POLICY ISSUE
(Notation Vote)

January 30, 2023 SECY-23-0010

FOR: The Commissioners

FROM: Daniel H. Dorman
Executive Director for Operations

SUBJECT: RECOMMENDATION FOR APPROVAL TO RETIRE THE REACTOR OVERSIGHT PROCESS PERFORMANCE INDICATOR FOR LICENSEE ALERT AND NOTIFICATION SYSTEM AVAILABILITY AND TO DEVELOP A PERFORMANCE INDICATOR FOR EMERGENCY RESPONSE FACILITY AND EQUIPMENT READINESS AVAILABILITY

PURPOSE:

The purpose of this paper is to request Commission approval to retire the reactor oversight process (ROP) alert and notification system (ANS) performance indicator (PI) and to implement an emergency response facility and equipment readiness (ERFER) PI as an alternative means to measure the effectiveness of licensee emergency preparedness (EP) staff maintenance activities. The current ANS PI tracks siren operability as a means of measuring the effectiveness of licensee EP staff maintenance activities. The proposed change will similarly measure the effectiveness of maintenance activities and is driven by the growing number of sites replacing fixed offsite siren systems with the integrated public alert and warning system (IPAWS) as the primary method to accomplish prompt public alerting during a radiological emergency.

This paper does not address any new commitments or resource implications.

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SUMMARY:

The Federal Emergency Management Agency (FEMA) and the U.S. Nuclear Regulatory Commission (NRC) anticipate that all offsite response organizations will adopt IPAWS as their primary ANS, therefore impacting all applicable licensees. The ANS PI accounts for the percentage of the sirens that can perform their function based on regularly scheduled tests. Once a site no longer uses a fixed offsite siren system as a primary method for performing prompt public alerting, it ceases to report ANS PI data. With widespread implementation of IPAWS, the ANS PI will eventually cease to have any useful data. As an alternative, the staff recommends a new PI to track emergency response facility and equipment readiness reliability. The Nuclear Energy Institute (NEI) submitted ROP FAQ 22-01[1] to request retirement of the ANS PI and the development of an ERFER PI.

These changes require Commission approval prior to implementation in accordance with the guidelines in Management Directive 8.13, "Reactor Oversight Process," dated January 16, 2018 (ML17347B670).

DISCUSSION:

Sirens and Integrated Public Alert and Warning System

The NRC requires power reactor licensees to demonstrate that offsite response organizations have public alert and notification capability. FEMA has the responsibility to establish the ANS design guidelines and evaluate the adequacy of the individual ANS design report submittals. In other words, FEMA provides the technical review while the NRC maintains the overall regulatory oversight and responsibility for the reasonable assurance determination.

Executive Order (EO)13407[2] directed the Department of Homeland Security to develop "…*an effective, reliable, integrated, flexible, and comprehensive system to alert and warn the American people in situations of war, terrorist attack, natural disaster, or other hazards to public safety and well-being (public alert and warning system), taking appropriate account of the functions, capabilities, and needs of the private sector and of all levels of government in our Federal system, and to ensure that under all conditions the President can communicate with the American people*." In addition, this EO also directed the "…*heads of agencies with capabilities for public alert and warning shall comply with guidance issued by the Secretary of Homeland Security under subsection 2(c) of this order and shall develop and maintain such capabilities in a manner consistent and interoperable with the public alert and warning system*."

The system used to meet the requirements of this EO is IPAWS. IPAWS is FEMA's national system for local alerting that provides authenticated emergency and life-saving information to the public through mobile phones using wireless emergency alerts, radio and television via the emergency alert system, the National Oceanic and Atmospheric Administration's Weather Radio, and other public information methods as designed by offsite response organizations and approved by FEMA. Since fixed offsite sirens will not likely be a part of the primary ANS method used by States that implement IPAWS, the ANS PI will become an ineffective indicator. Therefore, the request to retire the ANS PI serves to ensure that the ROP continues to be relevant and current.

[1] ROP FAQ 22-01 dated February 23, 2022 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML22055A562).

[2] EO 13407, Executive Order 13407—Public Alert and Warning System, dated June 26, 2006.

Alert and Notification System Performance Indicator

As stated in Inspection Manual Chapter (IMC) 0308, Attachment 1, "Technical Basis for Performance Indicators," dated January 1, 2021 (ML20262H116), "The ANS PI was initially developed out of the recognition that some measure of licensee performance in the maintenance of EP-related equipment was appropriate." When the ROP was developed, using siren availability as a PI was reasonable because most licensees and offsite response organizations used sirens as their primary means of providing prompt public alerts and notifications.

Nuclear power plant licensees that use fixed offsite sirens as their ANS collect and report siren test data for the ANS PI. This PI monitors the reliability of a fixed offsite siren system used as the primary method to accomplish prompt public alerting. However, sites have begun replacing fixed offsite siren systems with IPAWS as the primary method to accomplish prompt public alerting. Once a site no longer uses a fixed offsite siren system as their ANS, it ceases to report ANS PI data. The NRC staff believes that using the ANS PI as a metric for licensee performance will become ineffective as more States transition to IPAWS. Retiring the ANS PI is an appropriate and proactive action to maintain the efficiency of the ROP in recognition that EO 13407 will drive national implementation of ANS (via IPAWS) which will make the NRCs tracking of fixed siren operability (ANS PI) moot. Retirement of the ANS PI will require inspections of licensee ANS using inspection procedure (IP) 71114.02[3], instead of inspector verification of siren test data using IP 71151[4]. The inspections conducted via IP 71114.02 will require an emphasis on reviewing the requirements of the FEMA approved ANS Design Report and ensuring the licensee meets their requirements and ensures regulatory compliance.

Emergency Response Facility and Equipment Readiness Performance Indicator

IMC 0308, Attachment 1, states *"*The ANS PI was initially developed out of the recognition that some measure of licensee performance in the maintenance of EP-related equipment was appropriate.*"* Development of a new PI for emergency response facility and equipment readiness will:

- Maintain a performance indicator goal to have a measure of licensee performance in the maintenance of EP-related equipment.
    - The ERFER PI would monitor the effectiveness of EP maintenance activities and (1) allow for the staff to gauge how effective licensee EP staff is maintaining facilities and equipment needed to meet the functional requirements of the Risk Significant Planning Standards (RSPS), which include emergency action levels, notifications, dose assessments, and protective action recommendations; and (2) allow for the staff to gauge how effective the overall licensee organization is in prioritizing EP activities.
- Be consistent with the position endorsed in Regulatory Guide 1.101, "Emergency Response Planning and Preparedness for Nuclear Power Reactors," Revision 6, issued June 2021 (ML21111A090), which provides an acceptable method for licensees and applicants to adopt a voluntary process for conducting periodic EP program reviews at a 24-month frequency as allowed by Title 10 of the *Code of Federal Regulations* (10 CFR) 50.54(t)(1)(ii).

[3] IP 71114.02, "Alert and Notification System Evaluation" (ML15253A596)
[4] IP 71151, "Performance Indicator Verification" (ML20030A017)

- Enable moderate resource savings because the data verification process for the ERFER PI requires less inspection resources than for the ANS PI as the PI data verification for the ANS PI included a review of all monthly siren test data over a 2-year period. The ERFER PI data verification process will include a review of any related corrective action reports generated over a 2-year period, which is typically only about 2-5 per inspection cycle, and thus require less resources to review. The ERFER PI data verification effort will be similar to that needed for the existing Drill and Exercise Performance (DEP) PI and the Emergency Response Organization (ERO) Drill Participation PI.
- Maintain consistency with the EP significance determination process (SDP) because the PI threshold for White significance is the same threshold in the EP SDP for White Significance for 10 CFR 50.47(b)(8).[5]

The change to ANS PI was initiated through the ROP frequently asked question (FAQ) process. The proposed ERFER PI is provided in Enclosure 1 to ROP FAQ 22-01. The purpose of this PI, as stated in the ROP FAQ, is as follows:

> The Emergency Response Facility and Equipment Readiness (ERFER) performance indicator 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 Risk Significant Planning Standard (RSPS) functions and response actions.

The development of an ERFER PI is consistent with the initial expectations of the ROP in that an effective PI for EP staff maintenance effectiveness is a reasonable expectation of the EP cornerstone in the ROP.

Stakeholder Interactions

Industry presented the proposal to retire the ANS PI and develop the ERFER PI during the ROP public meeting held on July 28, 2021 (ML21229A171). The staff refined the approach during several additional ROP public meetings: December 2, 2021 (ML21348A754); January 26, 2022 (ML22034A766); March 23, 2022 (ML22091A184); May 26, 2022 (ML22159A212); and July 27, 2022 (ML22221A224).

Proposed Options

The staff is proposing the following options for Commission consideration:

Option 1: Maintain the current ANS PI.

In this option, the staff would continue to use the ANS PI and would not implement an ERFER PI.

[5] Inspection Manual Chapter 0609, “Significance Determination Process” (ML20267A146).

Pros:

- No changes would be needed to revise the PI data entry systems for the NRC or for the licensees.

Cons:

- The ANS PI would eventually have no data when national implementation of the IPAWS is completed.
- As plants move away from using ANS data, there would be no indicator of the effectiveness of licensee EP staff maintenance activities contrary to the design of the ROP.

Option 2: Retire the ANS PI only.

In this option, the staff would retire the ANS PI and would not implement an ERFER PI.

Pros:

- The only change needed would be to retire the ANS PI and cease the reporting of ANS data.
- The net EP inspection resource needs are expected to decrease because the resource savings resulting from no longer performing the ANS PI data verification process per IP 71151 more than offset the increase inspection resources needed to perform additional ANS inspections via IP 71114.02.

Cons:

- Without a PI, the NRC will not meet the intent of the IMC 0308 Attachment 1 technical basis to monitor the effectiveness of licensee EP staff maintenance activities.

Option 3: Retire the ANS PI and implement an ERFER PI.

In this option, the staff would retire the ANS PI and implement an ERFER PI.

Pros:

- The ERFER PI will meet the intent of IMC 0308 Attachment 1 technical basis as an indicator of the effectiveness of licensee EP staff maintenance activities.
- The ANS PI would be retired as sirens may not be the primary means of providing prompt public alerts. All licensee ANSs would continue to be inspected via IP 71114.02.
- As an overall EP inspection efficiency improvement, the ANS PI data verification effort, per IP 71151, would be changed to an ERFER PI data verification effort which would take less inspection resources and allow for a redistribution of inspection resources to other EP inspection areas.

Cons:

- The ERFER PI would require a revision to the NRC and licensee PI data entry systems as well as a revision to the NRC’s ROP PI dashboard.

RECOMMENDATION:

The staff recommends that the Commission approve Option 3 to retire the ANS PI and implement an ERFER PI as proposed by NEI in ROP FAQ 22-01. The staff has evaluated the proposed ERFER PI and believes that it meets the purpose of the ROP to have a PI to track licensee EP staff maintenance activities. The primary benefit of this ERFER PI is that it will remain consistent with the initial design expectations of the ROP by providing an indicator of licensee EP maintenance activities.

COORDINATION:

This paper has been coordinated with the Office of the General Counsel, which has no legal objection. This paper has also been reviewed and concurred on by the Office of the Chief Financial Officer.

Daniel H. Dorman

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Daniel H. Dorman
Executive Director
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Enclosure:
ROP FAQ 22-01, Retirement of
ANS PI and Implementation of
ERFER PI

SUBJECT: RECOMMENDATION FOR APPROVAL TO ELIMINATE THE REACTOR OVERSIGHT PROCESS PERFORMANCE INDICATOR FOR LICENSEE ALERT AND NOTIFICIATION SYSTEM AVAILABILITY AND TO DEVELOP A PERFORMANCE INDICATOR FOR EMERGENCY RESPONSE FACILITY AND EQUIPMENT READINESS AVAILABILITY Dated January 30, 2023

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