisters loaded and stored at reactor site prior to shipment and storage at an ISF

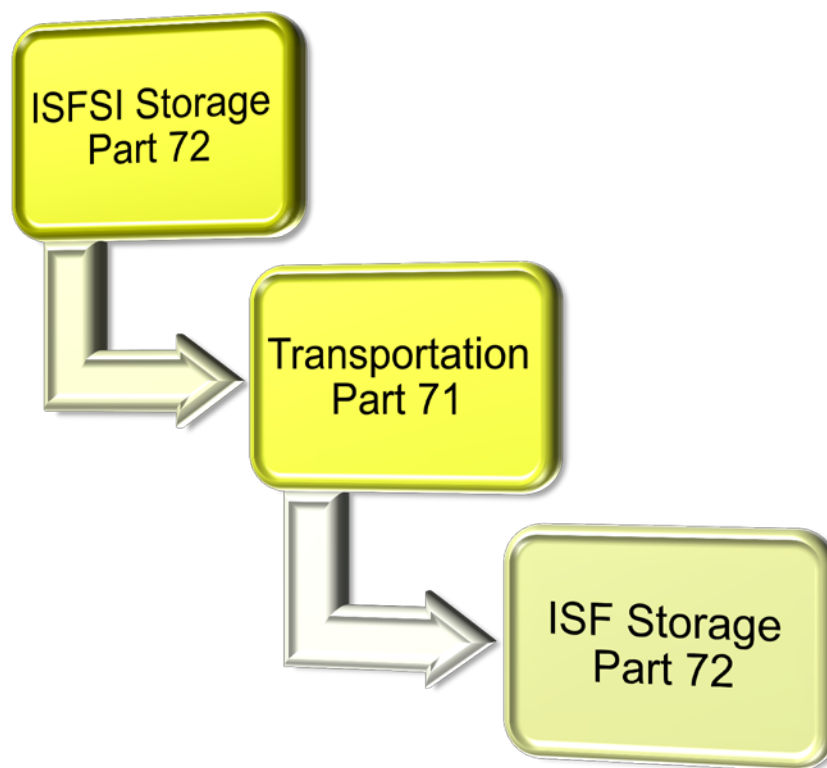


Model of a Multi-System ISF

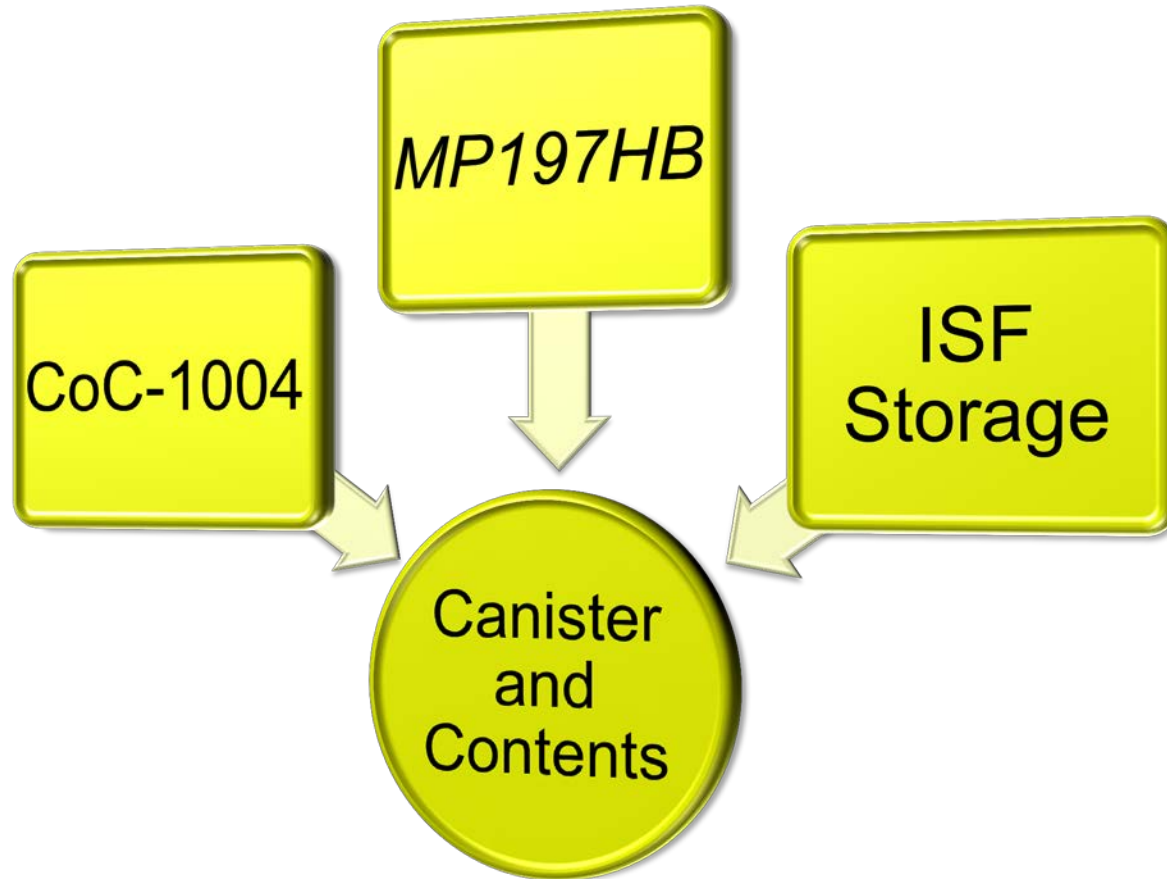
Shipment of Canisterized Fuel to ISF

- ▶ **Prior to shipment, verification that canister complies with the ISF terms, conditions of use and technical specifications is performed twice**
 - ◆ Site shipping the canister
 - ◆ ISF receiving the canister
 - ◆ Determine CoC/License Amendment under which canister was loaded
 - ◆ Review any changes made to a canister under 10 CFR Part 72.48
- ▶ **Canister is removed from the storage overpack at the originating site and transferred to an authorized transportation overpack**
 - ◆ Process is done under site's 10 CFR Part 50 and/or Part 72 License
 - ◆ Preparation for, and shipment is done under 10 CFR Part 71 and applicable 49 CFR Parts 171, 172, 173 and 174
- ▶ **Canister is received at the ISF and placed into Storage**
 - ◆ Process is done under the ISF site's 10 CFR Part 72 license

Is It Really About Managing Three Different Systems?



It Is Really About Managing the Canister and its Contents



Regulatory Basis for Canister and its Contents Included in Storage Licenses

- ▶ **ISFSI Storage License demonstrates that the canister and its contents integrity is assured for all**
 - ◆ Normal
 - ◆ Off-Normal
 - ◆ Accident Conditions
- ▶ **ISF License includes evaluations of the canister and its contents during normal conditions of transport**
 - ◆ ISF license specifies acceptable transportation overpacks
 - ◆ ISF license demonstrates confinement boundary of the canister is not adversely impacted during transport
 - B&PV Subsection NB Article NB-3200 (Level A allowables)
- ▶ **ISF Storage License demonstrates that the canister and its contents integrity is assured for all**
 - ◆ Normal
 - ◆ Off-Normal
 - ◆ Accident Conditions

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Additional Receipt Inspections Verify Confinement of SNF



► Post-transportation verification of canister shell

◆ Evacuated volume helium leak test of each canister (leak tight criteria)

- Demonstrates there is no breach to the environment through the canister
- Helium leak test performed while canister is in the transportation overpack

◆ Visual Inspection of two most limiting canisters from each reactor site

- Guidance from EPRI Report “Susceptibility Assessment Criteria for Chloride-Induced Stress Corrosion Cracking (CISCC) of Welded Stainless Steel Canisters for Dry Cask Storage Systems (Report No. 3002005371)
- Accounts for site specific conditions, canister design and fabrication details and canister contents

Only After Confirmation of Canister Integrity Is Placed in Storage at the ISF

- ▶ **Canisters are placed into storage at the ISF**
 - ◆ New storage overpacks
 - ◆ Same proven methods used to place the canisters back into storage



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Aging Management Program Continued at ISF



- ▶ **License Condition to require License Amendment to incorporate applicable portions of license renewals from originating licenses for canisters**
 - ◆ **Age of the canister from time loaded, not when arrives at ISF**
 - ◆ **Age of storage overpack from time loaded at ISF**
 - ◆ **Applicable AMPs implemented to assure continued integrity of storage systems**