

ADDITIONAL EMERGENCY PREPAREDNESS INFORMATION

The following additional information is provided for the Commission's review. This information will provide a semiannual report on the status of important activities in the area of emergency preparedness.

Initiative 1: NRC Bulletin 2005-02, "Emergency Preparedness and Response Actions for Security-Based Events"

Based on the insights derived to date from the September 11, 2001, terrorist attacks, the NRC has developed certain actions to strengthen licensee capability to respond to a terrorist attack. Licensees are responsible for the safe operation of their facilities. Moreover, licensees are ultimately responsible for developing prudent actions to be taken in response to an imminent or actual terrorist attack. To ensure an appropriate level of response in the unlikely event of an attack on a nuclear power plant (NPP), new emergency action levels (EALs) were developed for incorporation into existing emergency classification procedures. In addition, licensees were provided additional guidance for the evaluation of a modified notification process, onsite protective actions, and the drill and exercise programs. The staff issued Bulletin 2005-02 to NPP licensees to request information on five (5) aspects of their emergency preparedness (EP) programs:

- Enhancements to emergency classification level schemes
- NRC notifications
- Onsite protective measures
- Emergency response organization augmentation
- Drill and exercise program

Responses in those areas have been received and are summarized as follows:

Emergency Action Levels	NRC Notification	Onsite protective actions	Emergency Response Organization Augmentation	EP-Security Integrated Drill and Exercise Program
63 licensees ~ 180 days to implement	1 licensee Complete	4 licensees Complete	29 licensees Complete	9 licensees ~180 days to implement
1 licensee ~ 210 days to implement	9 licensees ~ 60 days to implement	1 licensees ~ 60 days to implement	34 licensees ~ 180 days to implement	55 licensees - awaiting NRC/DHS endorsement
	54 licensees ~ 90 days to implement	58 licensees ~180 days to implement	1 licensee ~ 210 days to implement	
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- Enhancements to emergency classification level schemes
 - All responses indicated that licensees will adopt the enhancements for their appropriate emergency classification schemes. This will be accomplished by January 20, 2006, in all cases except one licensee which will not do so until February 16, 2006, due to an outage.
- NRC notifications
 - All licensees state they will adopt the abbreviated notification to the NRC. This capability will be incorporated in notification procedures by October 18, 2005, in all cases.
- Onsite protective measures
 - All licensees state they will adopt the enhancements for their onsite protective measures.
- Emergency response organization (ERO) augmentation
 - All licensees state that they will incorporate enhancements consistent with the information provided in Bulletin 2005-02.
- Drill and exercise program
 - All licensees will adopt the drill and exercise program enhancements contingent on NRC and Department of Homeland Security (DHS) endorsement of the new evaluated exercise process program.

Initiative 2: Development and implementation of a security-event-based drill program

NPPs' security is robust and effective in protecting the public. In addition, based on NRC evaluations to date following 9/11, the emergency planning basis is valid. Licensees can and will implement protective measures to mitigate the effects of terrorist acts. These acts can not create a larger radioactive release or one that occurs more quickly than accidents already addressed by the EP planning basis. However, the condition of the plant after such an event is different from that routinely practiced in NPP drill and exercise programs. A properly prepared

ERO can effectively mitigate plant damage after a terrorist event. The staff and industry are in the process of ensuring that EROs routinely practice response to terrorism-based scenarios.

The Nuclear Energy Institute (NEI) Emergency Preparedness and Security Working Group is currently working with the staff on integrating and demonstrating emergency response to terrorist events, including preparation and conduct of integrated drills exercising a range of responses. The staff expects licensees to enhance key skills and capabilities through their drill programs. The industry is pursuing the integration of security events into the routine drill and exercise program as described in the NEI white paper dated May 2005 (ADAMS Accession No. ML051510380.) The end state of this process is for security events to be fully integrated into the drill and exercise program to the extent that one biennial exercise per 6-year period uses a security-based scenario.

However, there are some issues with respect to integration of security-based scenarios into NPP drill and exercise programs. The focus of EP/security exercises is different from routine radiological exercises in several ways:

- Integration of ERO, security, and operations response
- Coordination of notifications, offsite support, and plant ingress
- Recovery from the aftermath of a terrorist attack

The focus is not on response to a radiological release nor on protective-action decisionmaking and implementation. Those matters are adequately covered in routine radiological scenario based biennial exercises that have been practiced since 1980. This type of scenario will be implemented twice during the 6-year evaluated exercise period. A description of expected elements and sequence of EP/security exercises is provided below:

EP/Security Exercise Scenario Concept

The exercise begins at the site simulator with the normal shift staffing. The staff learns of security events through scenario messages and phone calls. Events progress through the attack on the plant and indication of damage.

The exercise includes the following elements:

- Immediate notification of the NRC
- Progressive declarations through at least a Site Area Emergency
- Onsite and offsite protective actions appropriate for the threat conditions and classification level (e.g., protecting a minimum contingent of operations and maintenance personnel for recovery)
- Notification of the offsite response organizations (OROs)
- Activation of the ERO (for armed attack scenarios, the use of the onsite emergency response facilities (ERFs) may not be possible, and the use of staging areas and alternative facilities would be demonstrated)
- Activation of the utility offsite ERFs and the State/local emergency operations centers (EOCs)

- Initial site access communications with local law enforcement agencies (LLEAs)
- Site conditions that may prevent normal access and transit due to fire, locked doors, security measures, and areas of the site that have not yet been secured

The initial response portion of the exercise will take about 60 to 180 minutes. The exercise will then pause and go through a time jump.

The ERO will reconvene at the ERFs and be briefed on the status of the plant. This phase of the exercise will demonstrate coordination of offsite support and plant ingress during a terrorist event and the ERO's ability to recover from the aftermath of a terrorist attack including protection of the core, reactor vessel and containment. During this time jump, the terrorist event will have damaged the plant, either through an aircraft attack or armed attack (land, water, bomb) scenario. Sites will be expected to alternate scenarios for the exercises.

The ERO will be allowed to stage in response centers and will be briefed that the site has been attacked, and that the site's response centers had been declared safe for operation and activated (the EOF and the EOCs may have been in the process of activation during the initial exercise play). Responders are given information about the site and the status that they could have reasonably been expected to learn. Information will provide simulated conditions in the aftermath of the attack that are scenario specific (e.g., casualties, loss of equipment, loss of instrumentation, damage from large fires, explosions, and bullets, civil structure damage, rubblized areas, areas of the plant not yet secure). Responders may be told that a General Emergency has been declared and that initial protective actions have been implemented and are in progress or complete.

The exercise will include the following elements:

- ORO conduct of operations, including public protective actions, without the benefit of resources called to the site (fire for aircraft and law for armed attack)
- OROs' control of site ingress and egress
- Response to a significant number of personnel injuries and/or casualties
- A change to the existing protective actions based on plant or weather conditions
- Scenarios can be success oriented (i.e., the ERO may succeed in preventing core damage and/or a radiological release if the proper actions are taken)
 - The scenario must threaten core damage or other means for a potential radiological release (i.e., fuel pool event).
 - Aircraft scenarios should include coordination of large firefighting efforts and identification of plant mitigative actions.
- ERO diagnoses plant status, plans mitigative actions, executes mitigative actions and navigates plant recovery
 - The ERO mitigates site damage under the simulated conditions after an attack, either large fires or armed-attack-type damage, that might include areas of the site not yet secure.

- Plant mitigative actions need not actually install and run equipment, but merely identify the existence of equipment needed to implement ad hoc measures and the equipment's availability and operability; means to use the equipment is also demonstrated (e.g., the expertise is on scene).

The post-event response portion of the exercise may take 3 to 4 hours, depending on how long it took to conduct the first portion, the objectives for the exercise, and how long it takes to effectively communicate response status after the simulated time jump. In any case, the exercise should be able to meet objectives in less than 7 to 8 hours total time.

The events that cause the conditions are secondary and need only to be explained as necessary for meaningful ERO response. There is no intention to simulate the defeat of the site security force or reveal targeting information. Rather, the scenario is used to postulate the failure of multiple safety systems as in typical reactor event scenarios, but as a result of aspects of a terrorist event. However, scenarios should never clearly identify target sets. Simulated equipment out of service and damage exceeding any single target set should be used. Additionally, specific repair measures may also be of value to adversaries. Due to the potential information value, licensee organizations should keep scenarios "not publicly available" in accordance with 10 CFR 2.390, although summaries without detailed component information may be released. Sharing experiences and insights with other emergency responders is expected. However, some level of discretion is appropriate when considering sharing with a wider audience if sharing could provide sensitive information.

As with ingestion pathway exercises, FEMA-REP-14 security-based exercise objectives must be developed to address the response differences from traditional radiological event drills. Additionally, several current General Emergency and plume-related objectives will not be demonstrated (due to the time jump) in order to allow the recovery actions to take place. For example, the security scenario may postulate a General Emergency with no release during the time jump:

- Objectives 6/8 (Field Radiological Monitoring), 7 (Dose Projection), 9 (Protective Action Decision Making), and 11 (Public Instructions and Emergency Information) will be given to the players as initial conditions.
- Objectives such as 15/16 (Special Populations/Schools) need modifications to their current extent of conditions for this type of exercise.
- New objectives must be developed to address the greater site response (police, fire, medical) and mutual aid agreements. Communications, incident command and impacted area ingress will be added.

NOTE: These elements are not meant to be an exhaustive list and other elements may be added.

All exercise extent-of-play and objective modifications needed to allow the substitution of a security-related exercise for a traditional radiological exercise will require DHS endorsement prior to implementation.

Initiative 3: Review of EP regulations and guidance for commercial nuclear power plants.

The staff conducted a successful and well attended public meeting on August 31 and September 1, 2005. The purpose of that meeting was to obtain stakeholder input on selected topics related to the review of EP regulations and guidance in the post-9/11 threat environment for commercial NPPs. The meeting was conducted as a roundtable discussion among participants who were invited to represent the spectrum of interests in the area of EP. The spectrum included representatives from State, local, and Tribal governments; DHS; NRC; advocacy groups; and the nuclear industry. A list of the roundtable participants and the agenda are provided in Attachment 2. The stakeholders raised issues on the following topics:

- Abbreviated notification to the NRC and the OROs, and the timing, sequencing, and technological means of the notifications
- EP-security integrated drill and exercise program
- Offsite protective actions, specifically the distinction between “sheltering” and broadcast monitoring, often referred to as “heightened awareness”
- Licensee protective action recommendations (PARs) for security events during a Site Area Emergency
- Backup power to siren systems

The staff is now analyzing comments from the meeting and will provide a comment summary and analysis on the NRC Web site by January 17, 2006 (90 days after the close of the public comment period). While the next semiannual status report will provide a summary of the staff's comment analysis, general comments and themes from the meeting included the following: (1) State, local and Tribal governments emphasized that they do not believe in a one-size-fits all approach to regulations and hoped that any new requirements would allow flexibility in approach and implementation, (2) public advocacy groups questioned the staff's recent endorsement of RIS 2005-08 “Endorsement of Nuclear Energy Institute (NEI) Guidance ‘Range of Protective Actions for Nuclear Power Plant Incidents,’” and (3) all stakeholders appreciated the opportunity to have their views heard at the meeting and requested future opportunities for a continuing dialogue in the process of enhancing EP regulations and guidance.

In addition to the topics discussed at the public meeting, the staff has a list of potential changes to EP regulations and/or guidance and is prioritizing these issues. The staff is also evaluating an effective method for developing a partnership with stakeholders, for example, by establishing a working group or advisory panel with representatives from NRC, DHS, State, local and Tribal governments, licensees, and public advocacy groups.

Consistent with the February 25, 2005, memo to the Commission, the staff is on schedule to send the Commission a paper at the end of the fourth quarter of FY 2006 on the results of the review of EP regulations and guidance. The paper will include a framework of potential changes to the regulations and guidance, along with next steps, priorities, and resource estimates.

Initiative 5: Review of licensee responses to the Imminent Threat Safeguards Advisory (SA-05-02) and the EP aspects of Section B.5.b. of the February 25, 2002, Order.

The staff reviewed licensee responses to the Imminent Threat Safeguards Advisory (SA-05-02.) This advisory provided limited EP guidance on EALs, prompt NRC notifications, and onsite protective measures for an air attack. In general, licensees will adopt the onsite protective measure guidance. No licensee discussed prompt notification to the NRC and the majority of the licensees referred to their existing emergency plans for the EALs. This was attributed to the licensees' need for information that was subsequently provided in Bulletin 2005-02. The summary of implementation of these enhancements is provided in Initiative 1.

The staff is supporting the ongoing Phase I effort to review licensees' plans and schedules for addressing the expectations in the February 2005 guidance on complying with Section B.5.b of the February 2002 Order for Interim Safeguards and Security Compensatory Measures. The staff will brief the Commission on the results of this review at a later date.

Initiative 6: Transition of the oversight for the EP component of force-on-force exercises to the regional offices.

In Staff Requirements-SECY-05-0010 "Recommended Enhancements of Emergency Preparedness Response at Nuclear Power Plant in Post-9/11 Environment," the Commission reviewed and approved the staff's recommendations to transition the support of the EP segment during force-on-force (FOF) exercises. The staff has developed a draft inspection procedure for the transition of the oversight for the EP component of the FOF exercises to the regional offices. This procedure has been piloted at an FOF exercise using the resident inspectors and seeking their feedback. The draft procedure was provided to the regions for their review and comment. The current goal is to transition the oversight for the EP component of FOF exercises to the regional offices by the end of calendar year 2005. Currently, NRC spends up to 20 hours per year at each site observing EP drill activities. The revised inspection module will have the regional inspectors continue to observe the EP drill activity, including the EP portion of an FOF exercise during the years that the FOF occurs at that site (triennial basis). This initiative is currently on schedule.