

North Anna And Surry Emergency Plan Staffing Amendment

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Agenda

- **LAR Background**
- **Technical Background**
- **ERO Staffing**
- **Repair Team Staffing**
- **Path Forward**

Background

- Nov 7, 2022 – LAR Submitted
- Mar 30, 2023 – RAI Response
- May 25, 2023 – Public Meeting
- July 10, 2023 – Regulatory Audit
- Oct 12, 2023 – Second RAI Response
 - Two Outstanding Review Issues
 - ERO Staffing
 - Repair Team Staffing

Emergency Response Organization (ERO) Guidance

- RIS 2016-10, “License Amendment Requests for Changes to ERO Staffing and Augmentation”
[ADAMS Accession No. ML16124A002]
 - Clarifies use of NEI 10-05 (On-Shift Staffing Analysis)
 - Staff evaluation against Table B-1 (NUREG-0654, Revision 1)
- Revised NUREG-0654 Table B-1 / Technical Basis
 - Issues by letter dated June 12, 2018, “Alternative Guidance for Licensee EROs”
[ADAMS Accession Nos. ML18022A352 / ML16117A427]
- NUREG-0654, Revision 2
 - Issued December 2019
[ADAMS Accession No. ML19347D139]

ERO Staffing / Augmentation

- Table B-1 (functions/augmentation times) is intended to provide a model to consider in developing a site-specific emergency plan.
- Emergency plan should describe the minimum ERO staffing plan
 - Supporting EIPs can describe any other staff response desired, as long as this staff is not critical to effective emergency plan implementation.

Command and Control Function

Performed by the Shift Manager for the first 60 minutes following the declaration of an Alert or higher classification level.

- As time progresses after declaration, so does the workload of the on-shift emergency director.
- Studies show when a large number of tasks are required to be performed in parallel an operator may adopt a strategy of ignoring tasks that appear to be not critical at the moment (e.g., NUREG/CR-7190).
- Studies also show that leadership is crucial to effective and safe team performance.

Dominion Request

- During normal plant operations, the Shift Manager (SM) is responsible for the control room command function. Unit Supervisors assume control room command functions during abnormal and emergency conditions. Once an emergency is declared at either NAPS or SPS, the respective SM performs the Station Emergency Manager (SEM) role as a dedicated resource responsible for classification and site oversight-and-control functions associated with event response.
- Because the Unit Supervisors perform the control room command function for plant operations and the SM is relieved of the control room command function during abnormal and emergency conditions, relief of SM duties within the 60-minute criteria is met. Therefore, separation of Control Room and EP oversight functions allows the SEM to perform both event classification and oversight of event response for the first 90-minutes.

Shift Manager Responsibilities

- 1) Classifying the emergency,
- 2) Authorizing notification to the NRC, State and local agencies of the emergency status,
- 3) Recommending protective measures,
- 4) Authorizing emergency exposure limits,
- 5) Activating emergency personnel and facilities,
- 6) Reducing power or shutting down both reactors,
- 7) Committing company funds as necessary,
- 8) Acquiring emergency equipment or supplies,
- 9) Ordering site evacuation,
- 10) Restricting access to the site,
- 11) Notifying company management,
- 12) Implementing work schedules, and
- 13) Directing onsite emergency activities.

RIS 2006-10 guidance for 60-Minute ERO Augmentation Times to 90 Minutes

A licensee requesting a change in staff augmentation requirements that would have the lead manager unavailable to assume command and control within 60 minutes of the initial emergency declaration ***should show that the on-shift staff includes enough qualified supervision such that one supervisor will assume the emergency director role.***

The licensee should show that the on-shift supervisor performing the manager actions will not have any additional duties ***(e.g., each unit under the direction of a unit supervisor, a shift manager providing oversight of the plant response, and a designated emergency director responsible for emergency plan implementation).***

The technical basis for the revised Table B-1

This function is important for effective emergency response because adequate command and control enables a licensee to effectively develop priorities for response planning and corrective action(s) and ***to provide a unified approach to the event response by providing a single individual with overall command and control authority.***

This function is also consistent with the Incident Command portion of the National Incident Management System (NIMS), dated December 2008. It should be staffed and maintained at all times. This function is typically assigned to the Operations Shift Manager (OSM). ***The augmentation (relief) of this position is intended to relieve the OSM of EP functions so that the OSM can focus on the event response from an operations perspective.***

Conclusion

LAR has not provided information sufficient for the NRC to justify the proposed extension in the amount of time an individual capable of relieving the shift manager of either the shift manager or emergency director responsibilities from 60 minutes to 90 minutes.

Repair Team Activities Function

- One electrician and one mechanic are required to provide augmentation within 60 minutes and an I&C technician providing augmentation within 90 minutes of an Alert or higher classification level.
 - Even if the above maintenance personnel cannot promptly restore the ECCS function, they will begin the maintenance process by gathering appropriate information to support prompt troubleshooting or repair.

Dominion Response

Dominion proposes to use a performance-based approach to justify the alternative means of compliance. This approach utilizes a layered methodology which consists of evaluation of both design basis and beyond design basis events through:

- The procedure-based analysis (hereafter referred to as the ‘analysis’) that considers actions which justify deviations from the designated staffing levels in NUREG-0654, Rev 2, Table B-1, and
- The revised assumptions included in NUREG/CR-7110, Vol 2, Revision 1, State of-the-Art Reactor Consequence Analysis Project (SOARCA) Surry Integrated Analysis, August 2013, as the justification for a 90-minute augmented response for maintenance personnel.

RIS 2006-10 guidance for 60-Minute ERO Augmentation Times to 90 Minutes

Repair and Corrective Actions

To adequately support an extension of the response time for these responders, the licensee should demonstrate that the ***responsibilities of these positions can be covered with on-shift staff or earlier responders.***

The technical basis for the revised Table B-1

From an EP perspective, the ability to get emergency core cooling system (ECCS) equipment operational was the primary basis for necessitating maintenance expertise while on-shift. Maintenance staff expertise may be advantageous for licensees to consider for other reasons, and at their discretion; however, for the purposes of NUREG-0654/FEMA-REP-1, ***the only area where maintenance availability should typically be necessary on-shift is for ECCS issues.*** However, a licensee's ECCS is designed to be redundant and diverse such that common mode failures are very unlikely. As a result, the need to accommodate maintenance functionality on-shift is unnecessary. ***Nevertheless, a minimum number of maintenance personnel should respond to an event as part of the ERO, with more personnel available on an as-needed basis depending on the event. The augmentation (support) of the electrician and mechanic positions should occur within 60-minutes of an Alert ECL, (or greater), and is typically staffed in the OSC.***

Conclusion

LAR has not provided information sufficient for the NRC to justify the proposed extension in timing of augmenting electrical and maintenance technicians from 60 minutes to 90 minutes.

Path Forward

- Currently NRC staff does not see sufficient justification for the discussed issues
- For ERO staffing, LAR needs to identify appropriate relief the Shift Manager at 60 minutes
- For repair team staffing, a significant amount of technical analysis and detail would be required to justify the acceptability of this change