

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
OFFICE OF NUCLEAR REACTOR REGULATION  
OFFICE OF NEW REACTORS  
OFFICE OF FEDERAL AND STATE MATERIALS AND  
ENVIRONMENTAL MANAGEMENT PROGRAMS  
WASHINGTON, DC 20555-0001

October 26, 2012

NRC INFORMATION NOTICE 2012-18: FAILURE TO PROPERLY AUGMENT  
EMERGENCY RESPONSE ORGANIZATIONS

**ADDRESSEES**

All holders of an operating license or construction permit for a nuclear power reactor, including decommissioning power reactors, under Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities," except those who have permanently ceased operations and have certified that fuel has been permanently removed from the reactor vessel.

All holders of and applicants for a power reactor early site permit or combined license under 10 CFR Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants."

**PURPOSE**

The U.S. Nuclear Regulatory Commission (NRC) is issuing this information notice (IN) to notify addressees of instances of licensees not properly staffing emergency response organizations (EROs). The NRC expects recipients to review the information for applicability to their facilities and consider actions, as appropriate, to avoid similar problems. However, suggestions contained in this IN are not NRC requirements; therefore, no specific action or written response is required.

**DESCRIPTION OF CIRCUMSTANCES**

From 2009 through 2011, a number of events occurred in which licensee EROs were not adequately staffed when required. On two occasions – at different sites – the ERO was augmented in a time that exceeded the licensee emergency plan requirements. On a third occasion, at a third site, the ERO was not activated because the licensee failed to declare an emergency action level (EAL) as required.

Brunswick Steam Electric Plant (Brunswick) – Delay in Augmentation of On-Shift Emergency Response Staff during Alert

On June 6, 2010, Brunswick declared an Alert, in accordance with EAL guidelines, in response to a discharge of Halon gas into the basement of the emergency diesel generator building. After the Alert declaration, the control room site emergency coordinator directed the secondary alarm station operator to activate the Brunswick emergency notification system. However, the secondary alarm station operator was unable to activate the emergency notification system because of administrative and computer access problems and an interruption by an incoming

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phone call. After the control room site emergency coordinator was notified of the failure to activate the emergency notification system, the individual initiated a manual ERO group page. This second attempt to activate the ERO was not initiated correctly because of operator error. The ERO notification issue finally was remedied by the emergency preparedness supervisor. As a result of these communications issues, the Brunswick ERO received confusing notifications of ERO activation (i.e., three inaccurate manual pages, one accurate text message, and several notices from the emergency notification system advising of the Alert declaration). Delays in proper ERO notification cascaded into delays in the actual staffing of the Brunswick ERO facilities to the extent that the Technical Support Center (TSC), the Operations Support Center (OSC), and the Emergency Operations Facility were not staffed in the time required by the site emergency plan.

The licensee determined that the root cause of this event was inadequate augmentation drill frequency, coupled with an inadequate strategy for staffing emergency facilities. Corrective actions included an increase in the frequency of ERO augmentation drills, shifting to an All-Call/All-Come ERO response philosophy, and implementing an improved automated notification system. This event is described in NRC Inspection Report 05000325/2010007 and 05000324/2010007, (Agencywide Documents Access and Management System (ADAMS) Accession No. [ML102930092](#)) and Final Significance Determination of White Finding and Notice of Violation, EA-10-192 (ADAMS Accession No. [ML103560553](#)).

#### Indian Point Nuclear Generating Unit 2 – Failure to Staff the TSC and OSC within the Required Time Limit

On November 7, 2010, the licensee at Indian Point Unit 2 declared an Alert, in accordance with EAL guidelines, in response to two explosions in the Unit 2 transformer yard. After the Alert declaration, the operation's crew activated the automatic notification system directing the ERO to staff the site emergency response facilities. The Indian Point Emergency Plan requires the TSC and OSC to be staffed and operational within 60 minutes of an Alert declaration. However, the licensee exceeded the 60-minute requirement when they declared the TSC and OSC operational 79 minutes and 86 minutes, respectively, after the Alert declaration.

The licensee identified two factors that contributed to the delay: (1) members of the ERO questioned the validity of the ERO beeper indications, or they believed that other ERO members would respond to the call-in, and (2) problems occurred with the beeper and phone systems where some ERO responders indicated that the system recording stated there was no emergency, while other personnel received a beep but were unable to call in.

While reviewing this event, NRC inspectors identified a cross-cutting aspect in the area of human performance associated with the work practices attribute of defining and effectively communicating expectations regarding procedural compliance. This event is described in NRC Inspection Report 05000247/2010-005 (ADAMS Accession No. [ML110420231](#)).

#### Davis-Besse Nuclear Power Station (Davis-Besse) – Failure to Declare Alert and to Implement the Emergency Classification and Action Level

On June 25, 2009, an explosion and fire occurred in voltage monitoring equipment on a 345 kilovolt electrical bus. Shift management personnel did not recognize the event as having satisfied any emergency criteria. The next day, the oncoming control room Shift Manager, in consultation with the Emergency Preparedness Manager, determined the event met the

conditions for an Alert, in accordance with EAL guidelines. At this point, the NRC, State, and local officials were notified of the missed EAL declaration and the proper classification status.

The licensee attributed the failure to declare an Alert to personnel not adequately describing the event as an explosion. A recent change to the site procedure added “catastrophic failure of energized equipment” to the definition of an “explosion.” However, this procedure change was not properly managed, resulting in site personnel not receiving adequate training to identify catastrophic electrical faults as explosions. Therefore, site personnel made reports of an electrical fault and did not report the explosion to the control room. This event is described in NRC Inspection Report 05000346/2009503 (ADAMS Accession No. [ML093620814](#)); Final Significance Determination for a White Finding Notification of Follow-Up Assessment, and Notice of Violation, EA-09-283 (ADAMS Accession No. [ML100560592](#)); and the Response to the Notice of Violation (ADAMS Accession No. [ML100910164](#)).

## **BACKGROUND**

Part 50.54(q) of 10 CFR, “Conditions of licenses,” requires licensees to follow and maintain the effectiveness of prescribed emergency plans. The requirements for emergency plans are codified in 10 CFR Part 50.47, “Emergency Plans,” and Appendix E to 10 CFR Part 50, “Emergency Planning and Preparedness for Production and Utilization Facilities.” Additionally, NUREG-0654, “Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants,” amplifies the requirements set forth in the regulations. Regulatory Guide 1.101, “Emergency Planning and Preparedness for Nuclear Power Reactors,” endorses NUREG-0654 as an acceptable method for applicants and licensees to comply with the planning standards of 10 CFR 50.47(b).

## **DISCUSSION**

Part 50.47(b)(2) of 10 CFR, requires that timely augmentation of on-shift emergency response capabilities be available. An in-depth review of the events described in this IN revealed inadequate training as a contributing cause to the untimely augmentation of emergency response capabilities. In general, training for emergency responders should be sufficient to ensure designated individuals are competent in executing their assigned emergency response duties. The events described in this IN illustrate potential deficiencies that licensees should take measures to avoid. Although there is no explicit NRC requirement to do so, licensees may consider reviewing the circumstances of these events within their emergency response training programs and preemptively implementing applicable corrective actions described in the documents referenced above.

## CONTACTS

This IN requires no specific action or written response. Please direct any questions about this matter to the technical contacts listed below or the appropriate Office of Nuclear Security and Incident Response (NSIR) manager.

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Note: NRC generic communications may be found on the NRC public Web site, <http://www.nrc.gov>, under NRC Library.

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