


Emergency Preparedness Decommissioning

Emergency Preparedness
Decommissioning Task Force
Issue Identification

April 3rd, 2014 • NRC White Flint Three


1



Issue Overview

- Needless expenditure of decommissioning funds on maintenance of existing requirements deemed technically suitable for removal from or modification in the emergency plan
- Inconsistent and untimely processes for NRC / licensees to process changes that comport with the defueled state of the facility
 - Current License Amendment Request (LAR) process takes 6-10 months
- Licensees need documented responses to inquiries that ensure consistency and provide assurance

2




Emergency Plan Change Process Needs Revision

- Licensees certify permanent cessation of operations and removal of fuel from the reactor vessel pursuant to §50.82(a)(i) and (ii).
 - "Upon docketing of the certification . . . the 10 CFR part 50 license no longer authorizes operation of the reactor or emplacement or retention of fuel into the reactor vessel." §50.82(a)(2)
 - Licensing basis for the plant is fundamentally changed by operation of rule
- Analysis of emergency plan changes to determine whether prior NRC approval is required should recognize the fundamental change in licensing basis that occurs by operation of §50.82.
 - Would allow licensee to base these analyses on the actual current licensing basis of the plant, rather than some previous version of the licensing basis
 - Would promote efficient use of NRC and licensee resources without compromising safety

3


Emergency Plan Change Process Needs Revision

- The NRC's current interpretation of the emergency plan change process does not allow for an efficient and logical reduction of emergency preparedness capabilities in situations where §50.82 certifications have been docketed.
- These plants are no longer licensed to operate or place fuel into the reactor vessel
- Nonetheless, the NRC's current interpretation of §50.54(q) requires the use of the license amendment process for changes that would not reduce the effectiveness of the emergency plan,
 - Because the original licensing basis of the plant is used as the baseline.




Emergency Plan Change Process Needs Revision

- Regulatory Guide (RG) 1.219, "Guidance on Making Changes to Emergency Plans for Nuclear Power Reactors," provides §50.54(q) implementation guidance
- Section 1.6.a of RG 1.219
 - Licensee must consider the basis of the staff's approval of the original plan
 - **BUT that basis assumes that the licensee was operating a commercial nuclear power plant**
 - After docketing of the 50.82 certifications, that assumption is no longer valid




EP Change Process Needs Revision: ERO Staffing

- Reduction of ERO staffing after licensee submits letter of cessation per 10 CFR 50.82
 - Example of proposed changes:
 - Elimination of unnecessary emergency response plan positions (e.g., Reactor Core Damage Assessment)
 - An increase in augmentation response times from 30 minutes to 60 minutes. For example:
 - In-Plant Radiation Emergency Team
 - Electrical and instrumentation and control positions




EP Change Process Conflicts with Fire Protection Program Regulation

- 10 CFR 50.48(f) allows changes to a fire protection plan for Licensees that have submitted the certification required under 10 CFR 50.82(a)(1)
 - Maintain a fire protection program to address the potential for fires that could cause the release or spread of radioactive materials.




EP Change Process Conflicts with Fire Protection Program Regulation

- 50.48(f)(3) "The licensee may make changes to the fire protection program without NRC approval if these changes do not reduce the effectiveness of fire protection for facilities, systems, and equipment that could result in a radiological hazard, **taking into account the decommissioning plant conditions and activities**".
- NUREG-0654 Table B-1 Firefighting Functional Area
 - Table is maintained in the modified plan
 - Staffing numbers are changed




EP Change Process Conflicts with Fire Protection Program Regulation

- 10 CFR 50.48(f) program objectives
 - Reasonably prevent fires
 - Rapidly detect, control, and extinguish fires that could result in a radiological hazard
 - Minimize the risk of fire-induced radiological hazards to the public



Industry Recommendation


- Licensee should be able to assess the Emergency Plan change against the licensing basis for:
 - The current state of the plant, which is no longer authorized to operate or load fuel into the vessel (e.g., accidents for the plant as modified by operation of 50.82 and the 50.59 process)
- vs.
 - The original Emergency Plan, which assumes a Part 50 operating license (e.g., accidents for an operating reactor), or
- Revise regulation
- Revise RG 1.219
- Regulatory relief using the 10 CFR 50.12 process



10

Need Documented Assurance:


- Licensees told verbally how to proceed
- Need documentation to ensure:
 - Consistent implementation
 - Regulatory certainty
- Successful use of the FAQ process in 2013



11

Need Documented Assurance: Shift Staffing Analysis


- EPFAQ 2013-008
 - Licensees need not consider a fuel handling event in the staffing analysis
- The FAQ is applicable to a plant entering into decommissioning in accordance with 10 CFR 50.82



12

Need Documented Assurance: Emergency Action Levels

- Revised EAL scheme submitted to NRC
 - Eliminates EALs and fission barrier status thresholds that are no longer applicable based on Mode applicability
- Until scheme approval, what means may a licensee use to reduce emergency coordinator burden during the classification process?




13

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Need Documented Assurance: Hostile Action EAL

- ISG-02, Emergency Planning Exemption Request for Decommissioning Nuclear Power Plants and past exemptions
 - Reference to hostile action lined out by NRC from ISG-02, Table 1
 - Basis for change for implementation of Appendix E, Section IV.B.1 state EALs are consistent with NEI 99-01, "Methodology for Development of Emergency Action Levels" Appendix C
 - 99-01, Appendix C requires a hostile action EAL




14

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Need Documented Assurance: Near Site Facility

- The logic applied to HAB EALs -
- Applies to a "Near Site Facility" in the Permanently Defueled Emergency Plan.
 - ISG-02 exemption of the requirement of 10 CRF 50 Appendix E Section IV.E.8.d




15

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Need Documented Assurance: Equipment Important to EP


- What process should be used to abandon equipment after a plant submits its letter of cessation per 10 CFR 50.82, but before approval of the Permanently Defuel Emergency Plan (PDEP)?
 - Current solutions do not follow regimented power plant processes
 - Equipment example:
 - Effluent radiation monitors
 - Primary containment radiation monitors
 - Containment hydrogen monitoring equipment
 - Process indicators



26

Need Documented Assurance: ERDS

- Reference 10 CFR 50.72(a)(4) and Appendix E Section VI.2.
 - Except for ... all nuclear facilities that are shut down permanently...
- Licensees need documented assurance when rule no longer applies:
 - NPP facilities that are shutdown permanently or indefinitely
 - Confusion exists because one licensee was asked/told to maintain ERDS



27

NRC Coordination with FEMA

- 44 CFR Part 353, Appendix A – “Memorandum of Understanding Between Federal Emergency Management Agency and Nuclear Regulatory Commission”
 - What level of coordination takes place between NRC and FEMA during the decommissioning process?
 - What actions are expected from the licensee in regards to FEMA, State and local coordination?



28

Industry Position: Mitigating Actions


- Mitigative strategies are not a:
 - Basis for approval of the exemption
 - 50.47(b) or Appendix E requirement
- Zirconium fire analysis
 - Ample time to respond to a partial SFP drain down using existing processes and equipment
- License conditions should be maintained separately from the emergency plan



19

Industry Position: No Significant Hazards Consideration (NSHC)


- Summary and Analysis of Public Comments on Proposed Rule Language (ML112971546)
 - Unlikely that an emergency plan change would:
 - Cause an increase in the probability or consequences of an accident,
 - Create a new or different accident, or
 - Involve a significant reduction in a margin of safety
- Industry agrees with this assessment and does not expect challenge from NRC reviewers



20

Conclusion

- Issues need to be addressed to enable decommissioning funds to be used for the intended purpose. Specifically:
 - An efficient process is necessary for NRC / Licensees to initiate changes that have no safety significance
 - Current LAR process is not efficient
 - Emergency plan regulations and associated guidance must be revised to adequately address decommissioned facilities
 - Ensure consistent issue resolution going forward by via formal documentation



21
