

EMERGENCY RESPONSE ORGANIZATION STAFFING AND AUGMENTATION SYSTEM

PROGRAM APPLICABILITY: 2515

71114.03-01 INSPECTION OBJECTIVE

To evaluate the adequacy of the ERO on-shift and augmentation staffing levels and verify that the augmentation system is adequate to allow meeting ERO augmentation and facility activation commitments.

71114.03-02 INSPECTION REQUIREMENTS

02.01 Review ERO On-shift and Augmentation Staffing.

- a. Determine licensee E-plan commitments for ERO on-shift and augmentation staffing levels including alternative emergency response facilities, and the ERO activation process.
- b. Review the licensee's ERO on-shift and augmentation staffing described in the licensee's E-plan to verify the licensee's compliance with its commitments and, as available, the conclusions of the detailed on-shift staffing analysis required by Appendix E §IV.A.9.
- c. Determine if the processes for maintaining required on-shift and augmentation staffing levels meets E-Plan commitments.
- d. Review the effectiveness of corrective actions related to ERO staffing levels.

02.02 Review of ERO Augmentation System.

- a. Review any changes to the ERO augmentation system and process. Initial procedure implementation verified the adequacy of augmentation system design.
- b. Review the results of ERO augmentation drills and/or tests.
- c. Review a sample of ERO augmentation system program elements.
- d. Review a sample of corrective actions related to ERO augmentation and assess their effectiveness.

ERO augmentation tests that require personnel to report to their emergency response duty locations are not mandatory. They do however provide a high level of assurance that activation goals can be met. Many sites recognize the value of such “report-in” tests and have committed to perform them periodically. However, other combinations of testing and verification, if properly implemented, can provide a reasonable level of assurance. Commitments on this subject are contained in the licensee E-Plan and may vary between sites.

After initial inspection of the ERO on-shift and augmentation staffing and the augmentation system design, subsequent inspections need not repeat the entire review, but should focus on changes to the ERO on-shift and augmentation staffing, the augmentation system design, conduct of system drills and tests, and the effectiveness of corrective actions.

The following inspection guidance section provides methods and examples of how the inspection requirements of this procedure could be completed. Use of the following guidance is at the discretion of the inspector.

03.01 Review ERO On-shift Staffing and Augmentation.

- a. Review the site E-Plan to determine the licensee's commitments for ERO on-shift and augmentation staffing levels, ERO activation timeliness, and associated facility activation goals.

1. Use the NRC approved version of the E-plan and any subsequent NRC-approved changes in performing this determination. Identify any changes to the ERO on-shift and augmentation staffing made by the licensee without prior NRC approval under 10 CFR 50.54(q)(4) and evaluate under 03.01.b.

2. Determine the licensee's commitments with regard to how the emergency response activation timeliness is assessed (e.g., when the “clock starts” and the “clock stops”). In the absence of an approved alternative, the NRC expects that the clock starts with the declaration of an Alert or higher emergency classification level and ends when the facility is ready to assume its assigned functions under the E-Plan and relieve the on-shift staff of those functions. (Although the facility may be ready, the on-shift staff relief may be postponed in the interest of completing critical tasks prior to turnover.)

3. Determine whether the licensee has completed the detailed on-shift staffing analysis required by 10 CFR 50 Appendix E §IV.A.9 by the required implementation date of December 24, 2012.

Note The on-shift analysis will be reviewed by the EP program office staff when the licensee submits the analysis as a change to its E-plan under 10 CFR 50.54(q)(4) or 10 CFR 50.54(q)(5). Subsequent performances of this inspection section need only to focus on changes to staffing analysis.

4. Review the on-shift staffing analysis to identify any subsequent changes thereto. A complete review of the analysis is not expected, but any changes that appear to be questionable should be evaluated further, particularly if they purport to support a reduction in on-shift staffing. If a justifiable basis cannot be established, the associated change in on-shift staffing maybe a reduction in effectiveness of the E-plan. Refer to NSIR-DPR-ISG-01, "Emergency Planning for Nuclear Power Plants," § IV.C, "Assignment of Multiple Functions to On-Shift Personnel," if necessary.
- b. Review the licensee's ERO on-shift and augmentation staffing described in the licensee's E-plan to verify the licensee's compliance with commitments, and to verify that the on-shift staffing is supported by the conclusions of the staffing analysis.
 1. NUREG-0654, Table B-1 (Table B-1) should be used to assess ERO on-shift and augmentation staffing levels unless an NRC-approved/ acceptable alternative is contained within the licensee's E-Plan.
 2. Once the detailed on-shift staffing analysis is implemented, review the licensee's ERO on-shift staffing commitments against the licensee's on-shift staffing analysis to verify that the on-shift staffing is supported by the conclusions of the staffing analysis.
 3. Verify that backup processes and/or procedures can be implemented in the event the normal ERO notification system is not available.
 - c. Review any changes in the design of the ERO staffing augmentation processes against commitments in the licensee's E-Plan. Process details may be found in the EIPs.
 1. To be effective, ERO staffing augmentation processes should include the following elements, sufficient to provide reasonable assurance that ERO activation, augmentation, and associated facility activation goals can be met:
 - Current ERO duty roster that lists only qualified personnel to fill positions required by the E-Plan.
 - A process to ensure augmentation staffing levels are met and a sufficient number of individuals are available to staff their assigned positions on a continuous basis (e.g., on-shift staffing processes ensure minimum staffing levels are maintained, sufficient depth of qualified individuals, formal rotational assignment schedule).
 - An ERO staffing augmentation process that is capable of ensuring timely augmentation of on-shift staffing and that facility activation goals can be met in accordance with E-Plan commitments. The augmentation staff roster may be divided into ERO teams or the licensee may employ an "all-call" approach. The all-call approach may involve all responders, reporting to the site with the first to arrive assuming the ERO positions. For any methodology employed by the licensee to augment plant staff during an

emergency, verify that **licensee's process is** adequate to ensure that all positions will be filled in the required time.

- Review the procedures and training provided to augmentation staff concerning response during a hostile action event, including the use of alternative facilities, onsite protective measures for staff safety, as well as clear reporting instructions in the event the plant is inaccessible.

2. The inspector's review of the process should:

- Review the performance of an actual event or drill where personnel reported to their duty locations and were timed, OR
- Review the performance of drills (e.g., unannounced off-hour report-in drills, unannounced off-hour "call-in" drills, pager/communications tests, etc.) where personnel response was timed. OR
- Verify that sufficient numbers of ERO members live within the appropriate travel time from their duty locations.

3. Review a sample of training records of ERO duty roster members to verify that qualifications are current, including respirator qualifications where appropriate. Verify that all requalification requirements have been performed as required.

4. Review a sample of on-shift staff rosters for normal business, after hours, as well as recent weekends and holidays. Focus on positions which are not part of the normal operations shift crew such as health physics technicians, chemistry technicians, and maintenance technicians. Verify that all positions are staffed on a 24-hour basis in accordance with E-Plan commitments.

- d. Review a sample of items from the corrective action program related to ERO staffing inadequacies and verify that the licensee has implemented adequate corrective actions to correct the problems. **With regard to corrective actions arising from the on-shift staffing analysis, licensees are expected to take interim compensatory measures to address any staffing shortfalls identified in the staffing analysis within 30 days of when the results of the staffing analysis are available, and then implement long-term corrective actions within 24 months of performing the staffing analysis.**

03.02 Review Of ERO Augmentation System.

- a. Review **any** changes made to the ERO augmentation system hardware, software **or** procedures since the previous inspection and determine the impact on the effectiveness of the process.

1. Determine whether the system, as modified, is still capable of ensuring timely augmentation of on-shift staffing and meeting facility activation goals in accordance with E-Plan commitments. Hardware systems, (e.g., pagers, cell phones, automated telephone systems) may be vendor-owned and operated. Changes to these systems may not be apparent, but the licensee is expected to

ensure the systems are maintained in proper working order through the conduct of system tests or other surveillance activities.

2. Review the licensee's process for keeping the automated phone system (or call out roster) current with ERO member names and telephone numbers. Determine whether system operation is periodically verified by the licensee.
- b. Review a sample the of ERO primary and backup augmentation system drills (e.g., call-in, report-in) results committed to in the E-Plan conducted since the last inspection. Review all results from actual E-Plan activations that occurred since the last inspection.
1. Determine whether the results have been evaluated accurately and whether the conclusions reached are valid.
 2. Determine whether tests of the system adequately verify ERO augmentation times (e.g., call-in drills are supplemented with travel time verification and/or report-in drills are conducted periodically).
 3. If no tests, drills or implementations of the backup ERO staffing augmentation system have been performed, review the major elements of the backup system to evaluate its capabilities. Interview a sample of ERO members to determine if they know how to implement and respond to the backup system.
- c. Review a sample of program elements such as:
1. Verify that equipment to notify individual ERO members is available and functional (e.g., pagers, cell phones, automated telephone systems).
 2. Review a sample of training records to verify that ERO members are trained in the proper response to the notification system.
 3. Review the procedures for ERO notification system activation to ensure the capability of timely augmentation of on-shift staffing and facility activation goals.
 4. Review a sample of training records, if appropriate, to verify that personnel expected to operate the ERO call out system are trained in its use.
- d. Verify that weaknesses identified during ERO augmentation drills, or failures in system tests, were entered into the licensee's corrective action program and that the licensee has initiated corrective actions to ensure a functional augmentation process.
1. Review a sample of the weaknesses identified during ERO augmentation drills, or failures in system tests, performed since the last inspection, to identify any trends or repeat failures and assess the effectiveness of corrective actions.
 2. Review corrective actions taken for repeat failures and assess the adequacy of corrective actions.

- Consider the disposition of personnel performance problems as well as equipment failures.
 - A repeat item does not necessarily indicate a failure of the corrective actions. However, a trend of repeat failures would bring into question the licensee's ability to augment the ERO and activate facilities within committed goals and may require additional effort to determine the adequacy of the corrective action process.
 - This effort may require interviews with management or other individuals and further review of licensee corrective action program.
3. Review all licensee self-assessments of ERO augmentation drills and system testing since the last inspection.
- Determine the coverage and depth of the assessments, knowledge level of the reviewers, and whether the disposition of problems was appropriate.
 - Determine whether identified problems were placed in the corrective action program and resolved.

71114.03-04 RESOURCE ESTIMATE

Direct inspection effort for this attachment is estimated to be, on average, between 6 hours and 10 hours biennially, regardless of the number of reactor units at a site.

71114.05 REFERENCES

NSIR/DPR-ISG-01, "Emergency Planning for Nuclear Power Plants"

NEI 10-05, "Assessment of On-Shift Emergency Response Organization Staffing and Capabilities"

71114.03-06 PROCEDURE COMPLETION

This procedure is considered complete when all the inspection requirements listed in the procedure have been satisfied. For the purpose of reporting completion in the Reactor Program System (RPS), the sample size is defined as 1. A sample size of 1 will be reported in RPS when the procedure is completed in its entirety.

END

Attachment 1

Revision History For IP 71114.03

| Commitment Tracking Number | Accession Number Issue Date Change Notice | Description of Change | Description of Training Required and Completion Date | Comment and Feedback Resolution Accession Number |
|----------------------------|---|---|--|---|
| N/A | 10/25/06 | Completed four-year historical CN search | N/A | N/A |
| CN 06-029 | ML061790107 10/25/06 | Partial re-write of document structure to add objective for explicit review of ERO staffing levels for adequacy using NUREG-0654, Table B-1 as the standard. Added one Inspection Requirement (.02.02.c) sub-section to make one-to-one correlation with Inspection Guidance. Added clarification on the review of ERO responder training and qualifications. | No | |
| CN 07-026 | ML072250458 08/24/07 | Clarification in guidance section, for inspector verification of timeliness, on ERO staff augmentation | No | |
| N/A | ML12095A279 05/29/12 CN 12-008 | Revised to reflect the final EP rulemaking with regard to alternative facilities and on-shift multiple responsibilities (staffing analysis). Added guidance on augmentation timing start and stop. Editorial changes to §03.01.c and §03.02.c to relocate some guidance to be in the proper section. Editorial changes to clarify use of “weakness” in §03.02.d (weaknesses are observed only in drills and exercises). Added new §03.06. Other editorial changes for clarity. Removed “Inspection Bases” in accordance with IMC 0040 “Preparing, Revising and Issuing Documents for the NRC Inspection Manual” formatting expectations. | Provided at 2011 annual EP counterpart meeting. | ML12095A296 |