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UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR REACTOR REGULATION
WASHINGTON, D.C. 20555-0001

May 25, 2006

**NRC REGULATORY ISSUE SUMMARY 2004-15, SUPPLEMENT 1
EMERGENCY PREPAREDNESS ISSUES: POST-9/11**

ADDRESSEES

All holders of operating licenses for nuclear power reactors, except those who have permanently ceased operations and have certified that fuel has been permanently removed from the reactor vessel.

INTENT

The U.S. Nuclear Regulatory Commission (NRC) is issuing this supplement to Regulatory Issue Summary (RIS) 2004-15, "Emergency Preparedness Issues: Post-9/11," dated October 18, 2004 (Agencywide Document Access and Management System (ADAMS) Accession No. ML041810037), to reinforce existing regulations and guidance related the maintenance of the emergency plan and implementing procedures (Item 1) and the evaluation of changes made to plant procedures and processes impacting the emergency plan (Item 2). In addition, Supplement 1 to RIS 2004-15 provides addressees information on emergency preparedness (EP) based on the NRC staff observations from the EP component of force-on-force (FOF) exercises and lessons learned from the telephonic walk throughs conducted between August and October 2005 with all 65 power reactor sites (Items 3 through 6). Some lessons learned discussions are contained in a separate enclosure since they contain sensitive information related to the January 26, 2005, Safeguards Advisory.

This RIS requires no action or written response from addressees. Observations and lessons learned provided in this RIS do not constitute regulatory requirements, but rather are intended to help licensees identify ways to enhance their EP programs in response to security-related events or threats. With the exception of Items 1 and 2, the information provided in this RIS is not intended for use in NRC inspection or oversight activities.

BACKGROUND INFORMATION

The NRC recognized that the post-9/11 threat environment affected EP when it ordered nuclear power reactor licensees on February 25, 2002, to implement a set of interim compensatory

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measures (ICMs) for nuclear security and safety, including EP programs. The NRC staff also evaluated the EP planning basis with respect to the threat environment that has existed since the terrorist attacks of September 11, 2001. Based on this evaluation and in conjunction with measures taken to strengthen security and EP programs since September 11, 2001, the NRC continues to believe that the EP planning basis for nuclear power reactors remains valid.

Terrorist-based events present unique challenges to EP programs. As such, in RIS 2004-15 the NRC staff identified various EP issues, related to a security event, to be considered by the licensees.

The NRC EP staff has supported the FOF exercise program by observing the demonstration of onshift EP and operational response capabilities. These activities have enabled better integration of EP, operations, and security responses during a security event.

In response to Bulletin 2005-02, "Emergency Preparedness and Response Actions for Security-Based Events," dated July 18, 2005, (ADAMS Accession No. ML051740058), the industry has also initiated the development of a terrorist event-based integrated response drill and exercise program. The NRC staff has supported the development of this program by observing various tabletop drills conducted by the industry in coordination with Federal, State, and local response organizations.

An imminent attack warning protocol was also issued by NRC staff as one element of the October 6, 2001, Safeguards Advisory. The attachment to the October 6, 2001, Safeguards Advisory was enhanced and recommended actions for licensees were reissued in the June 18, 2004, Safeguards Advisory. In August and September 2004, the NRC staff simulated imminent attack notifications during telephonic walk throughs with six sites. The objectives were to: (1) demonstrate the licensee's evaluation of event information and response in real time; and (2) verify the licensee's understanding of actions in response to an imminent attack warning. The walk throughs also allowed NRC staff to demonstrate NRC Operations Center protocols for imminent attack with the licensee and to verify the efficacy of communications protocols between the licensee and the NRC Operations Center. As a result of the 2004 imminent attack walk throughs, the NRC published the January 26, 2005, Safeguards Advisory, which clarified recommended actions contained in the June 18, 2004, Safeguards Advisory. Between August and October 2005, the Office of Nuclear Security and Incident Response (NSIR) staff conducted walk throughs with all 65 sites.

SUMMARY OF ISSUES

Item #1: Maintenance of the Emergency Plan and EIPs

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.54(q), a licensee authorized to possess and operate a nuclear power reactor shall maintain in effect emergency plans that meet the planning standards in 10 CFR 50.47(b) and the requirements of Appendix E to Part 50. This includes a description of how the planning standards of 10 CFR

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50.47(b) are being met and addresses the required contents of emergency plans as outlined in Paragraph IV to 10 CFR Part 50, Appendix E. The ICMs issued by the Commission in the February 25, 2002, orders also established regulatory requirements.

During FOF exercises, NRC staff has observed that many licensees had incorporated certain steps/actions currently residing in the emergency plan implementation procedures (EPIPs) into a safeguards or proprietary procedure used by the control room to respond to a security-related emergency, which is maintained by another organization (operations, security, etc.). These steps or actions included emergency classification, plant announcements, personnel instructions, required notifications to Federal, State, and local governments, and ERO activation. These steps or actions are intended to allow the licensee to tailor the safeguards or proprietary procedure and implement the emergency plan specifically to a security-related emergency, while providing initial operations instructions for validating an event and placing the plant in the desired configuration (i.e., shutdown of the reactor). RIS 2005-02, "Clarifying the Process for Making Emergency Plan Changes," dated February 14, 2005 (ADAMS Accession No. ML042580404), advises that licensees administratively control information from the emergency plan to ensure changes to those documents do not result in a failure to comply with 10 CFR 50.54(q).

Safeguards or proprietary procedures, which detail implementation of elements to the emergency plan, are subject to the requirements of Paragraph V (Implementing Procedures) to Appendix E of 10 CFR Part 50.

Item #2: Changes to Plant Procedures/Processes Impacting the Emergency Plan

Changes made to a station's facilities, plans, and procedures could result in a decrease in effectiveness of the emergency plan per 10 CFR 50.54(q). For example, changes to the placement of vehicle barriers, the relocation of employee parking areas, or the revision of event terminology in the security plan implemented subsequent to September 11, 2001, may impede site evacuation, delay site access, delay emergency response organization (ERO) arrival at their designated emergency facility, or impact emergency action level (EAL) criteria. As required in 10 CFR 50.54(q), any change that would constitute a decrease in effectiveness to the emergency plan may not be implemented without application to and approval of the Commission.

Information Notice 2005-19, "Effect of Plant Configuration Changes on the Emergency Plan," dated July 18, 2005 (ADAMS Accession No. ML051530520), provides a discussion of inspection findings related to licensees' failure to properly evaluate the effect of plant configuration changes (e.g., procedures, equipment, and facilities) on the emergency plan.

Item #3: Timely Notification of Offsite Response Organizations (OROs)

A physical attack on a nuclear power reactor site may disrupt normal procedures and processes for offsite notifications. For example, in the unlikely situation that an attack is successful in

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disrupting control room operations or results in a physical loss of the control room, the prompt notification of OROs may be delayed or may not take place through normal communication channels. During FOF exercises, NRC staff has observed the following good practices that many licensees were considering or taking action to implement as contingency measures for a terrorist attack to ensure the timely notification of OROs:

- (1) A rapid, brief notification process: Use of a primary point of contact for the dissemination of notification and/or limiting notification form content to identify the key information (e.g., event classification, reason for classification, and protective action recommendation if applicable) for an actual or imminent security event. Any changes to the notification process should be evaluated and implemented by the licensees in coordination with State and local authorities, and respective changes to the emergency plan and EIPs should be evaluated under 10 CFR 50.54(q).
- (2) Alternate means for offsite notifications: In the unlikely event of the physical loss of the control room or if communications with the control room are degraded, licensees were considering contingency measures to determine control room status and notify OROs from an alternate onsite location using available onshift personnel (e.g., secondary alarm station, work control center personnel), prior to the technical support center or emergency operations facility assuming responsibility for key functional areas. If onshift personnel are assigned and trained in this backup communicator role during a security-related event, it is not necessary to track them as a designated onshift communicator under the ERO participation performance indicator.

Item #4: Security Event-Based Tabletop Drills

NRC Bulletin 2005-02 included a description of enhancements that the NRC staff is pursuing to the EP drill and exercise programs for nuclear power plants. In Attachment 6 to the bulletin, the NRC staff stated:

It is recognized that the security at nuclear power plants is robust. In addition, current assessments indicate that licensee measures are available to mitigate the effects of terrorist acts. Consequently, such acts would not create an accident that causes a larger release or one that occurs more quickly than those already addressed by the EP planning basis. However, the condition of the plant after such an event could be very different from the usual condition practiced in more conventional nuclear power plant EP drills and exercises.

In light of the foregoing and of the post-9/11 threat environment, licensees should exercise and test security-based EP capabilities as an integral part of the licensee's emergency response capabilities.

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Through the Nuclear Energy Institute (NEI) the industry established a pilot program to begin to implement these enhanced drills. Phase 1 of the pilot program included the use of tabletop drills, which have been conducted at Diablo Canyon, Duane Arnold, North Anna, and Vermont Yankee sites. The consensus of attendees and observers was that tabletop drills are an effective training tool, similar to the integrated response planning and execution tabletops conducted in coordination with the Homeland Security Council and Department of Homeland Security at Indian Point Energy Center and Calvert Cliffs sites.

Tabletop drills gather responders, normally in separate locations, into a single room and asks them to respond to simulated events. This format allows responders to learn how their counterparts in other facilities perform actions and confront problems. Additionally, the effort provides an opportunity for team building.

Continued use of tabletop drills, such as those conducted during the NEI pilot drill program, facilitate the development of key skills which would be used in response to security event-based scenarios.

Item #5: Airspace Restrictions

Upon the identification of an imminent or potential threat due to a commercial aircraft, the Federal Aviation Administration, which is within the U.S. Department of Transportation, may close airspace based on the perception of the threat nationally, regionally, or to a specific site(s). During a recent tabletop drill conducted as part of the pilot phase for the terrorist event-based integrated response drill and exercise program (per Attachment 6 to Bulletin 2005-02), it was identified that a protocol for licensee or State officials to request the lifting of air space restrictions would facilitate the prompt mobilization and re-location of licensee, Federal, and State resources (i.e, equipment, personnel) in support of event mitigation and recovery activities.

NRC staff has the responsibility to coordinate licensee requests for Federal assistance related to an NRC-regulated facility through the Department of Homeland Security Operations Center (HSOC). A State's homeland security/emergency management office may communicate directly with the HSOC State and Local Desk Officer for assistance or through the NRC. Requests for modifying airspace restrictions would be reviewed by the Interagency Incident Management Group, which serves as the interagency policy-level interface with the Secretary of Homeland Security and the White House.

Item #6: Lessons Learned From Imminent Attack Walk Throughs

In conducting the imminent attack walk throughs, typical licensee participants included a licensed senior reactor operator and numerous emergency management and security representatives. Each site provided, at a minimum, an operations supervisor to participate. At various times throughout the schedule, NRC management, Office of Nuclear Reactor Regulation project managers, NRC regional staff, and NRC resident inspectors listened to calls.

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The Nuclear Sector Coordinating Council, NEI, and other industry representatives also participated with the licensees' consent.

The observations, listed below and discussed in the enclosure, were developed from the information gathered during these walk throughs:

a. NRC Communications for Emergent Airborne Threats

Generic Letter 91-14, "Emergency Telecommunications," dated September 23, 1991 (ADAMS No. ML031140150), informed licensees of the conversion to the Federal Telecommunication System (FTS) 2000 network and subsequent removal of direct, dedicated telephone lines. A component of the FTS-2000 is the emergency notification system (ENS) circuit, which serves as the primary communications link between the NRC Headquarters Operations Center and a licensee's control room.

In some cases, licensee participants were not aware that the ENS circuits in their control rooms were not dedicated lines to the NRC. Consequently, these licensees did not consider it necessary to validate imminent aircraft threat notifications received on their ENS circuits.

The NRC continues to work with other Federal agencies to ensure that threat notification to the licensees will normally be initiated through the NRC Headquarters Operations Center where time permits, thus minimizing licensee verification responsibilities for agencies other than the NRC under most procedures. Regardless of the initial caller's affiliation, if licensees require verification of the caller's identity and information, they may call the NRC's Headquarters Operations Center.

According to the January 26, 2005, Safeguards Advisory, licensees should maintain an open line of communications with the NRC for the duration of the event following notification of an emergent airborne threat. This allows NRC management to provide guidance and additional information as it becomes available and to give the licensee timely updates on the event, which may affect its response actions. Licensees may need to use a separate phone line to perform call verification, while maintaining an open ENS line to ensure continuity of communications.

b. Notification of Offsite Fire-Fighting and Medical Assistance for an Imminent Airborne Threat

In some cases, licensee participants did not contact designated offsite fire-fighting and medical assistance organizations in a timely manner following the notification of an imminent aircraft threat. The purpose of informing these organizations of an imminent aircraft threat, rather than after an aircraft impact adjacent to or within the plant site, is to:

- provide the opportunity for organizations to initiate call outs for mutual aid assistance based on the perceived threat;

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- initiate the near-site mustering of offsite fire-fighting and medical assistance for remote sites, where these organizations are not located in close proximity to the plant site; and
- allow for the mobilization of personnel for volunteer organizations (i.e., fire departments, ambulance services) and hospital staff.

Licensee notification procedures ensure that appropriate offsite fire-fighting and medical assistance resources are promptly mobilized and prepared to respond in the event of an aircraft impact on the plant site, which may involve multiple casualties and active fires over a large area. However, an actual response to the plant site upon notification of an imminent aircraft threat may not be appropriate and should be coordinated closely with offsite emergency management agencies (EMAs), since it may place responders in danger due to the aircraft impact adjacent to or on the plant site.

In some cases, licensees, in coordination with EMAs, may specify in their respective emergency plans and EIPs that fire-fighting and medical assistance be contacted by local officials upon receipt of a notification, in accordance with Appendix E to 10 CFR Part 50, for an emergency classification based on an imminent threat. This option can facilitate an integrated response within the local EMA's control and decision process and for the appropriate alerting and mobilization of offsite responders based on site-specific factors.

BACKFIT DISCUSSION

This RIS requires no action or written response. Any action on the part of addressees to evaluate changes to the emergency plan or to plant procedures/process impacting the emergency plan in accordance with the information contained in this RIS is voluntary and, therefore, is not a backfit under 10 CFR 50.109. Consequently, the NRC staff did not perform a backfit analysis.

FEDERAL REGISTER NOTIFICATION

A notice of opportunity for public comment on this RIS was not published in the *Federal Register* because it is informational and pertains to a staff position that does not represent a departure from current regulatory requirements and practices.

SMALL BUSINESS REGULATORY ENFORCEMENT FAIRNESS ACT OF 1996

The NRC has determined that this action is not subject to the Small Business Regulatory Enforcement Fairness Act of 1996.

PAPERWORK REDUCTION ACT STATEMENT

This Regulatory Issue Summary contains information collection requirements that are subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). These information collections were approved by the Office of Management and Budget (OMB), approval number 3150-0011, which expires February 28, 2007.

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Public Protection Notification

The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid OMB approval number.

CONTACT

Please direct any questions about this matter to the technical contacts listed below.

/RA/

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Enclosure: Lessons Learned From the Imminent Attack Walk Throughs
(Official Use Only – Security-Related Information)

Note: Enclosure will not be released to the public because it contains sensitive unclassified nonsafeguards information related to nuclear power reactors, and must be accorded protection required under 10 CFR 2.390(d)(1).

Note: NRC generic communications may be found on the NRC public website, <http://www.nrc.gov>, under Electronic Reading Room/Document Collections.

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