



Regulatory Framework Development

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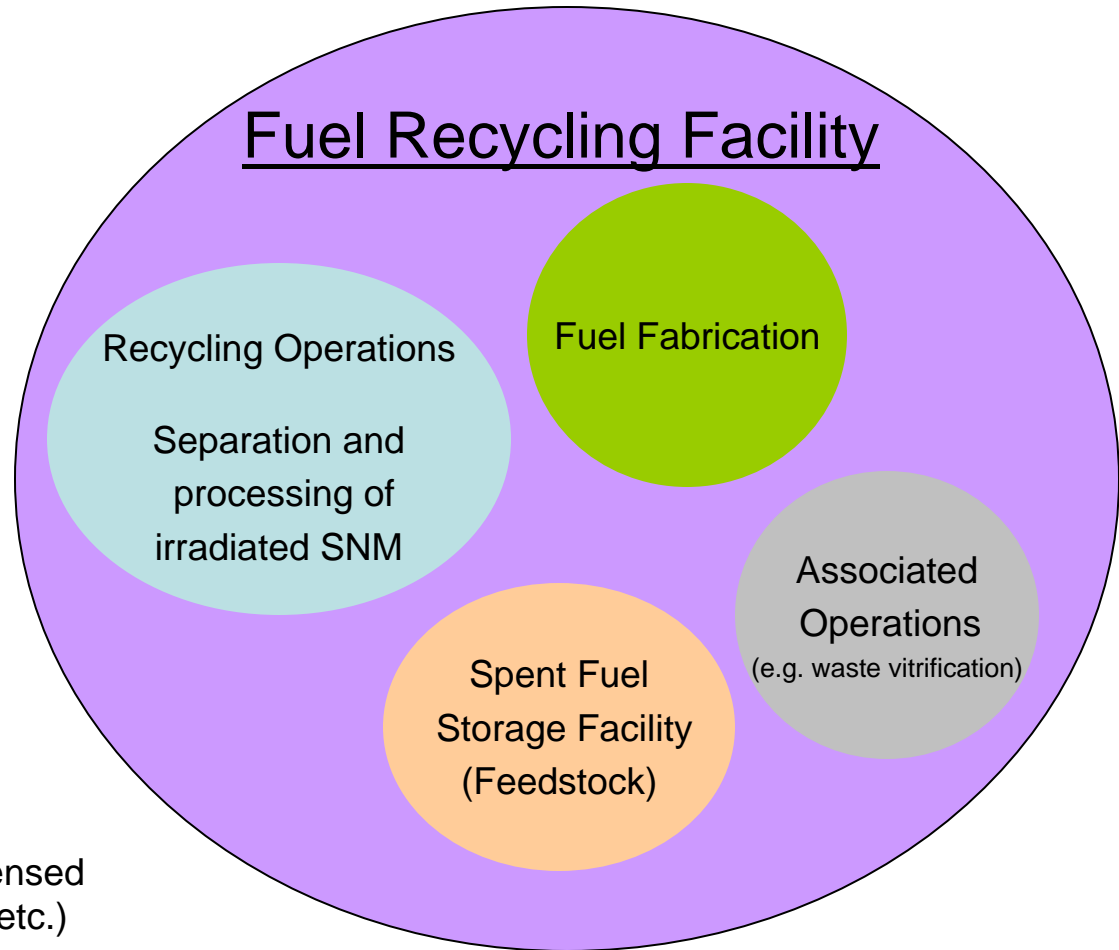
Regulatory Framework Development

– *Recent History* –

- May '07: SECY – 07 – 0081 (Regulatory options for GNEP facilities)
- Sep '07: DOE & NRC enter into Interagency Agreement
- Nov '07: SECY – 07 – 0198 (Performance and Coordination of Regulatory Framework for GNEP)
- Apr '08: SECY – 08-0059 (Rulemaking Plan: Part 74)
- May '08: NRC receives Letters of Intent (LOI) from industry
- Jun '08: ACNW&M (NUREG 1909 published)
- Sep '08: SECY – 08 – 0134 (Regulatory structure for Reprocessing)
- Sep '08: NEI Recycling Task Force Forms
- Dec '08: NEI White Paper submittal to NRC
- Feb '09: Staff Requirements Memo (SRM) regarding SECY-08-0059
- Feb '09: NRC Public Meeting on NEI Whitepaper
- May '09: SECY – 09 – 0082 (Gap Analysis)
- Jun '09: FCIX Recycling Workshop
- Sep '09: NRC Webinar on Regulatory Framework Development process

What is a Fuel Recycling Facility in Part 7x?

- Fuel Recycling Facility licensed under 10CFR7x
- Production Facility licensed under 10CFR7x
- Fuel Fabrication Facility Licensed under 10CFR7x or 10CFR70
- Spent Fuel Storage Facility (Licensed under 10CFR7x or 10CFR72)
- Associated Operations (Licensed under 10CFR7x or Part 30, etc.)



NRC taking an “Informed Approach”

- Believe work needed; a question of priority and urgency
- NRC pace consistent with industry progress and commitments
- Focusing on reprocessing regulatory framework considering most industrially mature technologies
- NRC approach: gap analysis, technical basis, then rule making
 - Gap Analysis: 23 gaps identified in areas of waste, safety, safeguards and regulatory infrastructure
- Staff identified resources needed to support schedule
 - Technical Basis: 5 FTE and \$1.11M; complete in late 2010
 - Rule Making: ~20 FTE; complete by 2012-2013 assuming resources are made available

Safeguards, Security and Transportation

- Background:
 - DOE uses a graded safeguards table (GST) in determining the “attractiveness” of special nuclear materials
 - 10 CFR Part 73, *Physical Protection of Plants and Materials*
 - 10 CFR Part 74, *Material Control and Accounting of Special Nuclear Materials*
 - Post 9/11 some factors have changed in determining material attractiveness
 - Bathke, et al papers
- Status:
 - DOE (NNSA) is in the process of updating the GST
 - NRC understands the technical basis behind the GST update and is considering a graded categorization approach, which if pursued, could be incorporated into regulations in the 2011 – 2012 timeframe
 - Changes, if implemented, will effect category 1 and category 2 definitions, which will impact plant design and transportation requirements
- Transportation:
 - There are transport systems being used overseas
 - SRS MOX Project has used NNSA’s OST and is looking at more efficient systems
 - When regulations are clear, the commercial transport industry will likely develop transport systems to safely and securely transport materials



Interface with U.S. LWRs

- Process is underway for U.S. LWRs to obtain NRC license amendments to utilize MOX fuel
 - Duke experience with MOX derived from weapons
 - International experience with MOX derived from recycled reactor fuel
 - TVA and other utilities are considering MOX usage

- 40 CFR Part 190: EPA regulation regarding radioactive releases from fuel cycle facilities
 - Thoughtful regulation prepared in 1970's
 - Dated information should be updated
 - For example, regulation was based on the assumption that 80,000 MT/year reprocessing capacity would be operational in 2020
 - ICRP advances in radiological protection methodology over past three decades should be considered