

NUREG-0654 Rev. 2

Draft of Section II.B,
“Onsite Emergency Organization”

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NUREG-0654, II.B, Rev.2 (draft)



Brief History of Emergency Plan (EP) Development

- Regulations
- Guidance
- Regulatory Guide (RG) 1.101
- Licensee Flexibility
 - Site-Specificity
 - State and Local Offsite Response Organizations (OROs)
- EP Maintenance and Change Management (10CFR50.54(q))



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NUREG-0654, II.B, Revision 1 Development

- Wide-Spectrum of Events
- Brainstorming of reasonable on-shift staff/expertise to mitigate consequences of radiological events to the public
- Emergency Response Organization (ERO) augmentation
 - Two principle goals
 - Relieve on-shift staff of EP function(s)
 - Support plant staff with additional expertise
 - Timing



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NUREG-0654, II.B, Revision 1 Development, cont.

- Issues:
 - Ambiguous direction related to intent of several functional areas or tasks
 - Lack of clear guidance related to when clock starts/stops for augmentation
 - Lack of clear guidance related to assigning multiple, and potentially conflicting, responsibilities to individual staff members
 - Unintended consequences related to EP documenting Operations and Security staffing levels

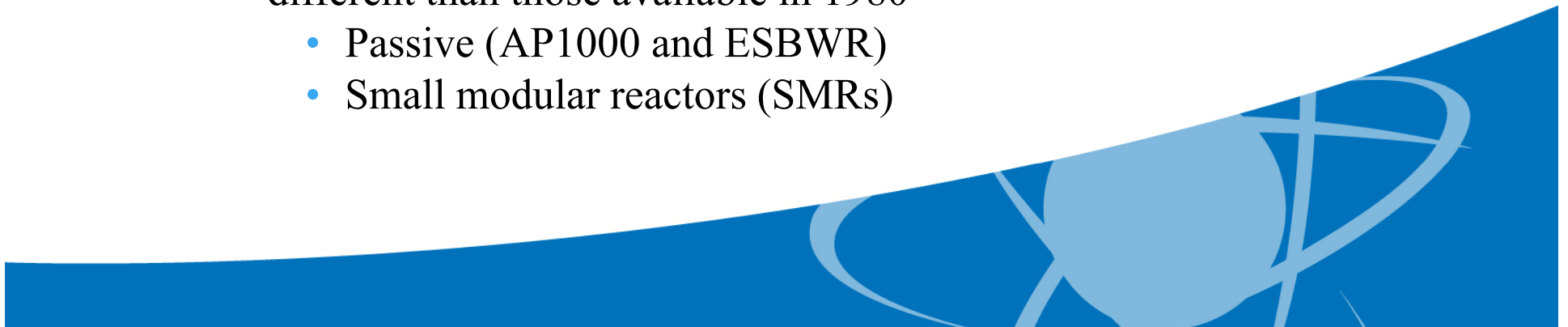


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NUREG-0654, II.B, Revision 1 Development, cont.

- Issues, cont:
 - Lack of clear guidance related to other required emergency response facilities (ERFs)
 - Age of document (35-years)
 - Technological enhancements
 - Industry events
 - Maturity of EP
 - Lack of clear guidance related to reactor designs significantly different than those available in 1980
 - Passive (AP1000 and ESBWR)
 - Small modular reactors (SMRs)

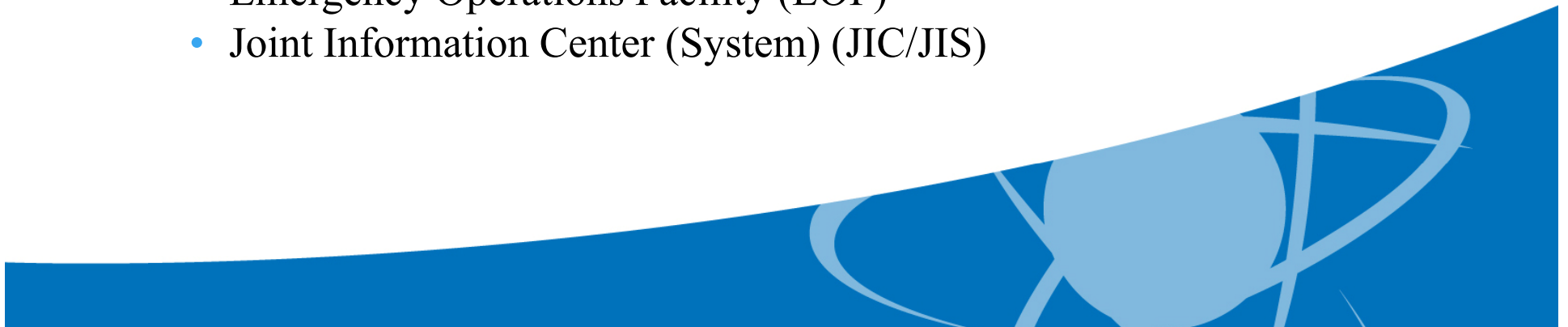


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- Review of industry best-practices
 - Timing of augmentation
 - Flexibility of expertise for offsite field monitoring teams
- Independent of reactor design differences for passive reactors (not for SMRs)
- More information for reasonable staffing of specific ERFs
 - Technical Support Center (TSC)
 - Operations Support Center (OSC)
 - Emergency Operations Facility (EOF)
 - Joint Information Center (System) (JIC/JIS)



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- Address expectations for timing of augmentation
- Address assignment of multiple responsibilities to individual staff members
- Provide more detail as to why functions/tasks/expertise is expected on-shift and as part of the ERO
- Remove Operations and Security Staff, as well as the Fire Brigade, from Table B-1 as they are controlled by other programs/regulations



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NUREG-0654, II.B, Revision 2 Development, cont.

- Facilitated input from NEI/Industry
 - 2009 Federal Register, Vol. 74, No. 94, May 18, 2009, Proposed Rules, IV. Specific Requests for Comments, states, in part:

Shift staffing and augmentation. Licensees are required by § 50.47(b)(2) and Appendix E to Part 50 to maintain an ERO comprising both an on-shift emergency organization and an organization capable of augmenting the shift in a timely manner. However, the regulations state that this shift staffing for emergency response must be “adequate” without providing a definition of “adequate” and are silent with regard to what constitutes a timely augmentation. NUREG–0654 defines the measure of adequacy and divides the ERO augmentation into 30-minute and 60-minute responders. However, the guidance is not succinct, resulting in inconsistencies in ERO shift staffing and augmentation strategies among nuclear power reactor licensees. In SECY–06–0200, the NRC staff identified shift staffing as an area of concern, noting the challenge in evaluating the adequacy of licensee shift staffing because of the lack of clarity regarding the functional requirements for emergency response. To address this issue, the NRC considered a revision to its regulations to establish functional requirements for the emergency responders instead of focusing on specific emergency responder positions. The NRC also realized that the functional requirements may be dependent upon site (and scenario) specific parameters.

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NUREG-0654, II.B, Revision 2 Development, cont.

- Facilitated input from NEI/Industry, cont.
 - 2009 Federal Register, Vol. 74, No. 94, May 18, 2009, Proposed Rules, IV. Specific Requests for Comments, states, in part, cont.:

Consequently, the NRC attempted to design a performance-based system for identifying shift staffing needs and intended to include it in the development of a broader EP performance-based regulatory regimen. As a result, the shift staffing element was no longer considered in this rulemaking effort. However, some stakeholders continue to express concern regarding emergency response organization staffing. The NRC recognizes that there is merit in enhancing the regulations to provide clear direction regarding adequate staffing, such as achieving regulatory stability through industry consistency and accommodating technological advancements. Toward that end, the NRC requests comments on whether the NRC should enhance its current regulations to be more explicit in the number of ERO staff necessary for nuclear power plant emergencies. When responding to this question, please consider the following draft staffing table. The table provides proposed staff functions and minimum staffing levels for the on-shift and augmenting emergency response organization. The table modifies the original guidance of NUREG-0654, Table B-1 with lessons learned from several years of EP program inspections by the NRC.

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NUREG-0654, II.B, Revision 2 Development, cont.

- Facilitated input from NEI/Industry, cont.
 - Asked for NEI input July, 2013.
 - NUREG-0654 Stakeholder Engagement, October 2013
- Facilitated input from HQ and Regional EP staff, 2013



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NUREG-0654, II.B, Revision 2, Implementation

- Guidance, not regulation
- No back-fit expected
- RG 1.101 revision
 - Review license amendment requests (LARs) related to staffing and augmentation against NUREG-0654, Rev. 2, with an opportunity to provide alternatives for staff consideration



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Discussion of NUREG-0654, II.B, Revision 2, Table B-1

- [*Link to Table B-1, draft*](#)



Recent Issue (OSA)



On-Shift Staffing Analysis (OSA) (10 CFR 50, App E, IV.A.9)

By December 24, 2012, for nuclear power reactor licensees, 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.

- Misunderstanding of how the OSA can support LARs related to shift staffing and/or augmentation changes (see EPFAQ 2014-002, ADAMS Accession No. ML15076A259)



NEI Questions



- NEI submitted questions related to NUREG-0654, Revision 2 (*draft*), II.B (ADAMS Accession No. ML15182A107)
- [Review of questions](#)



Thank you.

*Please ensure to submit formal comments on NUREG-0654,
Proposed Revision 2, to Docket ID FEMA-2012-0026 on
www.regulations.gov*

