



NUCLEAR ENERGY INSTITUTE

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May 18, 2007

Mr. Nader L. Mamish  
Deputy Director for Emergency Preparedness  
Office of Nuclear Security and Incident Response  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

**Subject:** NEI 06-04 *"Guideline for the Development of EP Drill and Exercise Threat-Based Scenarios"*, August 2006, Supplement - to NEI 06-04

**Project Number: 689**

Dear Mr. Mamish:

On August 30, 2006, the Nuclear Energy Institute<sup>1</sup> (NEI) forward to Nuclear Regulatory Commission (NRC) and Department of Homeland Security (DHS) a request for endorsement of NEI 06-04 Revision 0 *"Guideline for the Development of EP Drill and Exercise Threat-Based Scenarios"*, August 2006 by September 2007.

NEI 06-04 includes guidance on the preparation for conduct of drills and exercises, and the evaluation of Emergency Response Organization (ERO) responses to a range of threat-based events. As committed the next phase will result in each site performing a site-specific drill with their offsite emergency response organizations involving a security event-based scenario over the next three years, which began in September 2006.

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<sup>1</sup> NEI is the organization responsible for establishing unified industry policy on matters affecting the nuclear energy industry. NEI's members include all entities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect/engineering firms, fuel fabrication facilities, nuclear material licensees, and other organizations and individuals involved in the nuclear energy industry.

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The enclosed white paper is intended to supplement NEI 06-04 for the purposes of ensuring consistency in the conduct of Phase III (off-year) security event (threat)-based EP drills and should only be used for purpose of understanding the scenario time jump processes.

The inclusion of a time jump in NEI 06-04 threat based scenarios was intentional in order to: (1) limit the scope of the drill to allow demonstration of key objectives within a one day drill event, and (2) provide clear separation between the initial notifications and immediate actions associated with the threat attack and the repair/mitigation actions as a result of the attack.

The industry appreciates NRC participation, insights and support during the development of this important step forward, ensuring an enhanced level of preparedness for the nation's readiness.

If you have any questions, please contact me at 202.739.8110; [apn@nei.org](mailto:apn@nei.org).

Sincerely,

A handwritten signature in black ink, appearing to read "Alan Nelson", with a stylized flourish at the end.

Alan P. Nelson

Enclosure

c: Mr. Melvin N. Leach, Director, Division of Preparedness and Response, NRC  
Mr. Andrew Mitchell, Director, Office for Domestic Preparedness, DHS  
Ms. Vanessa E. Quinn, Acting Director, Radiological Emergency Preparedness, FEMA  
Joseph D. Anderson, Security Interface Team Leader, NRC

***“Guideline for the Development of EP Drill and Exercise Threat-Based Scenarios”***

**August 2006**

**Supplement – “Purpose of the Time Jump in Threat Based Scenarios”**

**May 16, 2007**

This document is intended to supplement NEI 06-04 for the purposes of ensuring consistency in the conduct of Phase III (off-year) security event (threat)-based EP drills and should only be used by licensees for purpose of understanding the scenario time jump processes.

Purpose

The purpose of the time jump between Part 1 and Part 2 of the NEI 06-04 threat scenario is to eliminate the demonstration of integrated site scenario tactical security law enforcement response activities between site security forces and federal, state and local law enforcement agencies through a coordinated incident command structure. Simply defined, these activities would include confirming the status of adversaries (terrorists) and the location and status of potential explosive devices to allow increased movement of site personnel and emergency responders in support of accident assessment and mitigation. NEI 06-04 is intended to demonstrate immediate station actions when presented with a hostile threat, then an integrated consequence management response following a hostile action.

Part 1

Historical precedence (TMI and Seabrook) indicates that initial access and movement restrictions for a ground or waterborne assault may extend into hours for small events (those without injuries or plant damage). As such, the uncoordinated movement of on-shift staff, the ability for ERO personnel to staff emergency facilities in support of the Control Room, and the deployment of offsite resources (i.e., fire-fighting, medical) would preclude demonstration of consequence management actions within reasonable time constraints of a drill.

The events postulated in Part 1 of an NEI 06-04 drill during Phase III would involve a rapid assault by adversaries, beyond existing design basis threat (DBT) requirements, which would escalate (at a minimum) to a Site Area Emergency and establish plant conditions that would eventually degrade resulting in fuel/core damage scenario if appropriate assessment and mitigative actions are not taken. The conditions resulting from adversary assault may also involve the failure of plant equipment to operate as expected (i.e., pump fails to start, valve fails to close) or equipment out of service for maintenance.

Demonstration of communications and coordination of actions between the Control Room (Operations) and site Security immediately following the adversary assault is needed due to the extended time frame that may be required to mobilize and coordinate federal, state and local law enforcement. While the use of an adversary force beyond DBT requirements may be postulated, scenario developers should exercise caution that the postulated force may result in precluding effective demonstration of a coordinated response to mitigate damage, provide command and control for reactor safety, and mass casualties.

The process of communications and coordination of immediate assessment and mitigative actions between the Control Room and site Security should include the following based on the postulated adversary force status, resulting damage to plant structures, and other hazards:

- Determine the possibility for limited, controlled movement of the site personnel to support staffing of on-site emergency facilities, site egress to evacuate non-essential personnel and supporting staffing of off-site emergency facilities.
- Determine the movement of on-shift staff (primarily Operations personnel) for the purpose of initial plant damage assessment and initiating possible actions to stabilize the plant and mitigative events.
- Determine whether limited site and/or protect area access can be restored and under what conditions for offsite responders (i.e., fire-fighting, medical) to support initial accident assessment and mitigative actions. If determined that site and/or offsite response organizations should be assembled a designated near-site staging area(s) and alternate assembly locations.

Initial communications and coordination between site Security and local law enforcement agencies (LLEA) is within the scope of Part 1 of the NEI threat based drill guidance and should consider the initial reports of the threat or attack and any follow-up communications that may occur until the end of Part 1.

Communications and coordination between site Security and Operations personnel (Control Room) are also within the scope of Part 1, and should include the determination of protective actions necessary for on-site personnel and communication of those decisions to station personnel.

Communications between site Security, local law enforcement and Operations personnel following Part 1 and before Part 2 (during the time jump) are simulated, and should address re-establishment of limited site and/or protected area access in support of off-site fire-fighting and medical response, controlled evacuation of non-essential site personnel, and efforts to support initial plant assessment and mitigative activities. Drills conducted under NEI 06-04 are not intended to demonstrate an armed tactical security/law enforcement response in order to neutralize adversary threat.

It is not expected that the above actions would be carried out to completion. While these actions should be demonstrated to the extent possible during Part 1 without unnecessarily extending the drill or including non-emergency preparedness/operations Force on Force components, it is suggested that these discussions between the Control Room, site Security, and law enforcement agencies take place to establish a set of agreed-upon actions prior to ending Part 1. Those actions would then be considered complete at the start of Part 2.

For a site with an offsite Emergency Operations Facility (EOF), primarily staffed by licensee personnel that do not respond from the site (i.e., common EOF), facility manning and the transfer of emergency director/coordinator command and control duties, directly from the Control Room to the EOF (bypassing the TSC), should be demonstrated if not normal protocol for a routine REP exercise.

## Part 2

Due to the challenges posed by a threat-based scenario, offsite agencies may consider protective action options not normally consistent with those implemented during a routine REP exercise. Therefore, the initial conditions of Part 2 should drive protective action decision-making by state and local agencies in response to the postulated on-site damage.

Initial conditions established at the start of Part 2 should also consider:

- The adversary terrorist force has been neutralized and conditions for controlled ingress/egress to site and within the protected area have been re-established.
- State and local emergency response facilities (i.e., EOCs) may be staffed and operational.
- Licensee emergency facilities not activated during Part 1 due to location or staff availability may be staffed and awaiting completion of turnover briefings prior to being declared operational.
- The near-site incident command facility has been established. Part 2 should involve the transition of incident command from tactical law enforcement/security response to accident assessment/mitigation.

## Conclusion

The inclusion of a time jump in NEI 06-04 threat based scenarios was intentional in order to: (1) limit the scope of the drill to allow demonstration of key objectives within a one day drill event, and (2) provide clear separation between the initial notifications and immediate actions associated with the threat attack and the repair/mitigation actions as a result of the attack. While a single utility or offsite agency may be able to include one or more of the above clarifications from NEI 06-04 within a specific threat scenario, it is not in the best interest of developing standard guidance and practices for the industry at large to do so. Although NEI 06-04 had significant development during the pilot process, it is still necessary to evaluate the guidance through consistent application during Phase III. Lessons learned that apply to the scope and conduct of the Phase III drills will be evaluated and resolved at the end of the phase by industry and regulators alike. At that point appropriate modifications will be made in a formal methodic process.