

**NEI 06-04 [Revision 2]**

# **Conducting a Hostile Action-Based Emergency Response Drill**

**August 2011**

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**Nuclear Energy Institute**

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This document was prepared by the Nuclear Energy Institute (NEI) Hostile Action-Based (HAB) Drill Task Force.

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# **CONDUCTING A HOSTILE ACTION-BASED EMERGENCY RESPONSE DRILL**

## **1 OVERVIEW**

The NEI Hostile Action-Based (HAB) Drill Task Force has developed this document to establish guidance for the development, conduct and evaluation of HAB emergency response drills and exercises<sup>1</sup>. An HAB drill provides an opportunity to practice the integrated response to a Hostile Action directed against a commercial nuclear power generating facility. HAB exercises are conducted periodically in accordance with the requirements of 10 CFR 50.47(b) and 10 CFR Part 50, Appendix E, Section IV.F.

While a HAB drill has many elements in common with a non-HAB drill, there are important differences. To aid in understanding these differences, the key attributes of a HAB drill are listed below.

- The drill scenario will postulate an attack by an adversary force that successfully inflicts significant damage to the facility and casualties to the station staff.
- A summary of Security and law enforcement responses are described in the scenario; tactical responses are not actually performed or simulated in the field.
- Additional participation by Security personnel will be necessary to simulate security facilities and functions (e.g., the Central Alarm Station), and on-shift security supervision.
- The attack will require activation and operation of an on-site or near-site Incident Command Post (ICP), and, depending upon State and local protocols, other facilities defined by the National Incident Management System (NIMS).
- Personnel from the on-shift Emergency Response Organization (ERO)<sup>2</sup>, local law enforcement and first-responder agencies will demonstrate the ability coordinate initial response actions including implementation of coping/mitigation actions, firefighting and emergency medical services in a post-attack environment.
- There will be a demonstration of the coordination and decision-making necessary to mobilize the ERO in a post-attack environment. Depending upon the scenario, this may include use of alternative facilities and staging areas.

In order to present opportunities for demonstration of certain HAB drill objectives, it will be

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<sup>1</sup> To improve readability, the term “drill” is used throughout this document. The usual distinctions between a drill and an exercise notwithstanding, the guidance in this document applies to both HAB drills and exercises.

<sup>2</sup> In accordance with commonly accepted terminology, this document uses the term ERO to refer to the licensee’s emergency response personnel.

necessary for the scenario to employ an adversary force in excess of that defined by the Design Basis Threat (DBT). In addition, drill exigencies will require that certain events, consequences or response actions be embellished or presented in a time-compressed fashion. Drill participants should be made aware of these stipulations, and of the expectation to assess, and respond to, the events as presented.

The damage assumed to occur in a HAB drill scenario is not a reflection of the actual protection provided by site security plans, personnel and equipment. Further, performance in these drills is not considered to be a demonstration of physical security plan capabilities or implementation. It is expected that the security functions or support necessary to implement the emergency plan will be demonstrated.

It is recognized that State and local jurisdictions surrounding different nuclear power plant sites have varying protocols concerning implementation of the NIMS. With respect to participation by NIMS-related facilities, this document refers to the ICP since, at a minimum, it is expected that an ICP will be established to direct a response to an attack on a nuclear power plant. As used in this document, "ICP" should be taken to mean not only the ICP, but also any additional NIMS-related facilities which State or local officials would establish to support an attack-related response for a given site (e.g., a separate Area Command or Unified Command facility). In other words, recommendations and actions directed towards the ICP should also be considered for applicability to other NIMS-related facilities that are not normally activated in response to an accident at a site.

The US Nuclear Regulatory Commission (NRC) has issued specific requirements and guidance concerning the expected scheduling of HAB exercises. Drill Managers must review this information when planning events for an upcoming exercise cycle. In particular, the following two documents should be closely reviewed.

- SECY-11-0053, Final Rule: Enhancements to Emergency Preparedness Regulations (10 CFR Part 50 AND 10 CFR Part 52) (RIN-3150-A110)
- NSIR/DPR-ISG-01, Interim Staff Guidance, Emergency Planning for Nuclear Power Plants

NEI maintains a listing of "lessons learned" from HAB drills and a generic drill preparation schedule; both documents may be obtained from the NEI member website (<http://www.nei.org/members>). Additional drill operating experience information may be reviewed on the NRC's website (see documents listed in References section) and the Lessons Learned Information Sharing website maintained by the U.S. Department of Homeland Security (<https://www.llis.gov>). Site drill managers and scenario developers should review the information available from NEI, NRC and DHS sources prior to conducting a HAB drill.

## **2 HAB DRILL OBJECTIVES**

To meet regulatory requirements and related guidance, a licensee must maintain a set of drill and exercise objectives which guides the periodic demonstration of response functions described in the site emergency plan. Since an exercise utilizing a Hostile Action-Based (HAB) scenario must be conducted during an 8-year exercise cycle, this set of objectives will need to be expanded to include a subset focused on demonstrating those functions uniquely performed in response to a hostile action. Appendix A, HAB Drill and Exercise Objectives, presents generic guidance that a licensee should use to develop a site-specific set of HAB drill and exercise objectives.

Each objective has an associated listing of Performance Attributes; these attributes define successful objective performance and should be used to develop the evaluation criteria for each objective. The development of objectives and evaluation criteria must be informed by site-specific emergency plan and implementing procedure requirements, and the content of existing drill and exercise objectives. A licensee is not expected to use the generic objectives verbatim; however, the function(s) described by each objective, and the associated performance attributes, must be addressed in the objectives and evaluation material used by the licensee to conduct an exercise.

Additional expectations concerning demonstration of drill and exercise objectives are contained in guidance documents issued by the US Nuclear Regulatory Commission (NRC); in particular, refer to NSIR/DPR-ISG-01, Interim Staff Guidance, Emergency Planning for Nuclear Power Plants.

As with any other emergency response drill, each HAB drill shall be critiqued to identify weaknesses and opportunities for improvement. Identified weaknesses shall be entered into the appropriate site corrective action process. Licensees should modify their critique processes as necessary to ensure a thorough review and evaluation of HAB-related drill objectives.

Objectives for Offsite Response Organizations (OROs)<sup>3</sup> are developed and evaluated in accordance with guidance provided by the Federal Emergency Management Agency (FEMA).

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<sup>3</sup> In accordance with commonly accepted terminology, this document uses the term ORO to refer to personnel from State and local response agencies.

### **3 HAB DRILL PREPARATION**

This section highlights drill preparation tasks and support needs unique to a Hostile Action-Based (HAB) drill. Each item should be reviewed, and identified actions incorporated into the appropriate site drill preparation process and schedule.

#### **3.1 GENERAL**

Conducting a HAB drill requires a set of site resources that differ from those necessary to conduct non-HAB drills. The drill manager should identify the site resources necessary to conduct the HAB drill and ensure that they are scheduled/reserved. Consider items such as security personnel and equipment, site or Protected Area escorts, firefighting or medical response personnel and equipment, etc. Additional considerations are listed on the generic drill preparation schedule maintained by NEI.

The Drill Manager should clearly communicate expectations to the scenario development team and controllers concerning the handling and forwarding of materials used to prepare for, and conduct, the drill. More specifically, personnel must observe all Safeguards and 10 CFR 2.390 requirements.

EP and Security department personnel responsible for drill planning are strongly encouraged to become familiar with the concepts and principles of the National Incident Management System (NIMS) and the Incident Command System (ICS). The Federal Emergency Management Agency (FEMA) maintains a web page with NIMS/ICS training material links; refer to <http://www.fema.gov/emergency/nims/NIMSTrainingCourses>.

Local news media companies should be notified that the site will be conducting a HAB drill; these contacts are intended to preclude unexpected, and possibly inaccurate or alarming, coverage. Calls to media outlets may also be used to provide instructions concerning reporting locations and allowed extent-of-play if their participation is desired. These contacts should be coordinated with appropriate Offsite Response Organization (ORO) officials.

#### **3.2 DRILL SUPPORT FROM SECURITY**

Engagement by, and support from, site Security Department management is critical to the successful development and execution of the drill. Security personnel can provide valuable direction and assistance in the following areas.

- Knowledge of security-related procedures, equipment and timelines
- Development of a credible attack sequence, and related reports and indications
- Devising methods to realistically simulate response actions by, and communications with,

security facilities, officers and supervision

- Facilitate drill planning and preparation with Local Law Enforcement Agency (LLEA) personnel
- Providing knowledgeable controllers for security facilities/functions
- Verifying that no safeguards information is released in drill materials or during the drill.

### 3.3 INCIDENT COMMAND POST

The National Incident Management System (NIMS) and Incident Command System (ICS) assign responsibility for establishing an Incident Command Post (ICP) to the Incident Commander. Prior to a HAB drill, licensee personnel should verify the location<sup>4</sup> of the ICP with the Incident Commander. This location should have the resources and capabilities needed to facilitate performance of ICP functions either in-place or readily available. To this end, the following facility readiness elements should be checked.

- Located at an appropriate standoff distance from the power block
- Accessibility by offsite responders
- Security of the selected location and related facility access controls
- Work spaces
- Communications capabilities
- AC power source (ideally, independent of power block buses)
- Access to site/plant layouts, and other displays necessary to effectively manage law enforcement, fire and medical responses

Also verify that provisions are in place to support the functions performed by liaisons from the licensee's organization and OROs. Review procedural or other guidance for dispatching licensee and ORO liaisons to the ICP.

In order to avoid negative training, the ICP should be established in a location that would actually be used during a real HAB event, and not one selected primarily to facilitate drill performance. Drill-focused placement may mask challenges to logistics, communications, and security or preclude the need for important discussions (e.g., how to respond when the ICP is located within an area that must be evacuated).

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<sup>4</sup> The location of the ICP need not be in a fixed facility.

Due to the potential value to an adversary, the location of a pre-planned ICP should be treated as 10 CFR 2.390 information.

### **3.4 FIREFIGHTING AND MEDICAL EMERGENCY RESPONSE**

Although demonstration of the ability to coordinate initial response actions among the on-shift Emergency Response Organization (ERO), local law enforcement and first-responder agencies is required, the drill manager and scenario team have several options with respect to the simulated performance of firefighting and emergency medical services. The drill extent-of-play should specify whether:

- Controllers will simulate all communications with firefighting and emergency medical services personnel (i.e., no actual deployment of vehicles or personnel). If this option is selected, then communications must be made to and from a control cell, i.e., the practice of using a controller to pass messages simulating these communications shall not be used.
- One or more actual vehicle(s) and personnel will be deployed to specified in-field/on-scene locations.
- A combination of the above two options will be used.

The drill extent-of-play must clearly describe the expected simulated and/or actual resources and response actions. If practical, controllers assigned to simulate firefighting and/or emergency medical services personnel should use the same communications equipment employed by actual response personnel.

Actions that would normally occur inside the Protected Area may be simulated at other locations. If play will occur inside the Protected Area, the drill manager should determine access needs and complete necessary access requirements before the drill in order to facilitate prompt entry into the Protected Area during the drill.

Consider the need to conduct “walk-downs” with in-field/on-scene drill controllers to review assigned observation areas and control expectations. These walk-downs should identify any safety, security, operational or radiation protection concerns. Use of LLEA vehicles or equipment should be also reviewed and evaluated.

Prior to the drill, the licensee should verify the ability to implement radiation protection measures for offsite first responders entering site and/or Protected Area under the postulated scenario conditions.

### 3.5 COMMUNICATIONS

Provisions should be in place to facilitate communications among responders at the ICP, Security facilities (included simulated facility locations), Emergency Response Organization (ERO) emergency response facilities (including alternative facility locations), in-field/on-scene locations and key ORO facilities (e.g., a State or county Emergency Operations Center). These communications paths should be clearly defined and verified (i.e., test communication capabilities prior to the drill). Communications paths and protocols should be reviewed with key offsite decision-makers (e.g., method for transmitting plant status updates, threat-related information, etc.).

The licensee should determine if changes to communications equipment in the simulator are needed to support the drill scope and extent-of-play. Changes may be necessary to duplicate certain Control Room capabilities. If duplication is not feasible, then suitable compensatory measures should be identified.

Opportunities to practice communications between the licensee and NRC may be possible by coordinating aspects of participation with the NRC staff. These activities could include the use of authentication codes and communications with the NRC Headquarters Operations Officer (HOO) regarding a postulated ground-based, waterborne, or airborne threat.

Additional considerations regarding communications are listed below.

- If a communications capability is dependent upon site personnel and offsite responders trading radios with one another, ensure that this action can be performed given the security situation created by the scenario.
- Availability of replacement batteries and/or chargers to support use of cellular telephones or radios.
- Adequacy of communications methods for ERO liaisons reporting to the ICP.
- If applicable, evaluate deployment and use of designated ORO communications vehicles (e.g., a mobile command post). Validate communications interoperability, and related procedures and training.
- Consider testing alternate means of communication (e.g., by simulating a loss of cellular phone service) at some point well into the drill.
- Other improvements may be identified by reviewing NRC Information Notice 2007-12, "Tactical Communications Interoperability between Nuclear Power Reactor Licensees and First Responders," dated March 15, 2007 (ADAMS Accession No. ML070710233).

### **3.6 EP PERFORMANCE INDICATORS**

Depending on the scenario timeline, a key ERO member assigned responsibility for emergency classification, notification or protective action recommendations may not be presented with a Drill/Exercise Performance (DEP) indicator opportunity. In these cases, the key ERO member may still be awarded ERO Participation performance indicator credit provided certain other conditions are met. Refer to NEI 99-02 for details.

### **3.7 PRE-DRILL BRIEFINGS AND LEARNING OPPORTUNITIES**

Key ERO and offsite participants should receive a thorough briefing on the proposed drill scope, extent-of-play and performance expectations. Consider conducting workshop-type sessions to improve familiarity and proficiency with assigned functions and tasks, particularly those requiring coordination with other response organizations and agencies. The Incident Commander (IC), and representatives of local and regional law enforcement agencies, must be briefed on the importance of allowing a prompt/timely ERO mobilization following the attack once security and law enforcement decision-makers have determined that the site is secure enough to allow prioritized, limited movement of personnel. This timeframe would be well before the site is considered secure (i.e., “all clear”).

The licensee should consider inviting officials from offsite first-responder agencies, including those from local and regional law enforcement, to observe control room simulator activities performed in response to a HAB scenario during licensed operator training. This visit could also include a walk-down of plant areas to gain familiarity with the facility layout, and a better understanding of the physical and industrial aspects of the facility. These activities provide important insights to ORO and law enforcement personnel, and foster good response coordination.

Given the significant role played by the IC, it is recommended that this individual be afforded an opportunity to observe a HAB drill at another site before participating in one. An observation opportunity may also benefit any EP Department personnel who have not previously planned and implemented an HAB drill.

### **3.8 PRE-DRILL TABLETOP**

Prior to the drill, a licensee should consider the need conduct an integrated tabletop with the OROs and offsite agencies participating in the drill. A tabletop provides key ERO, ORO and agency personnel with an opportunity to review and discuss their respective roles, priorities, and response actions during a HAB event. If needed, the tabletop should be conducted 4 to 8 weeks before the HAB drill, and all key ERO and offsite decision-makers should be represented. Refer to Appendix B for information on conducting a HAB integrated tabletop.

## **4 SCENARIO DEVELOPMENT**

This section highlights preparation tasks and support needs unique to a Hostile Action-Based (HAB) scenario. Each item should be reviewed, and identified actions incorporated into the appropriate site drill scenario preparation process and schedule.

### **4.1 SCENARIO TEAM**

A team of representatives from key on-site organizations including EP, Operations and Security should develop the drill scenario. Collaboration is also required with representatives from Offsite Response Organizations (OROs) and offsite first-responder agencies. This would include local law enforcement and firefighting agencies, and emergency response decision-makers at the State, county and local level. The licensee should engage ORO and agency personnel early in the scenario development process to define and discuss the unique challenges posed by a HAB event.

Depending upon the drill or exercise scope and extent-of-play, representatives from regional or Federal organizations may also be invited to participate in scenario development (e.g., the Federal Bureau of Investigation, US Coast Guard, etc.).

### **4.2 SCENARIO DEVELOPMENT AND KEY ATTRIBUTES**

When developing a HAB scenario, the first decision to be made is whether the attack will be land-based, waterborne or airborne. As used here, an airborne attack refers to the act of an individual(s) commandeering of a large aircraft and intentionally flying it into plant structures. The scenario team must also determine which alternative facilities and/or staging areas will be used, if any, as this will likely affect the actual or assumed drill date and time.

Figures 4-1 and 4-2 present recommended frameworks for developing a HAB drill scenario. Each framework breaks the scenario down into four phases, with proposed timing and attributes for each phase. It is recognized that the timeframes for certain actions may be compressed relative to what would actually be required (e.g., establishment of perimeter control and initial sweep of the site); however, this compression may be necessary in order to conduct the drill within a reasonable period of time.

For aircraft threat scenarios, licensees should ensure that the scenario reflects realistic timelines and notification procedures. This should preclude negative training and should convey more realistic implementation of response actions. Licensees should consult Regulatory Guide 1.214, "Response Strategies for Potential Aircraft Threats," dated July 2009 (ADAMS Accession No. ML091740646). It is advantageous for licensees to engage the NRC staff during scenario development and when possible have staff support initial communications between the licensee control room and the NRC Headquarters Operations Officer.

With respect to the attacking force, the scenario may specify a number of attackers and associated weaponry different than that defined by the Design Basis Threat (DBT). The scenario events are expected to cause, or threaten to cause, damage to irradiated fuel. The damage, or threat of damage, may be directed towards irradiated fuel in the reactor core or in the spent fuel pool, and must be of sufficient magnitude to necessitate the issuance of a Protective Action Recommendation (PAR) by the Emergency Response Organization (ERO) and a Protective Action Decision (PAD) from the appropriate ORO. Additionally, the scenario events must create a “sense of urgency” in the assessment of plant conditions, formulation of mitigating strategies and dispatch of teams to perform repair and corrective actions. In cases where an exercise scenario will not require the declaration of a General Emergency, the licensee will need to coordinate demonstration of required offsite objectives with the ORO and FEMA (e.g., use of out-of-sequence demonstrations).

In conjunction with offsite stakeholders, scenario developers will need to determine if the scenario will include a radiological release and, if so, of what magnitude and duration. At a minimum, the scenario should present conditions which will, absent mitigating actions, lead to a radiological release (i.e., a potential for a radiological release). The scenario may be structured such that a radiological release is prevented if drill players take appropriate and timely mitigating actions. Again, the scenario events must ultimately result in a PAR from the ERO and an ORO PAD. In cases where an exercise scenario will not include a radiological release, the licensee will need to coordinate demonstration of required offsite objectives with the ORO and FEMA (e.g., use of out-of-sequence demonstrations).

An HAB scenario must address the following elements:

- Scenario messages or scripts contain detail sufficient to ensure that on-shift responders (e.g., operators, security supervision and facilities, etc.) fully understand the nature and consequences of the attack.
- If needed, the scenario package contains drill-specific emergency messages to the plant staff and ERO (e.g., plant page announcements, pager text messages, etc.). These messages should contain the elements of real messages but be modified as needed to reflect the drill extent-of-play. For example, a plant page announcement may include a statement such as “Personnel not assigned to the drill should continue with normal duties.”
- The scenario material should describe realistically expected collateral damage that may occur (e.g., loss of offsite power or loss of use of certain onsite facilities and areas).
- Immediately following a Hostile Action, there will be delays in staffing on-site emergency response facilities and fully securing the site. Therefore, the scenario must allow for demonstration of the ability to dispatch on-shift staff members to perform time-sensitive actions once the active attack phase is over, and prior to activation of ERO facilities. Such actions may include implementation of damage coping or mitigation strategies, firefighting or emergency medical services. The dispatching of on-shift personnel in this post-attack environment must be coordinated among personnel from

Operations, Security, law enforcement and the Incident Commander.

- The scenario shall not postulate a "site is secure" / "all clear" condition which enables unchallenged or uncontrolled movement of on-site personnel. Rather, the ICP must assess post-attack site conditions and safely coordinate the deployment of on-shift staff, mobilization of the ERO, dispatch of repair teams and evacuation/release of non-essential personnel in a deliberate and prioritized manner. Example strategies supporting personnel movement include use designated routes, allowing movement within cleared areas, and use of armed escorts or vehicles.
- As noted in Figures 4-1 and 4-2, at least two teams must be dispatched to perform event mitigation actions after the active attack, but before the site is fully secured by law enforcement agencies. The damage resulting from the scenario events should be of sufficient complexity to require the need for engineering assessments and development of repair plans.
- Ensure that the events and cues necessary to drive decision-making concerning the deployment of firefighting and medical emergency resources are well integrated into the scenario timeline and related materials. The number and location of injuries and/or casualties described in the scenario should be commensurate with the nature of the postulated attack.
- The scenario package should contain ancillary attack-related information necessary to support more realistic "play". For example, a scenario for an airborne attack should specify the type of aircraft, airline name, flight number, points of departure and arrival, estimated number of passengers and crew, estimated fuel on-board, etc.
- NRC staff expectations for HAB scenarios are discussed in NSIR/DPR-ISG-01, Interim Staff Guidance, Emergency Planning for Nuclear Power Plants.

Options for scenario developers may include the following.

- The drill initial conditions may specify that certain equipment is out-of-service (e.g., undergoing maintenance). These out-of-service components may compound the results of the attack or provide a success path for the ERO. This approach may also assist with the masking of a complete target set, e.g., a critical component is out-of-service, not affected by the attack and later returned to service to mitigate the event.
- An "insider" may be used to facilitate an attack or exacerbate its effects. Scenarios using an "insider" should include the additional information necessary to support "play" for this element. For example, the individual's name, badge number, location and areas traversed. The selected insider should not be from the site Security organization.
- Use of diversionary actions, threats or attacks at offsite locations.
- OROs may wish to develop scenario materials to support demonstration of an offsite

response capability or function specifically related to a HAB event. For example, a county emergency management agency could develop scenario materials to demonstrate an area triage facility. Demonstration opportunities or requirements should be determined as the scenario is being developed.

### **4.3 SCENARIO TIME PROGRESSION**

The scenario frameworks illustrated in Figures 4-1 and 4-2 “accelerate” through the immediate post-attack period to a point where deployment of offsite response assets and mobilization the ERO may be considered. Drill messages, or instructions from a controller, should be used to inform participants of the actions which were completed during this time-compressed period (e.g., description of post-attack conditions, establishment of perimeter control and initial sweep of the site, etc.). This will allow the Incident Commander, in conjunction with key Security and ERO decision-makers, to demonstrate the ability to plan for, and direct, the deployment of offsite response assets and mobilization of the ERO.

Notwithstanding the time compression discussed above, the drill should be run real-time or as near real-time as feasible. More specifically, time jumps should be avoided as these can be a source of confusion to drill participants.

Applicable State and local response organizations should be made fully aware of any potential adverse impacts that a time jump or time compression may have on offsite decisions and actions.

### **4.4 SAFEGUARDS/SECURITY SENSITIVE INFORMATION**

HAB drills and exercises introduce the issue of appropriate handling of safeguards information. HAB scenarios should not and need not contain safeguards information. However, if the licensee finds it necessary to include safeguards information in some scenario elements, it must be handled in accordance with site procedures and NRC regulations. Nothing in this guidance should be construed as allowing the release of safeguards information to unauthorized personnel.

Due to potential information value, the scenario materials should be treated as security sensitive and handled in accordance with 10 CFR 2.390. The sharing of experiences and insights with OROs and the industry is expected; however, caution should be used to ensure that security sensitive information is protected and not released to unauthorized personnel.

When developing the scenario, care should be taken when selecting the equipment damaged by the postulated attack; a complete “target set”<sup>5</sup> should not be specified. If destruction of a complete target set is necessary to meet required drill objectives, then the scenario must specify other damaged or out-of-service equipment such that an outside observer could not identify which components comprise a complete target set.

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<sup>5</sup> As defined in site-specific safeguards documents.

#### **4.5 MINI-SCENARIOS/MSEL DETAIL DESCRIPTIONS**

The following information is typically placed in a stand-alone “mini-scenario” or included in the Master Scenario Events List (MSEL).

To support implementation of a land-based or waterborne attack timeline, scenario developers must create a detailed description of the Hostile Action, i.e., adversary force movements and actions, and related events, occurring during the attack phase. This timeline should include a listing of officer reports, camera observations, door alarms and other information that can be provided by a controller to describe the progress of the attack (e.g., number and location of observed casualties and fires, etc.). The attack timeline must not use actual attack progression timing as described in security program documents; however, the selected event sequence and times should be credible.

Portions of an attack timeline could contain aspects of safeguards information and, if so, appropriate controls must be used during its development and implementation. Even if the timeline is determined not to contain safeguards information, it should be controlled under 10 CFR 2.390 requirements and made available only to appropriate controllers. The Drill/Exercise Manager should discuss the collection, storage and/or destruction of this material with Security Department personnel.

Detailed scenario information should be developed to support implementation of firefighting and medical response “play” and/or simulation. For fires, this information would describe conditions such as the location/footprint of a fire, fire and smoke characteristics and wind direction. Medical response information should address the location of the dead and wounded, vital signs of the wounded and simulated victim names. Consider developing visual aids to assist in-field/on-scene controllers with drill implementation.

Scenario developers may wish to consider if credit for a plant fire or medical response drill can be taken for the actions performed in the HAB drill.

#### **4.6 EXERCISE SCENARIO CONFIDENTIALITY**

It is recognized that the planning, scheduling and logistical arrangements necessary to conduct a HAB drill or exercise will challenge the normal expectations for scenario confidentiality. For example, a HAB tabletop or drill will be conducted prior to an HAB exercise. In addition, prior reviews and approvals by various site personnel may be needed to pre-stage/pre-clear offsite responders and vehicles normally associated with a HAB response.

Although some players may infer that an HAB scenario will be used in a drill or exercise, under no circumstances may a player know any details of the scenario (i.e., specific event timeline and related information)<sup>6</sup>. The scenario used for a HAB exercise must be

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<sup>6</sup> This is meant to include any drill for which participants will receive ERO Participation performance indicator credit. In other words, the drill must be a valid performance enhancing opportunity as described in NEI 99-02.

sufficiently different from that used in the immediately preceding tabletop and/or drill. Specifically, the elements and consequences of the Hostile Action (attack) must be varied between the scenarios, e.g., attack type or direction, number of attackers, attack timeline, damage and casualties, offsite consequences, etc.

Provided that the above requirements are met, it is acceptable for the same “players” to participate in a tabletop and/or drill, and the subsequent exercise.

**FIGURE 4-1**

**Framework for a Land-Based or Waterborne Hostile Action-Based (HAB) Drill**

Attack Phase (15 to 30 minutes)	Initial Sweep Phase (30 to 60 minutes)	ERO Mobilization Phase (30 to 60 minutes)	Event Mitigation Phase (remainder of drill)
<ul style="list-style-type: none"> <li>• Events must meet threshold for a HOSTILE ACTION within the Protected Area</li> <li>• Provide detailed attack timeline and realistic communications interfaces (e.g., a control cell to simulate CAS, SAS, etc.)</li> <li>• On-site protective measures in effect as appropriate to date and time (e.g., shelter-in-place, take cover, hide, etc.)</li> <li>• Emergency classification and implementation of emergency plan; a Protective Action Recommendation (PAR) may be issued</li> <li>• Use of alternative facilities or</li> </ul>	<ul style="list-style-type: none"> <li>• Local Law Enforcement Agencies (LLEA) and Security discuss the attack and review immediate Security needs</li> <li>• LLEA perform initial sweep of Protected Area and/or Owner Controlled Area (OCA), and establish perimeter control and access restrictions</li> <li>• On-site protective measures remain in effect (e.g., shelter-in-place, take cover, hide, etc.)</li> <li>• Control Room may request immediate support for limited movement of personnel to support plant stabilization</li> </ul>	<ul style="list-style-type: none"> <li>• LLEA completes initial sweep of Protected Area and/or OCA, and establishes safe movement areas/corridors</li> <li>• Operations and ERO personnel may move in accordance with directions from ICP and Security</li> <li>• Licensee liaison personnel report to the ICP</li> <li>• ICP develops “damage footprint”</li> <li>• Offsite first-responders enter the Protected Area and commence operations (e.g., firefighting and medical responses).</li> </ul>	<ul style="list-style-type: none"> <li>• Emergency response facilities are activated; may operate either primary and/or alternative facilities</li> <li>• Projected or actual damage to irradiated fuel.</li> <li>• Radiological release (if included in the drill scope) or potential for a release.</li> <li>• Licensee issues a Protective Action Recommendation (PAR) if not already performed</li> <li>• Offsite authorities develop an appropriate protective action decision in consultation with the ICP</li> <li>• At least two teams must be</li> </ul>

Attack Phase (15 to 30 minutes)	Initial Sweep Phase (30 to 60 minutes)	ERO Mobilization Phase (30 to 60 minutes)	Event Mitigation Phase (remainder of drill)
<p>staging areas as appropriate to date and time</p> <ul style="list-style-type: none"> <li>• Incident Commander notified of attack; proceeds to Incident Command Post (ICP)</li> <li>• Begin staging offsite first-responders at designated locations</li> <li>• Attack phase terminates when the appropriate players are informed that all known adversaries are neutralized</li> </ul>	<ul style="list-style-type: none"> <li>• Incident Commander advised of immediate Control Room needs and directs appropriate support (e.g., armed escorts)</li> <li>• Offsite first-responders continue staging; await response direction from ICP</li> <li>• ICP undertakes discussion and decision-making necessary to support deployment of offsite response assets and ERO movement and mobilization</li> </ul>		<p>dispatched to perform event mitigation actions prior to drill termination. Dispatch may occur from a primary and/or alternative facility.</p> <ul style="list-style-type: none"> <li>• Demonstrate effective and controlled release of information from the JIC</li> </ul>

**FIGURE 4-2**

**Framework for an Airborne Hostile Action-Based (HAB) Drill**

Threat-to-Impact Phase (15 to 30 minutes)	Initial Post-Impact Phase (30 to 60 minutes)	ERO Mobilization Phase (30 to 60 minutes)	Event Mitigation Phase (remainder of drill)
<ul style="list-style-type: none"> <li>• Events must drive entry into an airborne threat response procedure, i.e., the aircraft must be considered a NORAD “Track of Interest”</li> <li>• Provide detailed threat timeline and realistic communications interfaces (e.g., a control cell to simulate the NRC, CAS, etc.).</li> <li>• On-site protective measures in effect as appropriate to date and time (e.g., disperse and evacuate)</li> <li>• Emergency classification and implementation of emergency plan; a Protective Action Recommendation (PAR) may be issued</li> </ul>	<ul style="list-style-type: none"> <li>• Attack consequences must drive entry into Extreme Damage Mitigation Guidelines</li> <li>• Local Law Enforcement Agencies (LLEA) establish perimeter control and access restrictions</li> <li>• Control Room may request permission for limited movement of personnel to support plant stabilization, or fight fires</li> <li>• Incident Commander advised of immediate Control Room needs and directs appropriate support</li> <li>• Offsite first-responders enter</li> </ul>	<ul style="list-style-type: none"> <li>• Operations and ERO personnel may move in accordance with directions from ICP and Security [Note – Even though the aircraft impact has occurred, decisions affecting ERO mobilization should consider the potential for subsequent attacks.]</li> <li>• Licensee liaison personnel report to the ICP</li> <li>• ICP develops “damage footprint”</li> <li>• Continuance of fire fighting and medical response efforts</li> </ul>	<ul style="list-style-type: none"> <li>• Emergency response facilities are activated; may operate either primary and/or alternative facilities</li> <li>• Projected or actual damage to irradiated fuel.</li> <li>• Radiological release (if included in the drill scope) or potential for a release.</li> <li>• Licensee issues a Protective Action Recommendation (PAR) if not already performed</li> <li>• Offsite authorities develop an appropriate protective action decision in consultation with the ICP</li> <li>• Events may drive simulated</li> </ul>

Threat-to-Impact Phase (15 to 30 minutes)	Initial Post-Impact Phase (30 to 60 minutes)	ERO Mobilization Phase (30 to 60 minutes)	Event Mitigation Phase (remainder of drill)
<ul style="list-style-type: none"> <li>• Use of alternative facilities or staging areas as appropriate to date and time</li> <li>• Incident Commander notified of attack; proceeds to Incident Command Post (ICP)</li> <li>• Begin staging offsite first-responders at designated locations</li> <li>• Attack phase terminates when the appropriate players are informed of the aircraft impact</li> </ul>	<p>the Owner Controlled Area (OCA) and/or Protected Area as directed by IPC and Security, and commence operations (e.g., firefighting and medical responses)</p> <ul style="list-style-type: none"> <li>• ICP undertakes discussion and decision-making necessary to support ERO movement and mobilization</li> </ul>		<p>implementation of strategies to respond to a loss of large areas of the plant due to explosions or fire [per 50.54(hh)(2)].</p> <ul style="list-style-type: none"> <li>• At least two teams must be dispatched to perform event mitigation actions prior to drill termination. Dispatch may occur from a primary and/or alternative facility.</li> <li>• Demonstrate effective and controlled release of information from the JIC</li> </ul>

## **5 HAB DRILL IMPLEMENTATION**

This section describes the actions necessary to implement a successful HAB drill; these actions may be applicable to players or controllers. Included are items identified from a review of industry operating experience and observed good practices. Drill managers should carefully consider each item and incorporate applicable recommendations into the drill and related implementation processes.

### **5.1 ON-SHIFT PERSONNEL RESPONSE**

HAB drills should be implemented using the site's simulator control room.

Any on-shift staff member not normally located in, or immediately adjacent to, the Control Room, and whose travel to the Control Room would be prohibited by the postulated scenario events, shall not be allowed to participate in Control Room response functions.

An HAB drill requires the demonstration of a coordinated response to a Hostile Action by on-shift Operations and Security personnel. To effectively demonstrate this objective, a simulated Central Alarm Station (CAS) and Secondary Alarm Station (SAS) should be established (i.e., a control cell). Personnel familiar with the operation of these facilities, and capable of simulating their responses, should be assigned as drill participants. Likewise, a knowledgeable individual should be designated to simulate on-shift security supervision.

For a land-based or waterborne attack scenario, the events of the postulated attack should be presented to the CAS and/or SAS individual, sequentially and in real-time, by a security controller. Such presentation may include use of messages, scripts or graphics to relay information such as officer reports, camera observations, intrusion/door alarms, etc. Security personnel are expected to initiate and maintain communications with the simulator control room, and other response facilities, in accordance with site-specific procedures and training.

For an airborne attack scenario in which the NRC is not a participant, it will be necessary to establish a control cell to simulate communications with NRC Operations Center personnel. These communications should be structured to occur as realistically as possible (e.g., use of communications equipment, content and timing of messages, etc.).

The practice of using a controller in the Simulator to pass messages simulating security or NRC communications with Control Room personnel shall not be used.

### **5.2 INCIDENT COMMAND POST RESPONSE**

To the degree practical, offsite personnel should respond to the Incident Command Post (ICP) and the site in real-time, i.e., do not pre-stage personnel unless normal travel times are prohibitive. If personnel are pre-staged, develop appropriate time delay criteria to be used

before allowing individuals to begin “play”. Delayed individuals should wait in an area away from any active “play” activities and related communications. Where possible, actual communications methods should be used to communicate with pre-staged individuals.

The Incident Commander should direct measures to control access to, and protect, the ICP.

To facilitate better understanding of post-attack conditions, the ICP staff should develop a “damage footprint” – a site/plant layout graphic indicating locations of damage, hazards and casualties.

The licensee should dispatch liaisons to the ICP.

- A liaison from the site’s security department to interface with the Incident Commander, and representatives from local and regional law enforcement.
- Liaison(s) knowledgeable in the areas of operations and radiation protection to assist with overall response coordination, and to facilitate timely communications between the ICP and key ERO decision-makers.

OROs should consider dispatching a liaison(s) to the ICP to assist with overall response coordination, and to facilitate timely communications between the ICP and key ORO decision-makers. Actions directed by the Incident Commander and/or LLEA, such as road closures, evacuation of the public located near the site, and augmentation of resources, could have a significant impact on protective action decision-making at State and local emergency operations centers.

### **5.3 RESPONSES IN THE FIELD**

Ensure that drivers of responding vehicles from offsite agencies know site access routes, entry requirements and destinations. These should reflect procedural guidance or agreed upon protocols, unless the drill extent-of-play dictates otherwise.

In-field/on-scene controllers must be knowledgeable in the functions that they are controlling (e.g., security actions being controlled by security personnel or firefighting actions controlled by individuals with firefighting expertise). Field controllers should have a means to communicate with the drill manager and other required locations/individuals.

In-field/on-scene “play” by emergency medical service responders may be enhanced through the use of real individuals or mockups such as “dummies” or body posters (a cardboard cutout) to simulate casualties. If used, include a means to provide vital sign information to the players (e.g., a tag).

## **5.4 ERO MOBILIZATION**

Controllers should closely monitor the formulation and delivery of post-attack instructions to the plant staff and ERO members (e.g., plant page announcements, pager text messages, etc.). These are the messages that provide direction concerning movement of personnel, and associated cautions and constraints. Messages contained in procedures may be modified as needed to reflect the drill extent-of-play. Controllers should be prepared to direct or deliver messages as necessary to ensure drill continuity.

As discussed in Section 4, decision-makers must develop a plan for prompt ERO mobilization during the “Initial Sweep Phase”, for a land-based or waterborne attack, or the “Initial Post-Impact Phase”, for an airborne attack. Expected decision-makers involved in this discussion include the Incident Commander (IC), senior security supervision and a senior Emergency Response Organization (ERO) Manager (which may be the Shift Manager). Discussion should cover the status of the plant and reactor core, security functions, fires, and casualties; the potential for a secondary attack; accessibility and availability of emergency response facilities; use of alternative facilities if necessary; and strategies to facilitate ERO mobilization and implementation of mitigation actions.

Once an ERO mobilization plan is developed, a controller should inform the players that they may now direct the actions necessary for mobilizing the ERO. Players should actually perform these actions to the extent practical (e.g., plant page announcements, pager messages, etc). ERO members should respond to their facilities in real-time; however, time compression and/or pre-staging may be used to maintain scenario flow and continuity. Time compression and/or pre-staging may be required to support simulated or actual use of remote staging areas or alternative facilities.

## **5.5 DRILL CRITIQUE**

As noted in Section 2.0, each HAB drill shall be critiqued to identify weaknesses and opportunities for improvement. Identified weaknesses shall be entered into the appropriate site corrective action process. Licensees should modify their critique processes as necessary to ensure a thorough review and evaluation of HAB-related drill objectives.

## **6 PUBLIC AND MEDIA INFORMATION**

### **6.1 DRILL PARTICIPATION**

The licensee should invite public information officials from OROs, local first-responder agencies, and responding Federal, State and local law enforcement agencies to participate in HAB drills.

Prior to conducting a Hostile Action-Based (HAB) drill, consideration should be given to conducting a HAB tabletop focused exclusively on public information functions and related operations at the Joint Information Center (JIC). Representatives from Security, Communications, Offsite Response Organizations (OROs), local first-responder agencies, and responding Federal, State and local law enforcement agencies should be invited to attend. This type of tabletop is beneficial for identifying potential problem areas, defining protocols for the release of public information and achieving aligned expectations.

### **6.2 OPERATING EXPERIENCE AND GOOD PRACTICES**

The following items were identified from a review of industry operating experience and observed good practices. Licensees are encouraged to consider each item and determine if changes to public information protocols or procedures are warranted. Potential changes should be discussed and validated with all Company, ERO and offsite stakeholders.

A. Public information personnel from the Emergency Response Organization (ERO) and OROs will face several challenges during a HAB event.

- Potential for a rapid series of significant events and consequences
- Events that may be visible and/or audible to offsite observers – gunshots, fires, explosions, etc.
- Sensitivity of, and release restrictions on, certain information
- Potential to deal with events entailing fatalities and mass casualties
- Different set of external stakeholders, and varying expectations concerning the review and approval of information provided to the media and public
- Potential delay or inability of ERO communications personnel to respond during the initial phase of the event when there are restrictions on the movement of on-site personnel

B. In addition to normal review requirements, public information released by the licensee

during a HAB event should be reviewed by:

- Security personnel to ensure that no safeguards or security sensitive information is released.
- Responding Federal, State and local law enforcement agencies to ensure that released information does not compromise the subsequent crime investigation.

This requirement may be met through the use of pre-approved news statements or templates, or other means.

- C. The licensee should consider dispatching a public information liaison to the Incident Command Post (ICP) to gather facts for use in licensee news statements and briefings. The liaison should also coordinate the release of public information between the Incident Commander (or the designated Public Information Officer [PIO]), represented law enforcement agencies and the Joint Information Center (JIC).
- D. Provisions should be in place to facilitate communications between the ICP and Joint Information Center (JIC). This communications path(s), and expectations for its use, should be clearly defined and reviewed with offsite public information decision-makers. The designated communications equipment should be tested prior to the drill.
- E. ERO and ORO public information officials may wish to review the description of public information functions conducted within the National Response Framework (NRF) and the National Incident Management System (NIMS). These descriptions may be accessed on the Federal Emergency Management Agency (FEMA) web site.
- NRF Public Affairs Support Annex at <http://www.fema.gov/emergency/nrf>
  - NIMS Public Affairs Support Annex at <http://www.fema.gov/emergency/nims>

## **7 EP PROGRAM AND PROCEDURE ENHANCEMENTS**

### **7.1 OPERATING EXPERIENCE AND GOOD PRACTICES**

The following items are recommended EP program and procedure enhancements which will improve performance in responding to a HAB event. These enhancements were identified from a review of industry operating experience and observed good practices. Licensees are encouraged to consider each item and determine if program or procedure changes are warranted.

- A. Ensure that procedural instructions for the assessment and direction of protective measures for the on-site population are appropriately sequenced (i.e., supports rapid implementation of protective measures following detection or notification of a threat or attack).
- B. Develop pre-scripted post-attack and mobilization messages with instructions to the plant staff and ERO, and incorporate these into appropriate procedures.
- C. Develop a method to ensure that the Shift Manager's post-attack priorities are communicated promptly to the Incident Commander.
- D. Ensure that notification procedures used to contact offsite first-responder agencies direct the caller to communicate not only the request for assistance but also the nature of the event. For example, a call to a fire department should include communicating that the reported fire is due to a Hostile Action.
- E. Verify that dosimetry and other site-specific radiation protection measures are, or can be made, available to offsite first-responders during the period when movement of the plant staff and ERO is restricted.
- F. Review standard emergency communications paths and protocols between and among licensee, State and local emergency response facilities. Consider how the HAB responses by law enforcement agencies and an Incident Command Post may impact these paths and protocols. Identify changes necessary to support timely and effective communications during a HAB event.
- G. Develop procedural or other guidance for dispatching a licensee liaison(s) to the ICP to assist with overall response coordination, and facilitate timely communications between the ICP, Security and key ERO decision-makers. The liaison(s) should be knowledgeable in areas of site security, operations, radiation protection and public information. Liaisons should have access to supplies and equipment necessary to fulfill their purpose (e.g., stored at a designated location, available in a "go kit", etc.).
- H. Develop guidance to monitor Incident Command Post (ICP) habitability in the event of a

radiological release. Guidance for relocating the ICP in response to a radiological release or a protective action decision may also be beneficial.

- I. Evaluate reasonable improvements that might be made to address a mass casualty event until the arrival of offsite emergency medical services.
- J. Verify that Security and ERO procedures support timely assessment and invocation of 10 CFR 50.54(x) during a HAB event.
- K. Review pre-planned Protective Action Recommendations (PARs) with ORO officials; determine if new or revised PARs are necessary to address HAB event conditions.

## **8 TRAINING ENHANCEMENTS**

### **8.1 OPERATING EXPERIENCE AND GOOD PRACTICES**

The following items are recommended training enhancements which will lead to improved performance by personnel responding to a HAB event. These enhancements were identified from a review of industry operating experience and observed good practices. Licensees are encouraged to consider each item and determine if training program or content changes are warranted.

A. Train key Operations, Security and ERO personnel on the significant differences between responding to a non-security emergency event and a HAB event. Suggested topics include:

- Prompt communication of threat or attack information between the Control Room and Security is critical to an effective response.
- The need for rapid assessment and direction of protective measures for the site population.
- An HAB event will require the Shift Manager to take or direct actions that may not be frequently performed, while under significant time pressure.
- During a land-based or waterborne attack, the Shift Manager must balance the responsibility for Control Room oversight with the need to maintain frequent communications with Security.
- Requirements associated with NRC notifications and communications (e.g., refer to NRC RIS 2009-10).
- Understanding the process for requesting and receiving approval to dispatch on-shift personnel in a post-attack environment.
- Understanding the process for mobilizing the ERO in a post-attack environment.
- HAB event conditions may lead a State to implement offsite protective actions that differ (perhaps substantially) from the licensee's protective action recommendation.

B. Train ERO personnel that calls to offsite first-responder agencies should communicate enough information that agency personnel can fully understand the nature of the event. For example, a call to a fire department includes communicating that the reported fire is due to a Hostile Action.

C. Personnel from offsite first-responder agencies (e.g., law enforcement, firefighting,

ambulance service, etc.) should be familiarized on protocols for responding to a HAB event. Consider topics such as site layout, staging areas, travel routes, preferred Incident Command Post (ICP) location(s), credentials, communications, radiation protection and dosimetry, roles of the Shift Manager and on-shift security supervision, etc.

- D. Consider inviting representatives from local and regional law enforcement, and local firefighting agencies to observe and/or participate in a HAB simulator scenario conducted during licensed operator re-qualification training.
- E. Consider requesting NRC headquarters participation in a HAB simulator scenario conducted during licensed operator re-qualification training. This participation is particularly effective when practicing responses to an airborne attack.
- F. Lead ERO facility managers, and liaisons to the ICP, should be broadly familiar with the concepts and principles of the National Incident Management System (NIMS) and the Incident Command System (ICS), as practiced by their State and local authorities<sup>7</sup>. The Federal Emergency Management Agency (FEMA) maintains a web page with NIMS/ICS training material links; refer to <http://www.fema.gov/emergency/nims/NIMSTrainingCourses>
- G. Review activation and operation of ERO staging areas and/or alternative facilities.
- H. Train ERO personnel on implementation of the “Two-Man Rule”.
- I.

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<sup>7</sup> This is not to suggest that NIMS/ICS training be required for any ERO member.

## **9 REFERENCES**

1. RIS 2002-12a: Power Reactors NRC Threat Advisory and Protective Measures System
2. RIS 2002-21: National Guard and Other Emergency Responders Located in the Licensee's Controlled Area
3. RIS 2003-16: NRC Threat Advisory and Protective Measures System
4. RIS 2004-15: Emergency Preparedness Issues: Post 9/11
5. RIS 2004-15s: Emergency Preparedness Issues: Post-9/11
6. RIS 2006-02: Good Practices For Licensee Performance During The Emergency Preparedness Component of Force-On-Force Exercises
7. RIS 2006-12: Endorsement of Nuclear Energy Institute Guidance "Enhancements to Emergency Preparedness Programs for Hostile Action"
8. RIS 2007-02: Clarification of NRC Guidance for Emergency Notifications During Quickly Changing Events
9. RIS 2008-08, Endorsement of Revision 1 to Nuclear Energy Institute Guidance Document NEI 06-04, 'Conducting a Hostile Action-Based Emergency Response Drill'
10. RIS 2008-22: Notification Of Licensees Regarding Aircraft Threats
11. RIS 2008-26: Clarified Requirements of Title 10 of the Code of Federal Regulations (10 CFR) Section 50.54(Y) when Implementing 10 CFR Section 50.54(X) to Depart from a License Condition or Technical Specification
12. RIS 2009-10: Communications Between the NRC And Reactor Licensees During Emergencies And Significant Incidents
13. IN 2007-12, Tactical Communications Interoperability Between Nuclear Power Reactor Licensees and First Responders
14. IN 2009-19, Hostile Action-Based Emergency Preparedness Drills
15. NSIR/DPR-ISG-01, Interim Staff Guidance, Emergency Planning for Nuclear Power Plants
16. Regulatory Guide 1.214, Response Strategies for Potential Aircraft Threats
17. SECY-11-0053, Final Rule: Enhancements to Emergency Preparedness Regulations (10 CFR Part 50 AND 10 CFR Part 52) (RIN-3150-AI10)

## APPENDIX A - RECOMMENDED DRILL AND EXERCISE OBJECTIVES

Recommended Objective	Performance Attributes
1. Demonstrate the ability to implement the emergency plan during a hostile action-based event.	<p>Timely implementation of:</p> <ul style="list-style-type: none"> <li>• emergency classification.</li> <li>• the formulation of Protective Action Recommendations (PARs).</li> <li>• Offsite Response Organization (ORO) notifications.</li> </ul>
2. Demonstrate the ability to make initial notifications to law enforcement and other first-responder agencies during a hostile action-based event.	<p>Timely notifications are made to law enforcement, fire, medical and other first-responder agencies as specified by appropriate procedures. [Notification made to actual or simulated agency contact points.]</p>
3. Demonstrate the ability to communicate threat-related information to the NRC during a hostile action-based event.	<ul style="list-style-type: none"> <li>• Perform accelerated notification to the NRC in accordance with appropriate procedures. [Notification made to actual or simulated NRC for a land or waterborne attack scenario.]</li> <li>• Perform airborne threat communications with the NRC in accordance with appropriate procedures. [Communications with actual or simulated NRC for airborne attack scenario.]</li> </ul>
4. Demonstrate the ability of on-shift Operations and Security personnel to coordinate response actions among themselves, and with the Incident Commander and local law enforcement agency (LLEA) personnel.	<p>Discussion, decision-making and communication related to:</p> <ul style="list-style-type: none"> <li>• threat type, location, progression and changes to protective strategies.</li> <li>• protective measure instructions to on-site personnel [communication may be simulated].</li> <li>• entry, control, coordination and deployment of LLEA resources.</li> <li>• radios or other methods used to facilitate communications between licensee and law enforcement personnel.</li> <li>• understanding plant status and damage, personnel casualties and response priorities.</li> </ul>
5. Demonstrate the ability of on-shift Operations and Security personnel to coordinate with the Incident Commander	<p>Discussion, decision-making and communication related to:</p>

Recommended Objective	Performance Attributes
for deployment of on-site and offsite first-responders in a post-attack environment.	<ul style="list-style-type: none"> <li>• deployment of offsite first-responder personnel and vehicles to staging areas (e.g., fire trucks, ambulances, etc.).</li> <li>• radios or other methods used to facilitate communications between licensee and offsite first-responder personnel.</li> <li>• determination of on-site response locations and priorities.</li> <li>• rapid deployment of offsite first-responder personnel and vehicles to on-site response locations while maintaining control of site and Protected Area access.</li> <li>• implementation of initial accident mitigation actions prior to ERO mobilization, including movement of on-shift personnel to perform critical tasks.</li> </ul>
6. Demonstrate the ability to coordinate implementation of on-site radiation protection measures for offsite first-responders with the ICP.	Discuss, simulate and/or implement radiation protection measures for offsite first-responders reporting to the site, as appropriate to the scenario (e.g., dosimetry, KI, respiratory protection, etc.).
7. Demonstrate the ability of the Emergency Response Organization (ERO) to support operation of an Incident Command Post (ICP).	<p>Discussion, decision-making and communication related to:</p> <ul style="list-style-type: none"> <li>• support activation of an ICP.</li> <li>• accessibility by offsite responders.</li> <li>• dispatch of licensee personnel to the ICP to serve as liaisons to ERO facilities, and to advise on matters related to plant operations, radiation protection, and Security.</li> <li>• availability of site and plant layouts, and other aids that the ICP staff might need to effectively coordinate law enforcement, fire and medical responses.</li> <li>• coordination with field responders.</li> </ul>
8. Demonstrate the ability to coordinate mobilization of the Emergency Response Organization (ERO) with Security and the ICP.	<p>Discussion, decision-making and communication related to:</p> <ul style="list-style-type: none"> <li>• confirmation that the known threat has been neutralized to the extent necessary to allow ERO mobilization (land or waterborne attack).</li> </ul>

Recommended Objective	Performance Attributes
	<ul style="list-style-type: none"> <li>• selection of a method(s) to protect ERO members during movement and provide safe passage (e.g., use designated routes, armed escorts, vehicles, etc.).</li> <li>• mobilization instructions provided to responders (e.g., routes, escorts and exclusion areas; proceed directly to facilities; do not detour to inspect damage, etc.) .</li> <li>• allowing ERO members to exit the site and proceed to their assigned emergency response facilities (e.g., the EOF or JIC).</li> <li>• on-going protection of emergency response facilities and staff.</li> </ul>
<p>9. Demonstrate the ability of the Emergency Response Organization (ERO) to coordinate in-plant and on-site response actions with Security and the Incident Command Post (ICP).</p>	<ul style="list-style-type: none"> <li>• Effective interface between the ERO emergency director, Security supervision and the Incident Commander is maintained as conditions change.</li> <li>• Plant status is determined, and mitigative actions are planned and prioritized.</li> <li>• Alignment on priorities and assignment of resources.</li> <li>• Coordination and communications supporting timely movement of ERO personnel to perform on-site and in-plant response actions in a post-attack environment (e.g., dispatching an OSC repair or survey team).</li> <li>• ERO personnel adhere to movement and other restrictions imposed by Security and law enforcement decision-makers, (e.g., stay clear of perimeter zones, definition of free movement areas, special identification, two-person line-of-sight rule, use of escorts, etc.).</li> <li>• ERO Liaisons at the ICP are provided with information and updates in a timely manner.</li> <li>• As determined by law enforcement personnel, coordination and communication of actions to preserve a crime scene.</li> </ul>

Recommended Objective	Performance Attributes
<p>10. Demonstrate the ability of the ERO to activate alternative facilities (if required by the scenario).</p>	<ul style="list-style-type: none"> <li>• Determine if activation of alternative facilities is necessary based on the event conditions, and communicate this decision to ERO members.</li> <li>• Personnel at these locations are able to communicate with the Emergency Operations Facility, Control Room, and Security.</li> <li>• Personnel at these locations can make ORO notifications if required by emergency plan implementing procedures.</li> <li>• Personnel at these locations are able to perform engineering assessment activities, including damage control team planning and preparation.</li> </ul>
<p>11. As appropriate to the scenario, coordinate deployment of fire and medical response resources between the ICP, on-site ERO facilities, and Security.</p>	<ul style="list-style-type: none"> <li>• Decision-making and coordination support timely deployment of firefighting and medical responders to appropriate site and plant areas. [Consider limited deployment of actual resources to support this demonstration.]</li> </ul>
<p>12. Demonstrate the ability to account for on-site personnel in a post-attack environment.</p>	<ul style="list-style-type: none"> <li>• Discussion of strategies for conducting accountability of on-site personnel in a post-attack environment, including any associated movement (e.g., assembly and release).</li> <li>• Accountability within ERO facilities, including team deployments, is maintained consistent with Security and law enforcement requirements.</li> </ul>
<p>13. Demonstrate the ability to perform an assessment of offsite radiological consequences as appropriate to the scenario events.</p>	<ul style="list-style-type: none"> <li>• Perform offsite dose projections as appropriate to the scenario events.</li> <li>• Develop dose-based PARs as necessary.</li> <li>• Consider the impact of a release on the ICP and first-responder staging areas.</li> </ul>

<b>Recommended Objective</b>	<b>Performance Attributes</b>
14. Demonstrate the ability of the ERO to coordinate the development and release of public information in a post-attack environment.	<ul style="list-style-type: none"><li>• Integrate public information officials from participating Federal, State and local law enforcement agencies, and first-responder agencies, into JIC operations.</li><li>• Public information releases are vetted for sensitive and safeguards information prior to issuance.</li></ul>

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## **APPENDIX B - PRE-DRILL TABLETOP GUIDELINES**

A tabletop provides a facilitated learning environment for key Emergency Response Organization (ERO) and Offsite Response Organization (ORO) personnel to review and discuss their respective roles and responsibilities. In particular, it permits the various organizations to gain an understanding of each other's needs and priorities when responding to a Hostile Action-Based (HAB) event. For example, these drills can provide offsite first-responders with a perspective on the plant operating crew's immediate concerns with restoration of equipment important to safety and the need for ERO assistance. Likewise, the station staff will gain an appreciation for law enforcement requirements and the operational aspects of the National Incident Management System (NIMS). Therefore, it is important that the structure and conduct of the tabletop encourage a free exchange of viewpoints and concerns among the participants.

The tabletop scenario may use the same type of attack event (i.e., land-based, waterborne or airborne) as that used for the subsequent HAB drill; however, the following constraints apply to Tabletop scenario.

- If performance in the subsequent HAB drill will contribute to the ERO Participation Performance Indicator, then the details of Tabletop scenario attack sequence must be sufficiently different from the Drill scenario (i.e., the drill scenario will present a valid performance enhancing opportunity as described in NEI 99-02). For example, vary the attack direction, number of attackers, attack timeline, damage and casualties, offsite consequences, etc.
- If performance in the subsequent HAB drill will not contribute to the ERO Participation Performance Indicator, then the Tabletop scenario may be the same as the Drill scenario.
- Exercise scenarios must always be sufficiently different from either or both the preceding Tabletop and/or Drill.

A tabletop facilitator(s) will use a scenario to lead participants through a series of postulated attack and post-attack events, pausing after each event to elicit discussion from the participating decision-makers in a logical sequence. For example, after presentation of the initial attack event, station security would explain its responses (but not tactical, safeguards-related actions). The facilitator will then seek input from, in order, the operating crew, offsite first-responders, station ERO personnel and finally ORO personnel.

Details concerning implementation of a tabletop are presented below.

## I. DISCUSSION TOPICS

The overarching objective of the pre-drill tabletop is for the participants to achieve mutual understanding of each organization's roles, responsibilities, priorities and actions when responding to a HAB event. This understanding should contribute to a successful integrated response during the HAB drill. The drill manager should consider the following topics for inclusion in the tabletop agenda.

1. Method(s) used by the licensee to notify offsite first responders of a threat and/or attack. Method(s) for subsequent dissemination of this information among offsite response organizations
2. Initial site security actions in response to the event (but not tactical, safeguards-related actions)
3. The operating crew's actions per HAB-response operating procedures and procedures for implementing the emergency plan
4. Initial offsite first-responder actions upon notification:
  - site access requirements for offsite first-responders
  - staging and/or reporting location(s) of offsite first-responders
  - communications and coordination with Incident Commander, Shift Manager, and site security
5. Establishment of the Incident Command Post (ICP):
  - who is in charge of the overall response, and how transitions in command and control would take place as the scenario evolves?
  - key support personnel reporting to the ICP and their respective functions
  - how off-site first responders obtain turnover from, and integrate with, the site response?
  - how will Incident Commander communicate and coordinate with ORO decision-makers
6. Radiation protection provisions for offsite first-responders to the site
7. Primary and backup means of communications between and among the operating crew, site security, offsite first-responders in the field and the ICP
8. Coordination and decision-making related to:

- Ensuring that the ICP understands operational priorities for restoration of damaged plant equipment and application of firefighting resources
  - Prompt post-attack movement of on-shift personnel to support plant stabilization, implementation of coping strategies and/or cooldown
  - Protective action decisions for the public
  - Mobilization of the ERO and activation of ERO facilities
    - ensuring the safety of ERO personnel in transiting to their emergency facilities
    - method and messages to notify ERO personnel of ERO activation
    - mustering locations of station ERO personnel and alternative facilities that will be utilized, if any
    - credentials required for ERO personnel returning to the site to pass through offsite law enforcement access controls
9. Management of the on-site emergency medical response to triage, treat and transport injured personnel, and utilization of offsite medical resources
10. Informational requirements of making protective action decisions (PADs). Also discuss how PADs during an HAB event may differ from PADs resulting from a non-security event.
11. Development, approval and release of event information to the media
12. Crime scene preservation.

## **II. PREPARATION**

Representatives from offsite stakeholder organizations, particularly the first-responder organizations, should be involved in the planning for the tabletop. The offsite official who will serve as the Incident Commander should have a role in such preparation activities as selecting participants, establishing discussion topics and objectives, designing the scenario, arranging the room layout and deciding who will facilitate. The following tabletop planning elements should be jointly determined.

- Date, time and location.
- Individuals from the site ERO and key offsite response organizations that will be invited to participate.

- Method(s) and responsibilities for inviting identified participants.

Develop a relatively simple, straightforward scenario that postulates an attack on the plant and consequences that require a range of offsite resources. Review the scenario with representatives of key offsite response organizations to ensure that it promotes the desired range of offsite participation.

Conduct meetings with selected on-site and offsite key participants to review the tabletop scenario and timeline, and to solicit their suggestions for conducting the tabletop.

Suggested outcomes from this activity are:

- given the scenario, determine what the agencies perceive as their role and extent-of-play
- determine what the agencies want to learn from the tabletop as a guide for the facilitator
- determine which agencies will have a lead role at different stages of the timeline
- provide the agencies' the opportunity to think about their individual extents-of-play as the tabletop scenario evolves and how the command structure may change
- establish ownership of key off-site participants in their respective roles in the tabletop.

Determine if the tabletop will use one or more than one facilitator. This decision should be based on what arrangement will promote maximum participation and information sharing. If more than one facilitator will be used, specify who will serve as the lead facilitator and define expected roles.

Determine the room layout for the tabletop; an example tabletop layout is presented in Figure B1. Thought should be given to locating the various organizations in the room to achieve maximum interaction and communication among key participants. For example, the Incident Commander and other key first response organizations will be located together at one table to represent the ICP and other NIMS command structure entities. The room arrangement should facilitate communication between this location and initial on-site response personnel (i.e., site security and the control room). Licensee liaison personnel should be located at the ICP table to facilitate communication and understanding of plant information.

Setup the tabletop area prior to the participants' arrival. Each table should have a sign, readable by all participants, that identifies the represented organization. A name and position placard should identify individual participants.

Observers and other non-participants should be located in peripheral areas of the room so as not to interfere with participant interaction. A nearby break-out location may be designated for security personnel in the event safeguard discussions become necessary.

Depending on the size of the room and how far participants are situated from one another, a sound system and microphones may aid discussion.

### **III. CONDUCT**

Each participant should be provided with a diagram of the tabletop facility layout that identifies the participating organizations. They should also be provided a list of all participants, their emergency response titles and the organizations they represent.

Designate a non-participant to take notes of the discussion, and record key points and “parking lot” issues.

The lead facilitator should have the participants introduce themselves - participants should state their name, organization, emergency position and a brief statement of their emergency role. The lead facilitator should caution participants to avoid discussion of safeguards information; however, accommodations can be made for review of this material by appropriate officials if necessary.

The lead facilitator initiates the scenario by stating the initiating conditions and events, and soliciting expected response actions from site personnel. This segment would include the process of threat identification and initial notifications to on-site personnel and offsite first-responders. A short break may follow this segment to allow the notified organizations to review their response actions (at their respective tables) and prepare to present them to all tabletop participants.

The facilitator(s) advances the timeline of the scenario segment by segment, soliciting response actions of each participating organization and emergency response function.

As necessary, the facilitator(s) should prompt discussion<sup>8</sup> concerning:

- Information requirements of each organization and how communications will occur among emergency response facilities and organizations.
- Post-attack coordination necessary to allow movement of on-shift personnel and deployment of offsite response assets.
- Post-attack mobilization of the ERO – prerequisite conditions, methods to facilitate, communications and coordination, etc.
- Transition of licensee’s command and control structure, and how this transition is communicated to the offsite responders.
- Coordination between the station ERO and the ICP.

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<sup>8</sup> NEI maintains a list of sample facilitative questions for use in conducting HAB tabletops. This list may be obtained by contacting a member of the NEI EP staff.

#### **IV. CRITIQUE AND FOLLOW-UP**

At the conclusion of the tabletop, the lead facilitator should request that each table conduct its own critique, and identify a summary of lessons learned and any items requiring further review and/or corrective action. In particular, participants should be asked to focus on issues that may have impeded an effective, integrated response. Allow approximately 15 minutes for this activity.

The lead facilitator should then ask the lead individual from each table to present the critique results to all tabletop participants. The designated note taker should record critique items and issues on a display visible to everyone. After presentation of each table's critique, observations should be solicited from any observers.

Issues requiring further evaluation or action should be entered into an appropriate tracking mechanism (e.g., a corrective action program). The EP Manager should consider issuing a tabletop report or summary document to the participants, and a method to communicate resolution of critical issues to the appropriate decision-makers prior to the HAB drill.

**FIGURE B-1**  
**Example Tabletop Layout**

