

December 17, 2018

Efficiency Opportunity: 18–EP–01

Incorporate the Integrated Public Alert and Warning System (IPAWS) into a Site Alert and Notification System (ANS)

Replace an offsite siren system with the FEMA-sponsored IPAWS as the primary ANS alerting method for the public. This action will allow either retirement of the siren system or reduced system testing and maintenance requirements.

Issue: Sites currently use siren systems to meet a regulatory requirement for alerting the public of a radiological emergency involving the need for potential or actual offsite protective measures. While effective for their purpose, these siren systems are old technology and costly to maintain. To assure expected levels of reliability, each system has a testing and preventative maintenance program, with test data periodically reported the U.S. Nuclear Regulatory Commission (NRC). In addition, emergent issues detected during testing and/or maintenance activities often require an expedited response that disrupts planned work and necessitates significant vendor expenditures.

Summary of Efficiency Opportunity

- IPAWS is modern technology that uses different pathways to simultaneously send alerts through many different channels:
 - Televisions and radios receive alerts through the Emergency Alert System (EAS)
 - Cell phones receive Wireless Emergency Alerts (WEA)
 - Internet applications can receive alerts through the All-Hazards Information Feed
- NRC regulations allow public alerting methods other than sirens and the U.S. Federal Emergency Management Agency (FEMA) has issued policy guidance that permits incorporation of IPAWS into a site ANS.
- A site may be able to replace a siren system with IPAWS as the primary means of emergency public alerting. Doing so would lower or eliminate system testing and maintenance costs. The decision to incorporate IPAWS must be coordinated with State and local emergency management agencies.

Relevant Standards

- National Institute of Standards and Technology (NIST) Technical Note 1950, *Outdoor Siren Systems: A review of technology, usage, and public response during emergencies*, dated February 2017. Although not a standard per se, this document reviews outdoor siren systems and operating experience from actual emergencies. Information in the document may be useful when discussing potential siren system replacement with emergency management agency officials and other stakeholders.

Relevant Regulatory Requirements

- 10 CFR 50.47(b)(5)
- 10 CFR 50, Appendix E, Section IV.D
- 10 CFR 50.54(q)

Guidance

- NRC NSIR/DPR-ISG-01, *Interim Staff Guidance, Emergency Planning for Nuclear Power Plants*, Revision 0
- FEMA P-1028, *Program Manual, Radiological Emergency Preparedness*, dated January 2016
- FEMA policy memorandum, *IPAWS Implementation Guidance*, dated September 13, 2017
- Information related to IPAWS, including a system description, testing activities, and sign-up instructions, is available on FEMA's website – start [here](#).
- NEI 99-02, *Regulatory Assessment Performance Indicator Guideline*, Revision 7

Recommended Industry Actions

- Incorporating IPAWS into a site ANS could occur in several ways; however, there are two options that offer cost saving opportunities:
 1. Use IPAWS as the primary public alerting method and retain the present non-siren backup alerting method; this option would allow for retirement of the siren system from the emergency preparedness program.
 2. Use IPAWS as the primary public alerting method and assign the siren system as the backup method; this option could allow for a less rigorous and costly testing and maintenance regime.

Each site should discuss these options with their Offsite Response Organization (ORO) partners and obtain necessary concurrence for an implementation plan.

Other Actions for Consideration

- The incorporation of IPAWS into a site ANS will be an infrequently performed, complex activity requiring interfaces with multiple organizations. To mitigate potential risks to success, a site should designate a lead individual to plan and coordinate the transition project, and provide this person with adequate levels of management oversight and support.
- Many sites, in conjunction with their ORO partners, are already evaluating or pursuing incorporation of IPAWS into their site ANS. Sites considering implementation of this Efficiency Opportunity are encouraged to assess the lessons learned from ongoing IPAWS transition projects. Contacts for obtaining this information can be provided by NEI (see NEI contact information below).
- It may be necessary to budget some funds to perform an IPAWS test survey. This survey would be conducted following a localized test activation of IPAWS in areas near the site, and involve contacting residences and businesses to determine if they received the test message. The results of the survey may be needed to support requested changes to the site ANS design report.

Change Management Considerations

Industry Activities

- NEI will continue to engage NRC on the development and communication of guidance needed for implementation of IPAWS as the primary prompt public alerting method. The goal is to have this guidance available for licensee use in 2019.

Company Actions

- Coordinate changes to the site siren system with State and local emergency management agency officials.
- Facilitate periodic communication of project updates to the appropriate FEMA Regional Assistance Committee Chairperson.
- Update the site-specific ANS design report and obtain FEMA approval.
- Coordinate revisions to State and local emergency plans and procedures, and training materials.
- Revise the site emergency plan and applicable implementing procedures.
- Revise instructions for reporting ANS reliability data.

Guiderrails

- Changes in siren system testing and maintenance should not increase the potential for inadvertent siren actuations.
- Ensure that secondary uses of a siren system (e.g., a severe weather warning) are considered when discussing IPAWS transition options with offsite response agency officials.

Industry Contacts

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