REACTOR OVERSIGHT PROCESS
FREQUENTLY ASKED QUESTION 22-01

Plant: Generic
Date of Event: N/A
Submittal Date: March 23, 2022
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Performance Indicator: EP03 – Alert and Notification System (ANS) Reliability

Site-Specific FAQ (see Appendix D)? ( ) Yes or (X) No

FAQ to Become Effective: When Approved

Question Section

Event or circumstances requiring guidance interpretation:

This Reactor Oversight Process (ROP) frequently asked question (FAQ) proposes the retirement of the alert and notification system (ANS) performance indicator (PI) and the addition of an emergency response facility and equipment readiness (ERFER) PI (i.e., replace the former with the latter). The proposed change is driven by the growing number of sites replacing their offsite siren system with the Integrated Public Alert and Warning System (IPAWS)[1] as the primary method to accomplish prompt public alerting during a radiological emergency. If adopted, this change would affect the guidance in Nuclear Energy Institute (NEI)- 99-02, "Regulatory Assessment Performance Indicator Guideline," and the PI databases maintained by the U.S. Nuclear Regulatory Commission (NRC) and the Institute of Nuclear Power Operations (INPO).

The change proposed by this ROP FAQ affects the entirety of the NEI-99-02 section entitled, "Alert and Notification System Reliability," which is presented on pages 60 through 64 of Revision 7.[2] The existing guidance in this section would be replaced with new guidance as discussed below under "Proposed Resolution of FAQ." The associated elements in the PI data reporting databases would also need to be changed such that licensees could report the data for the new ERFER PI.

Most nuclear power plant licensees have provisions to collect and report data for the ANS PI described in NEI 99-02. This indicator monitors the reliability of an offsite siren system used as the primary method to accomplish prompt public alerting, a critical link for ensuring that the public can be instructed of the need to take protective actions during a radiological emergency. The ANS PI provides the percentage of the sirens that are capable of performing their safety function based on regularly scheduled tests; however, sites have begun replacing offsite siren systems with the IPAWS as the primary method to accomplish prompt public alerting.[3] For a

[1] Information about IPAWS can be found here. Note that the wireless emergency alerts system and the emergency alert system are pathways within the IPAWS architecture.
[2] Refer to Agencywide Documents Access and Management System Accession No. ML13261A116.
[3] A site may also employ IPAWS as a primary public notification method.

site that has replaced an offsite siren system with IPAWS, the ANS PI is moot for performance assessment purposes because there is no siren data to report.

Once a site no longer employs an offsite siren system as a primary method for performing prompt public alerting, it ceases to report ANS PI data. This cessation of data reporting has caused the NRC and INPO to utilize data-entry "workarounds" for these sites.[4] The workarounds are needed to enable the INPO PI data collection system to produce a PI data file the NRC's data system can accept when the ANS PI data is not reported. NEI and the NRC staff believe that the resources necessary to make the changes at the NRC and INPO could be better used by modifying the data systems to support the use of the ERFER PI.

Given the events discussed above, the NRC staff has suggested that it may be appropriate to seek Commission approval to replace the ANS PI with an ERFER PI. NEI supports this approach.

If licensee and NRC resident/region do not agree on the facts and circumstances, explain:
Not applicable to this FAQ.

Potentially relevant FAQs:
ROP FAQ 21-03, Revision 1.

Response Section

Proposed Resolution of FAQ:
The proposed change to NEI 99-02 is presented below, beginning on page 4; this new guidance would replace the entirety of the existing guidance for the ANS PI.

The approach used for the ROP ERFER PI is the same as that used for the ERFER PI described in the NEI White Paper, "Implementing a 24-Month Frequency for Emergency Preparedness Program Reviews."[5] This white paper is endorsed in Revision 6 of Regulatory Guide 1.101, "Emergency Response Planning and Preparedness for Nuclear Power Reactors," issued June 2021.[6] The proposed ERFER PI considers impacts to a site's technical support center (TSC) and emergency operations facility (EOF). All other emergency response facilities, while contributors to effective implementation of an emergency plan, do not support the purpose of this PI (i.e., monitoring the readiness of facilities and equipment necessary to implement risk-significant planning standard (RSPS) functions and response actions).

The White threshold for the ERFER PI was set at ≥ 1 per quarter based on professional judgment that a facility or equipment condition involving a prolonged loss of an RSPS function or response action with no compensatory measure(s) implemented represents performance outside an expected range of nominal performance. Similarly, the Yellow threshold was set at ≥ 3 per quarter as this indicates performance with substantial safety significance.

[4] Refer to ROP FAQ 21-03, "Reporting ANS Data Following a Transition to IPAWS," Rev. 1.
[5] Refer to ML19344C419.
[6] Refer to ML21111A090.

The anticipated path forward to implement the ERFER PI includes these actions:

1. Public meeting engagement to agree on the resolution of this ROP FAQ.

2. NRC to develop and submit a SECY paper to obtain Commission approval in accordance with Management Directive 8.13, “Reactor Oversight Process.”

3. NRC and INPO to modify their data systems to accommodate the new ERFER PI.

4. Licensees implement the approved ROP FAQ, including direction from the Commission, on a schedule agreeable to the industry and the NRC (*to be determined*).

If appropriate, provide proposed rewording of guidance for inclusion in next revision:
See next page.

Emergency Response Facility and Equipment Readiness

Purpose

The ERFER PI measures licensee performance in maintaining the emergency response facilities and equipment of greater importance to the protection of public health and safety. It reflects the ability of the licensee to perform the surveillance, testing, inventory, and preventative and corrective maintenance activities that contribute to the availability of emergency response facilities and equipment necessary to implement RSPS functions and response actions.

Indicator Definition

The number of occurrences during a quarter that the TSC or EOF is nonfunctional, or equipment necessary to implement the emergency plan is not available or functional, such that an RSPS function or response action could not be performed for greater than 168 continuous hours from the time of discovery (TOD) and no compensatory measure(s) was implemented.

Data Reporting Elements

The number of occurrences that the TSC or EOF is nonfunctional, or equipment necessary to implement the emergency plan is not available or functional, such that an RSPS function or response action could not be performed for greater than 168 hours from the TOD and no compensatory measure(s) was implemented.

Calculation

Count the number of occurrences that the TSC or EOF is nonfunctional, or equipment necessary to implement the emergency plan is not available or functional, such that an RSPS function or response action could not be performed for greater than 168 hours from the TOD and no compensatory measure(s) was implemented.

Definition of Terms

The definition of the terms “risk-significant planning standard function,” “time of discovery,” and “compensatory measure” are those described in the NRC Inspection Manual Chapter 0609, Appendix B, “Emergency Preparedness Significance Determination Process.”[7]

Clarifying Notes

The ERFER PI reflects the ability of a licensee to perform the surveillance, testing, inventory, and preventative and corrective maintenance activities that contribute to the availability of the facilities and equipment necessary to accomplish RSPS functions and response actions.

Consistent with the indicator definition, a facility or equipment issue must be impactful enough to prevent the performance of an RSPS function or response action; a degraded capability to

[7] See Inspection Manual Chapter 0609, Appendix B, “Emergency Preparedness Significance Determination Process”, Issue Date September 22, 2015, (ML15128A462), Section 2.0, Definitions, Abbreviations, and Acronyms.

perform a function or action should not be counted. A compensatory measure need not meet the same design or operating requirements as the methods normally used to perform an RSPS function or response action; however, its effectiveness should be sufficient to ensure that the supported function or action would be accomplished during an actual emergency, albeit in a possibly degraded manner.

To be counted towards the performance indicator, the occurrence of a given facility or equipment issue must exceed 168 hours during one continuous period (i.e., continuous hours) in one quarter. The starting point of the issue should be determined in accordance with the "Time of Discovery" guidance in the NRC Inspection Manual Chapter 0609, Appendix B. Further, if an equipment issue affects performance of an RSPS function or response action at multiple facilities (e.g., loss of common computer or communications system) but the impact started at different times depending on the facility, then the performance indicator assessment should use the longest out-of-service time.

A loss of the TSC or EOF, or associated equipment, that precludes the performance of an RSPS function or response action for ≥ 12-hours from TOD should be documented (e.g., in the licensee's corrective action program). The compensatory measure implemented in response to the facility or equipment issue should also be documented.

If the licensee reports a lost RSPS function or response action under this performance indicator but later determines that the capability was not lost (e.g., through a subsequent engineering analysis), then the performance indicator data should be revised accordingly. The basis for this determination should be documented and the documentation retained for inspection.

NOTE: The ROP ERFER PI and the ERFER PI described in NEI White Paper, "Implementing a 24-Month Frequency for Emergency Preparedness Program Reviews," dated November 2019 (ML19344C419), use the same approach but with different threshold values, reflecting their different purposes. The NEI white paper is endorsed in Regulatory Guide 1.101, "Emergency Planning and Preparedness for Nuclear Power Reactors." In addition to monitoring performance indicators, licensees implementing a 24-month review frequency, per Title 10 of the Code of Federal Regulations 50.54(t)(1)(ii), will need to conduct periodic evaluations of the adequacy of interfaces with State and local governments as described in the NEI white paper.

Data Example

Threshold

- White ≥ 1/quarter
- Yellow ≥ 3/quarter
- Red N/A

PRA update required to implement this FAQ? No.

MSPI basis document update required to implement this FAQ? No.