

Emergency Preparedness Frequently Asked Questions (EPFAQ) 2014-002 Final Response

Question:

Nuclear Energy Institute (NEI) 10-05 (Reference 3) was developed by industry, and endorsed by the U.S. Nuclear Regulatory Commission (NRC), to aid in performing 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, as stated in Title 10 of the *Code of Federal Regulations* 10 CFR Part 50 Appendix E.IV.A.9. It was endorsed by the NRC as a possible method to meet 10 CFR Part 50 Appendix E.IV.A.9, but the endorsement did not limit the methodology to only NEI 10-05.

Is it acceptable to use this evaluation to support licensee amendment requests (LARs) asking for NRC approval for changes to on-shift staffing assignments and/or delays in the licensee's emergency response organization (ERO) augmentation?

Proposed Solution (Industry):

NEI 10-05 has been endorsed by the NRC staff as a possible method for meeting the requirements of 10 CFR Part 50 Appendix E.IV.A.9. The staff does not require submittal of an NEI 10-05 analysis in order to evaluate an LAR related to a proposed ERO staffing change; however, the results or insights from such an analysis may be used as part of the LAR basis, at the discretion of the licensee. For licensees electing to do so, the expected use of NEI 10-05 methodology is discussed below.

An evaluation performed pursuant to the guidance contained in NEI 10-05 could provide an acceptable basis in support of a proposed change affecting on-shift ERO staffing only (i.e., the proposed change does not affect the number or timing of augmented ERO responders). In this context, the analysis could demonstrate that the on-shift ERO staff is able to accomplish timely performance of all required functions and tasks necessary to respond to a declared emergency. Where called for, the analysis should utilize the results of a job task analysis and other performance-based assessment process that verified the ability of on-shift personnel to perform their assigned emergency plan functions under the proposed staffing configuration. The accident or event scenarios used in the evaluation should be consistent with those discussed in Office of Nuclear Security and Incident Response/Division of Preparedness and Response (NSIR/DPR)-Interim Staff Guidance (ISG)-01, "Interim Staff Guidance - Emergency Planning for Nuclear Power Plants" (Reference 4).

An evaluation performed pursuant to the guidance contained in NEI 10-05 would generally be acceptable for providing a portion of a basis developed in support of a proposed change affecting the number or timing of augmented ERO responders. As with a change affecting the on-shift ERO staff only, this analysis would assess the ability of the on-shift ERO to perform all assigned functions and tasks within necessary time periods; however, the analysis will not provide other information needed by the staff to evaluate the proposed change. In particular, the NEI 10-05 methodology does not evaluate all potential impacts resulting from a change to the number or timing of the augmented ERO, nor does it address the criteria used by the licensee for the selection of accident or event scenario(s) used in the analysis.

A complete LAR evaluation should demonstrate that there will be reasonable assurance of the ability to protect public health and safety following implementation of the proposed change. Two key aspects of this evaluation, not addressed in NEI 10-05, are assessing the impacts of:

1. The extended response time on the ability of the on-shift staff to maintain effective situational awareness of the plant and the event, while simultaneously meeting all the requirements for implementation of the site emergency plan prior to the arrival of the augmented ERO; and
2. Delaying implementation of those major tasks listed in NUREG 0654, Table B-1 or as stated in the approved emergency plan), performed by the augmented ERO.

The LAR should address how the identified impacts are mitigated.

It is also expected that the LAR would provide the rationale behind the selection of the accident or event scenario(s) used in the evaluation. For example, the LAR should discuss how the selected scenario(s) would place the greatest demands on the ERO staff in terms of the number and timing of required functions and tasks, and thus bound the demands caused by all other scenarios of lesser severity. This discussion may be informed by the content of NSIR/DPR-ISG-01 and NEI 10-05.

The content necessary to support an LAR related to a proposed change affecting ERO staffing is dependent upon the scope and nature of the request. NEI and the industry have developed a template that a licensee may use as a starting point when considering the content of their LAR. This template reflects the industry guidance presented in NEI 06-02, "License Amendment Request (LAR) Guidelines" (Reference 5), but it may need to be adjusted to suit the particular LAR submitted for review.

NRC Response:

The NRC amended 10 CFR Part 50, Appendix E, Section IV.A, "Organization," to address concerns regarding the assignment of tasks or responsibilities to on-shift ERO personnel that would potentially overburden them and prevent the timely performance of their emergency plan functions. Licensees must have enough on-shift staff to perform specified tasks in various functional areas of emergency response. All shifts must have the capability to perform these emergency functions on a 24 hours-a-day/7 days-a-week basis, to minimize the impact of radiological emergencies and to provide for the protection of public health and safety. 10 CFR Part 50, Appendix E, Section IV.A.9, as revised, better ensures sufficient on-shift staff in the post-September 11, 2001, threat environment by limiting the assignment of responsibilities which on-shift ERO members would likely perform concurrently with their emergency plan functions. NSIR/DRP-ISG-01 provides information that supports the rule change. This rule change was not intended to support an evaluation of the time it takes to augment the on-shift staff.

NEI 10-05 has been endorsed by the staff as a possible method for meeting the requirements of 10 CFR 50, Appendix E, Section IV.A.9, but it is not the only method licensees may consider when meeting the requirements of this regulation. While the on-shift staffing evaluation, in NEI

10-05 can be used, in part, to justify on-shift staffing changes (LARs) submitted to the NRC for prior approval via 10 CFR 50.54(q), the staff does not require that NEI 10-05 be used.

As stated in Regulatory Guide (RG) 1.219, (Reference 2), Section 5.2, "Evaluation Process," step c (1), licensees must (emphasis added):

...identify the individual proposed changes to be evaluated. Each proposed change should be evaluated separately. The treatment of changes collectively should be reserved for (1) repetitive identical changes, (2) editorial or typographical changes such as formatting, paragraph numbering, spelling, or punctuation that does not change intent, (3) conforming changes, or (4) two or more elements that are interdependent (e.g., a change to one element compensates for a change in another element).

LARs submitted for NRC prior approval must identify and evaluate every change. Changes to on-shift staffing assignments, functional responsibilities, and/or staffing numbers, must be evaluated. NEI 10-05 is one method licensees can consider to support this evaluation. However, this does not satisfy the requirement to identify and evaluate changes to ERO augmentation timing or any other change to the ERO. LARs that seek approval for changes to on-shift staff **AND** the ERO (timing, etc.) must identify each change and evaluate them individually following the guidance from RG 1.219.

The template developed by NEI (Agencywide Documents Access and Management System (ADAMS) Accession Number ML14231B019) is one possible method for licensees to consider in developing an LAR for shift staffing and/or ERO augmentation changes. However, a licensee may use the NEI template with the understanding that the scope of the LAR may require a different approach than what is in the template and that the guidance from References 2 and 4 should be used to aid in the development of an LAR and to support a 10 CFR 50.54(q) evaluation. Use of this template as a guideline is at the discretion of a licensee and, as such, this EPFAQ does not constitute NRC endorsement of the NEI template.

References:

1. NEI letter and attachment, dated July 10, 2014, "Industry Review of Emergency Preparedness Frequently Asked Questions 2014-001, 2014-002, and 2014-003," (ADAMS Accession Numbers ML14195A395 and ML14195A410).
2. RG 1.219, "Guidance on Making Changes to Emergency Response Plans for Nuclear Power Plants," dated November 2011 (ADAMS Accession No. ML102510626).
3. NEI 10-05, Revision 0, "Assessment of On-Shift Emergency Response Organization Staffing and Capabilities," dated June 2011 (ADAMS Accession No. ML111751698).
4. NSIR/DPR-ISG-01, Revision 0, "Interim Staff Guidance – Emergency Planning for Nuclear Power Plants," dated November 2011 (ADAMS Accession No. ML113010523).
5. NEI-06-02, Revision 2, "License Amendment Request (LAR) Guidelines," dated October 2010 (ADAMS Accession No. ML103360404).