

Review of NEI 10-05 Rev. 0

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- Developed to address new EP Rule requirement in 10 CFR 50, Appendix E, IV.A.9
 - Nuclear power reactor licensees shall perform “a detailed analysis demonstrating that on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the emergency plan”₂

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- NEI 10-05, Assessment of On-Shift Emergency Response Organization Staffing and Capabilities
 - Development begun in 2009
 - Validation cases performed at Exelon and NextEra Energy sites
 - Industry review in July, 2010

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- Submitted to NRC for endorsement in November, 2010
- February, 2011 NRC staff visit to Seabrook
 - Performed demonstration cases
- Discussion in several public meetings
- Re-submitted to NRC for endorsement in June, 2011

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- NSIR/DPR-ISG-01, Interim Staff Guidance, Emergency Planning for Nuclear Power Plants
 - Section IV.C provides inspection guidance for the On-Shift Staffing Analysis
 - Scenarios to be analyzed
 - Process requirements
 - Relationship to the emergency plan
 - NEI 10-05 is acceptable analysis method

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- Scenarios to be analyzed per ISG
 - Postulated Accidents (Condition IV Events) described in the UFSAR
 - One must result in a General Emergency with a release that exceed the EPA PAGs
 - The Design Basis Threat
 - An “aircraft probable threat” per 10 CFR 50.54(hh)(1) and Regulatory Guide 1.214
 - Control Room fire leading to evacuation and remote shutdown per IN 95-48

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- Consider site-specific commitments and unique licensing attributes that would impact on-shift staffing considerations
 - Station blackout
 - Appendix R fire response
 - SAMGs
- If not analyzed, provide rationale as to why these events were not included.

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- NEI 10-05 Methodology Key Points
 - Uses reasonable assumptions that allow for a standard analysis approach
 - Allows flexibility in assignment of emergency response tasks/functions
 - Credits task analyses performed by other programs (e.g., Operator training)
 - Document the process where performed; do not need to duplicate the paperwork

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- Overview of Process
 - Define minimum on-shift staff per E-Plan
 - Perform On-shift Staffing Analysis (OSA)
 - Conduct for each event/accident
 - Identifies tasks not previously analyzed and potential collateral duty issues
 - Assessment complete if OSA identifies no unanalyzed tasks and no unacceptable collateral duties

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- Overview of Process (cont.)
 - OSA results may require a Time Motion Study (a timed drill performance)
 - Condition Report for unacceptable results
 - Implement interim measures as needed
 - Resolve staffing/duty issue
 - Reassign a task
 - Re-sequence or eliminate a task
 - Add staff to perform a task

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- Relationship to the Emergency Plan
 - Staffing analyses are part of the emergency plan
 - Must be retained and available for inspection
- Update as needed in address changes in shift staffing, responsibilities, equipment, etc.

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- Implementation Time
 - Perform staffing analysis for all scenarios
 - 365 days from effective date of rule
 - Interim compensatory measures
 - 30 days from completion of analysis
 - Long-term corrective actions
 - 24 months from completion of analysis

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- Work through 3 examples
 - Loss of Coolant Accident with assumed release exceeding PAG levels offsite
 - Fire leading to Control Room evacuation
 - Attack from the Design Basis Threat (DBT)

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- Questions?



- Contact: dly@nei.org or (202) 739-8127