



Idaho National Laboratory

NSNFP Program Direction – FY 2007 Workscope

NSNFP Strategy Meeting

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Licensing Strategy

- Development of repository licensing strategy that minimizes reliance on DOE SNF fuel-specific information through:
 - Reliance on engineered barriers
 - Use of a surrogate model rather than modeling individual fuels
 - Use of grouping to simplify analyses
 - Use of fuel-specific information is limited to sensitivity analyses

Licensing Strategy Activities

- Develop and communicate overall repository licensing strategy for DOE wastes
- Provide YM liaison (Jim Linhart)
- Maintain spent fuel database
- Support ad hoc requests
 - IAS development and input
 - Swap studies

LA Strategy Status

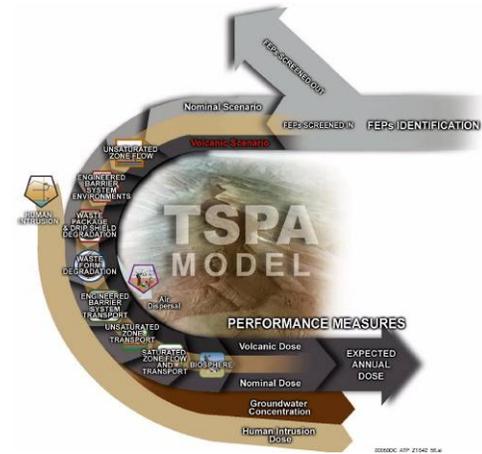
- All DOE SNF will be in the initial LA
 - Excludes sodium bonded, epoxy SNF requires treatment
- PSA analyses relies heavily on engineered systems
 - All fuel except intact commercial is packaged in standard canisters
- Waste isolation analyses use a single surrogate model for all releases

Repository Analysis Activities

- Demonstrate that DOE SNF will meet repository criticality requirements
- Demonstrate that DOE SNF will meet preclosure, and postclosure performance requirements
- Support questions on methods and techniques used in determining the DOE SNF radionuclide inventory

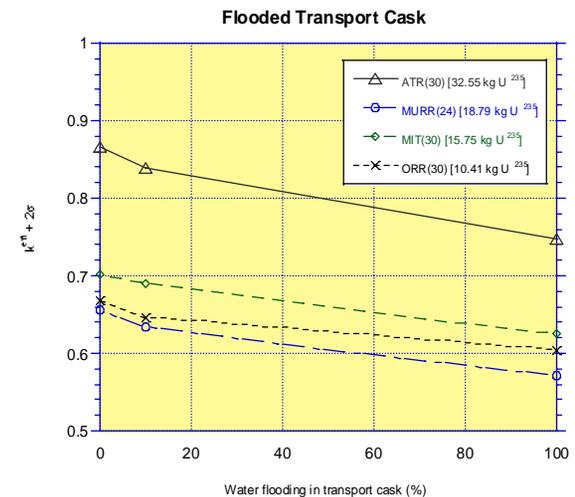
Repository Analysis Activities (Continued)

- Support viability analyses of disposition of DOE materials not presently in the 2008 LA
- Interface with RW on LA and support NRC RAIs on DOE SNF/HLW criticality, preclosure, and postclosure safety issues
- Perform additional analyses as required to support the NRC RAIs



Repository Analysis Activities (continued)

- Review and correct reports to be issued under the RW program to ensure proper DOE SNF representation
- Continue criticality analyses for remaining DOE SNF basket designs and configurations to support DOE SNF transportation
- Support criticality analyses of other DOE EM materials destined for the repository



Repository Analysis Milestones

- Complete criticality, preclosure and postclosure activities to support LA –September 30, 2007
- Complete sodium-bonded spent fuel chemical reaction model construction –
September 30, 2007
- Provide criticality support for the acceptance of DOE EM MOX and LaBS glass in the repository – 2007

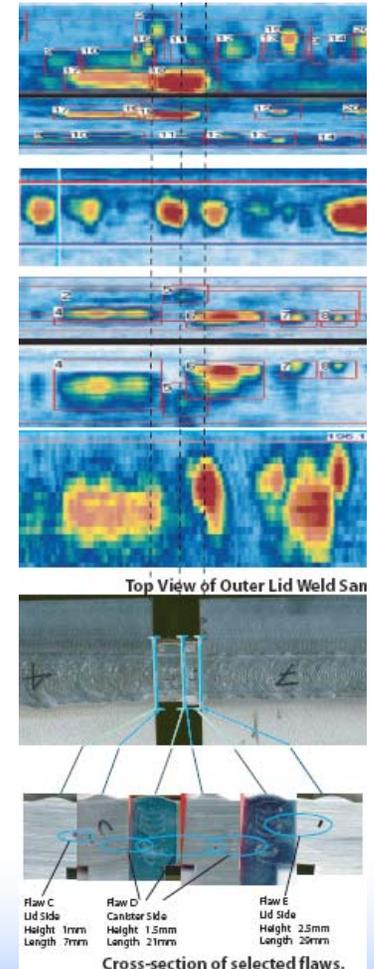
Canister Activities

- Monitor and assist deployment of the DOE-EM standardized canister and MCO
- Develop transportation approach for DOE-EM canisters (standardized canisters and MCOs)
- Obtain NRC Spent Fuel Project Office approval of topical reports for transporting DOE-EM SNF in DOE canisters
- Verify MCO survivability of a hypothetical transportation accident (not part of current topical report)
- Dynamic testing of canister materials at elevated temperatures and at -20 F



Canister Activities (Continued)

- Support canister handling preclosure analysis at repository
- Develop a remote weld closure and repair system for the DOE standardized canister that does not require a shield plug (maximize canister useable volume)
- Develop ASME accepted NDE systems that minimizes waste generation
 - Eddy current surface inspection code case (submitted to ASME Code committee)
 - Ultrasonic full volumetric inspection

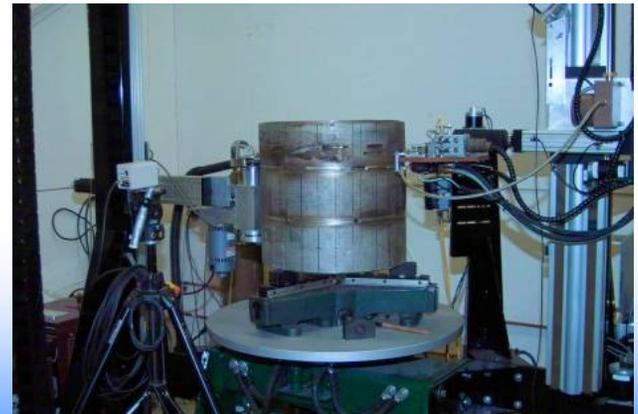


Canister Milestones

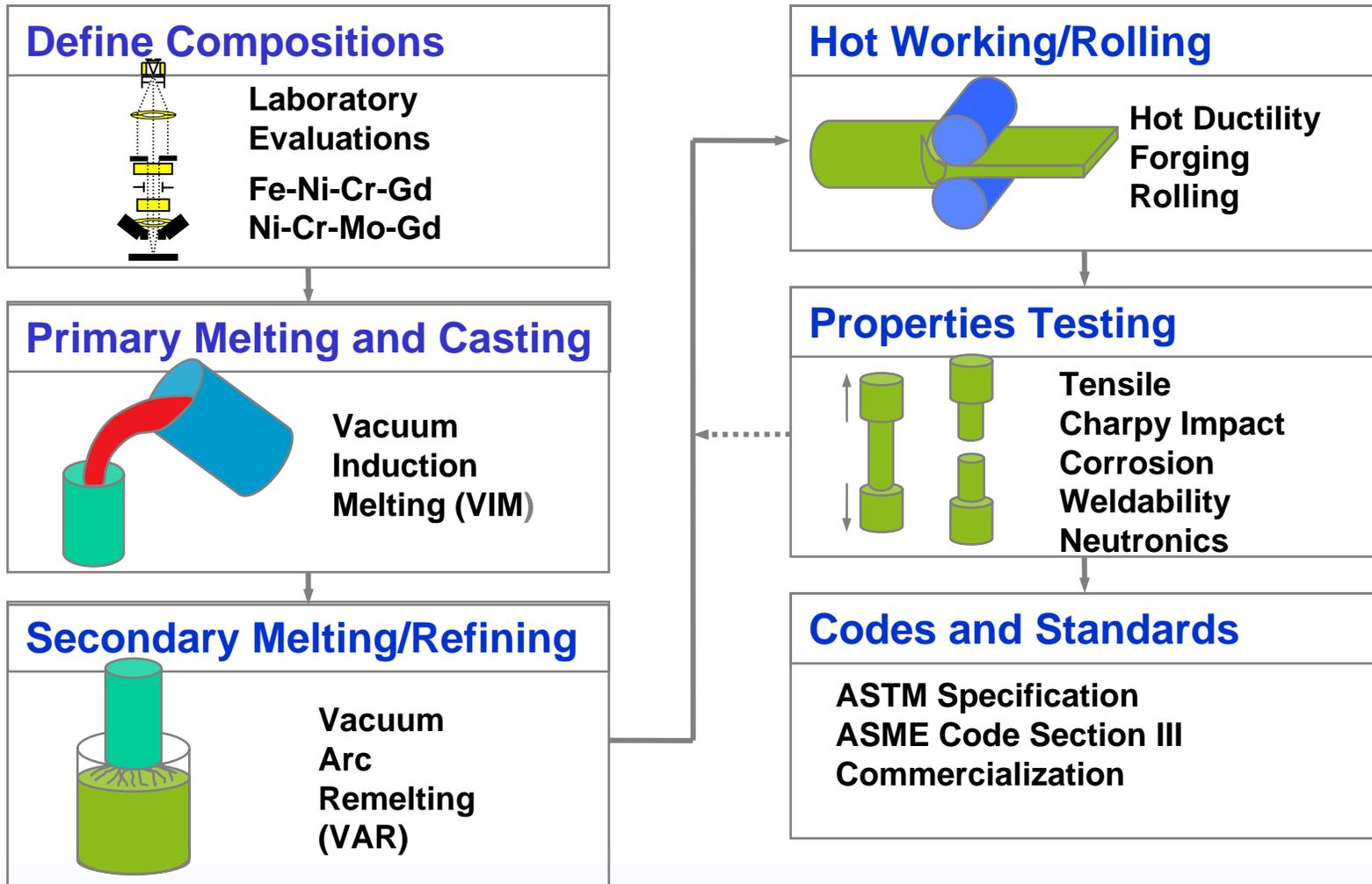
- Completed criticality and structural analysis (including draft topical report) on 18"x15' standard canister with aluminum plate fuels
- Criticality and structural analysis for type 1a basket (multiple fuels) – February 28, 2007
- Topical report on standardized canister with type 1a basket – April 30, 2007
- Initial topical report meeting with NRC to obtain approval by FY 2009

Canister Milestones (Continued)

- Issue criticality and structural analysis report on MCO for hypothetical transportation accidents –
April 30, 2007
- Provide additional information as required during ASME Code weld committee deliberations on eddy current inspection
- Assembling weld and inspection equipment for demonstration of weld process –
September 30, 2007

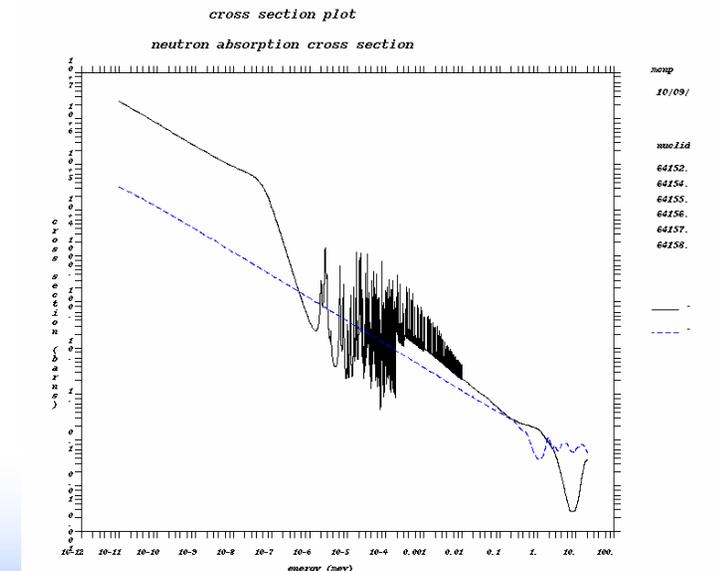


ANA Activities Description



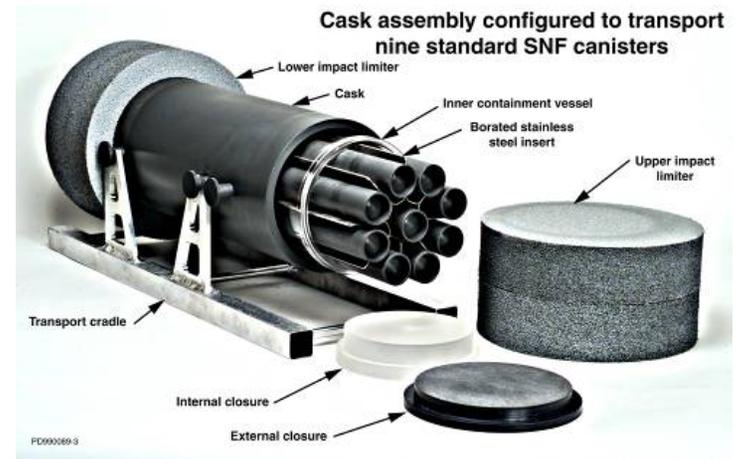
ANA Milestones

- Furnace lining interaction studies completed – September 28, 2007
- Initiating mechanical property measurements to support welded code case submittal – August 30, 2007
- Perform neutron transmission measurements – June 29, 2007



Transportation Support Activities

- Provide support to DOE-RW transportation system acquisition planning
- Provide the interface POC between DOE-RW and DOE-EM custodial sites on transportation issues
- Provide route planning information related to access to DOE-EM sites
- Keeping DOE-RW focused on procurement of a transportation system for the DOE-EM SNF in light of their current focus on development of the TAD system



Quality Assurance Activities

- Conduct oversight of quality affecting activities performed by NSNFP technical staff to ensure compliance with the NSNFP QA Program and DOE-RW QARD requirements
- Track deficiencies and perform trending and causal analysis of the NSNFP QA Program's performance
- Provide QARD implementation support at DOE sites
- Support DOE EM and RW quality assurance activities and assist in the resolution of cross-cutting quality issues