



Rulemaking on Regulatory Improvements for Power Reactors Transitioning to Decommissioning

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Commission Established Rulemaking Scope

In SRM-SECY-14-0118, the Commission Directed Staff to Address the Following Issues in the Rulemaking:

- Graded approach to emergency preparedness
- Lessons learned from recently shutdown plants
- NRC approval of post-shutdown decommissioning activities report
- Maintaining three existing decommissioning options and associated timeframes
- Role of State and local governments and non-governmental stakeholders in the decommissioning process
- Other issues deemed relevant by staff



Rulemaking History

- Advance Notice of Proposed Rulemaking – November 19, 2015
- Draft Regulatory Basis – March 15, 2017
 - Federal Register Notice (FRN) announced opportunity for comment of the draft regulatory basis in 11 topical areas (82 FR 13778)
 - Public comment period ends June 13, 2017



Draft Regulatory Basis

Covers 11 topical areas:

- Emergency preparedness
- Physical security
- Cyber security
- Drug and alcohol testing
- Certified fuel handler staffing/training
- Decommissioning trust funds
- Offsite and onsite insurance/indemnity agreements
- **Current regulatory approach to decommissioning**
 - **Clarify spent fuel management requirements**
- Backfitting
- Aging management
- Fatigue management



Clarify Spent Fuel Management Requirements

– Current Requirements

- Current requirement in 10 CFR 72.218(a):
 - 10 CFR 50.54(bb) spent fuel management program must include a plan for removal of the spent fuel stored under the general license from the reactor site
 - The plan must show how the spent fuel will be managed before starting to decommission systems and components needed for moving, unloading, and shipping spent fuel
- Current requirement in 10 CFR 72.218(b):
 - The application for termination of a reactor operating license submitted under 10 CFR 50.82 or 10 CFR 52.110 must also contain a description of how the spent fuel stored under the general license will be removed from the reactor site
- These 10 CFR 72.218 requirements are not reflected in 10 CFR Parts 50 and 52



Clarify Spent Fuel Management Requirements

– Draft Regulatory Basis

Draft regulatory basis provides 3 options

- Option 1 – No action
- Option 2 – Guidance development/enhancement
- Option 3 – Rulemaking to clarify spent fuel management requirements



Clarify Spent Fuel Management Requirements

– Staff Recommended Option 3

- Add language to 10 CFR 50.54(bb) to reflect current requirement in 10 CFR 72.218(a)
 - Plan for removal of the spent fuel
 - Show how the spent fuel will be managed before starting to decommission systems and components needed for moving, unloading, and shipping spent fuel



Clarify Spent Fuel Management Requirements

– Staff Recommended Option 3, cont.

- Add language to 10 CFR 50.82(a)(4) and 52.110(d) to reflect current requirement in 10 CFR 72.218(b);
 - description of how the spent fuel stored under the general license will be removed from the reactor site
 - clarify that this is discussed in the PSDAR, not the LTP
- Make 10 CFR 72.218 applicable to both specific and general licensees



Clarify Spent Fuel Management Requirements

– Basis for Recommendation

- Provide additional clarity between the spent fuel requirements in Parts 50, 52, and 72. Enhance the associated spent fuel management documentation.
- Promulgate rule language already present in the regulations and considered by decommissioning licensees.
- Enhance the opportunity for public and stakeholder involvement in the decommissioning process and expand overall regulatory transparency and openness.



Next Steps

- Draft Regulatory Analysis – April 2017
- Public meeting Draft Regulatory Basis – May 8-11, 2017
- Comment period Draft Regulatory Basis ends – June 13, 2017
- Final Regulatory Basis – Late 2017
- Proposed Rule/Draft Regulatory Guidance
 - Provide to Commission in Spring 2018
- Final Rule/Final Regulatory Guidance
 - Provide to the Commission in Fall 2019





Acronyms

- FR – Federal Register
- FRN – Federal Register Notice
- CFR – Code of Federal Regulations
- PSDAR – Post-shutdown decommissioning activities report
- LTP – License Termination Plan



BACK-UP SLIDES



Date

Appendix A – Emergency Preparedness (EP)

- Commission directed staff to pursue rulemaking for issues discussed in SECY-00-0145, such as graded approach to EP for plants transitioning to and in decommissioning
 - Options considered
 - No action
 - Licensees continue to submit exemption requests and license amendment requests for staff review
 - Rulemaking
 - Establish graded approach to EP requirements based on the risk profile of the plant at key milestones during decommissioning
- Staff recommendation
 - Proceed with rulemaking



Appendix B – Physical Security

- Describes lessons learned regarding security plan changes from plants that have undergone or are undergoing decommissioning
 - Options considered
 - No action
 - Licensees continue to submit exemption requests and license amendment requests for staff review
 - Licensees continue to implement security plan changes that don't decrease safeguards effectiveness in accordance with 10 CFR 50.54(p)(2) and report changes to NRC within 2 months
 - Rulemaking
 - Establish graded approach for physical security regulations, consistent with the approach taken for EP, based on the risk profile of the plant during decommissioning
- Staff recommendation
 - Proceed with rulemaking



Appendix C – Cyber Security

- Captures lessons learned regarding cyber security requirements from plants that have undergone or are undergoing decommissioning
 - Options considered
 - No action
 - Cyber security provisions in 10 CFR 73.54 end at permanent cessation of operation and license condition continues to apply
 - Rulemaking
 - Amend regulations to continue cyber security provisions, consistent with graded approach for EP (spent fuel stored in dry casks or when spent fuel is sufficiently decayed), remove license condition at decommissioning
- Staff recommendation
 - Staff will seek public input prior to finalizing recommendation



Appendix D – Drug and Alcohol Testing

- Captures lessons learned regarding fitness for duty (FFD) requirements from plants that have undergone or are undergoing decommissioning
 - Options considered
 - No action
 - Licensees would continue to implement elements of 10 CFR Part 26 in their insider mitigation program (IMP), as required by 10 CFR 73.55(b)(9)
 - Staff will continue to pursue guidance via Regulatory Guide 5.77 to address elements of IMP
 - Rulemaking
 - Amend regulations to clarify the applicability of FFD requirements for decommissioning nuclear power plants
- Staff recommendation
 - Staff will seek public input prior to finalizing recommendation



Appendix E – Certified Fuel Handler (CFH) Staffing/Training

- Addressed in SECY-00-0145 and captures lessons learned regarding minimum staffing and CFH training requirements from plants that have undergone and are undergoing decommissioning
 - Options considered
 - No action
 - Licensees continue to submit CFH training programs for staff review
 - Voluntary industry initiatives
 - NRC would review any proposed voluntary industry initiatives associated with CFH training programs and staffing
 - Rulemaking
 - Amend regulations to clarify minimum staffing requirements
 - Amend regulations to revise definition of “certified fuel handler” in Part 50 to include three broad scope objectives discussed in SECY-00-0145 and NRC approvals of CFH training programs
- Staff recommendation
 - Staff will seek public input prior to finalizing recommendation



Appendix F – Decommissioning Trust Funds (DTFs)

- Captures lessons learned regarding DTF requirements from plants that have undergone or are undergoing decommissioning
 - Options considered
 - No action
 - Licensees continue to submit exemption requests for staff review
 - Rulemaking
 - Amend several regulations associated with use of DTFs, while continuing to ensure that sufficient funding is available to complete decommissioning
 - » Radiological decommissioning, spent fuel management, and Part 72 specific licensed ISFSI decommissioning costs
 - » 1% of estimated total in DTF for miscellaneous expenses that support decommissioning
 - » Modify reporting requirement in 10 CFR 50.75 from 2 to 3 years
 - » Maintain decommissioning funding assurance at all times
- Staff recommendation
 - Proceed with rulemaking



Appendix G – Offsite and Onsite Insurance/Indemnity Agreements

- Captures lessons learned regarding offsite and onsite liability protection requirements from plants that have undergone or are undergoing decommissioning
 - Options considered
 - No action
 - Licensees continue to submit exemption requests for staff review
 - Rulemaking
 - Amend offsite and onsite insurance and indemnity agreement regulations, consistent with graded approach for EP, based on the risk profile of the plant as it undergoes decommissioning
- Staff recommendation
 - Proceed with rulemaking



Appendix H – Current Regulatory Approach to Decommissioning

- Commission directed staff to consider advisability of requiring NRC approval of licensee’s Post Shutdown Decommissioning Activities Report (PSDAR) and the appropriateness of maintaining three existing options for decommissioning and associated timeframes
 - Options considered
 - No action
 - Staff continues to conduct sufficiency review of PSDAR submittals, and options for decommissioning and timeframes remain unchanged.
 - Guidance Development
 - Provide clarification regarding content of PSDAR submittals, and develop or revise guidance regarding options for decommissioning, associated timeframes, and creation of community advisory boards
 - Rulemaking
 - Amend regulations to clarify spent fuel management requirements and “clean up” certain environmental requirements
 - Pursue guidance development and rulemaking clarification/clean-up



Appendix I – Backfitting

- Commission directed staff to pursue rulemaking for issues discussed in SECY-00-0145, including consideration of whether Backfit Rule applies to decommissioning plants
 - Options considered
 - No action
 - Continue to apply Backfit Rule to licensees in decommissioning “to the extent practical”
 - Guidance Development
 - Issue new or revised guidance regarding backfitting for decommissioning power reactors
 - Rulemaking
 - Amend regulations to provide decommissioning licensees with same backfitting protection they had during operation
- Staff recommendation
 - Proceed with rulemaking



Appendix J – Aging Management

- Considered among “other issues deemed relevant by staff,” per SRM-SECY-14-0118
 - Options considered
 - No action
 - No changes to requirements for decommissioning power reactors to implement aging management activities
 - Guidance development and update inspection procedures
 - Create guidance to explain adequate methods for implementing the regulations and update inspection procedures for decommissioning power reactors to ensure adequate and consistent oversight of aging management
- Staff recommendation
 - Staff will seek public input prior to finalizing recommendation



Appendix K – Fatigue Management

- Considered among “other issues deemed relevant by staff,” per SRM-SECY-14-0118
 - Options considered
 - No action
 - Retain the FFD provisions of the current regulations.
 - » Fatigue management provisions in 10 CFR Part 26, Subpart I would continue to not apply to decommissioning 10 CFR Part 50 power reactors, but would continue to be applicable to holders of a COL under 10 CFR Part 52 after entering decommissioning
 - Voluntary industry initiatives
 - Pursue voluntary initiatives associated with fatigue management of CFHs and security personnel at decommissioning power reactors
 - Rulemaking
 - Amend regulations to codify fitness for duty requirements for decommissioning power reactors
 - Staff recommendation
 - Staff will seek public input prior to finalizing recommendation

