

# Enhancements to Emergency Action Levels (EALs)

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# NRC Bulletin 2005-02 Overview

- Adds classification criteria based on hostile action posed by hostile events rather than current plant status.
- Incorporates a nuclear accident progression which considers unlikely occurrence of multiple failures and loss of defense-in-depth provided by plant design.
- ECL revisions incorporate the intentional harm and destruction by a HOSTILE ACTION that could lead to radiological release.
- EALs are intended to be more proactive and to initiate response measures not previously considered.
- Considered appropriate because of the nature and indeterminate magnitude of the potential for harm during hostile action events.



# NEI White Paper Overview

- NEI 11/18/05 White Paper provides enhancements to NRC EP Bulletin 2005-02 in five areas based on lessons learned during industry implementation of bulletin
- NRC reviewed White Paper and provided positive feedback via letter dated 12/08/05
- Majority of industry will implement Bulletin to include NEI enhancements based on NRC feedback letter stating future intention to endorse the White Paper via RIS.
- Industry appreciates NRC staff efforts to co-develop EP enhancements with the NEI task force.



# EAL FAQ Process Overview

- Pilot program established Oct. 1, 2005 for one year.
- NRC to evaluate formal program adoption in Sept. 2006
- If EAL FAQ program adopted then will consider possibility of expanding FAQ process to other EP guidance.
- Purpose:
  - Document and resolve issues dealing with the interpretation or applicability of EAL regulatory guidance.
  - Limited to guidance endorsed under RG 1. 101, Rev. 4
  - Shall NOT be used to create new regulatory positions or guidance.
  - Shall NOT be used to determine whether proposed change is a DIE.
  - Issues involving Safeguards Information will not be considered.



# ECLs

- **UE** – “or indicate a security threat to facility protection has been initiated”
- **ALERT** – “or a security event that involves probable life threatening risk to site personnel or damage to site equipment because of intentional malicious dedicated efforts of a hostile act”
- **SAE** – “or ~~security events~~ **(HOSTILE ACTION)** that results in intentional damage or malicious acts; (1) toward site personnel or equipment that could lead to the likely failure of or; (2) prevent effective access to, equipment needed for the protection of the public”
- **GE** – “or security events that result in an actual loss of physical control of the facility.

# DEFINITIONS

## HOSTILE ACTION

- An act toward an NPP or its personnel that includes the use of violent force to destroy equipment, takes hostages, and/or intimidates the licensee to achieve an end. This includes attack by air, land, or water using guns, explosives, projectiles, vehicles, or other devices used to deliver destructive force. Other acts that satisfy the overall intent may be included. HOSTILE ACTION should not be construed to include acts of civil disobedience or felonious acts that are not part of a concerted attack on the NPP. Nonterrorism-based EALs should be used to address such activities, (e.g., violent acts between individuals in the owner controlled area.)

## HOSTILE FORCE

- One or more individuals who are engaged in a determined assault, overtly or by stealth and deception, equipped with suitable weapons capable of killing, maiming, or causing destruction.



# IC/EALs

## NUE

- **IC HU4:** Confirmed Security Event Which Indicates a Potential Degradation in the Level of Safety of the Plant
  - **EAL:** A validated notification from NRC providing information of an aircraft threat ~~→ 30 mins away~~

## Alert

- **IC HA7:** Notification of an Airborne Attack Threat
  - **EAL:** A validated notification from NRC of an airliner attack threat < 30 mins away.
- **IC HA8:** Notification of HOSTILE ACTION within the OCA
  - **EAL:** A notification from the site security force that an armed attack, explosive attack, airliner impact, or other HOSTILE ACTION is occurring or has occurred within the OCA.

## SAE

- **IC HS4:** Site Attack
  - **EAL:** A notification from the site security force that an armed attack, explosive attack, airliner impact, or other HOSTILE ACTION is occurring or has occurred within the PROTECTED AREA.

## GE

- **IC HG1:** Security Event Resulting in Loss of Physical Control of the Facility
  - **EAL:** A HOSTILE FORCE has taken control of plant equipment such that plant personnel are unable to operate equipment required to maintain safety functions.



# Implementation Guidance

- Guidance added as an Enclosure
  - Provides specific guidance for NEI 99-01, NUMARC/NESP-007, and NUREG-0654 users
  - NEI 99-01 and NESP-007 basis are identical
  - Includes entire security related EAL set that revised Emergency Plans should contain
- Changes made in accordance with this guidance are not a decrease in effectiveness and may be performed under 10 CFR 50.54(q) without prior NRC approval
- Should coordinate changes with State and Local Offsite Response Organizations (OROs)

# HU4 Basis Key Points

**IC -Confirmed Security Event Which Indicates a Potential Degradation in the Level of Safety of the Plant.**

**EAL** -A validated notification from NRC providing information of an aircraft threat ~~>30 minutes away~~

## **BASIS**

- Ensure credible security threat notifications made in a timely manner
- Ensure OROs and plant personnel in a state of heightened awareness
- Only the plant to which the specific threat is made need declare the UE
- NOT the intent of this EAL to replace existing non-violent related EALs involving aircraft.



# HA7 Basis Key Points

## IC - Notification of an Airborne Attack Threat

**EAL** -A validated notification from NRC of an airliner attack threat < 30 minutes away.

## **BASIS**

- Status and size of the plane are provided by NORAD through the NRC.
- Only the plant to which the specific threat is made need declare the UE
- Ensures notifications made in a timely manner for credible security threat
- Ensures OROs and plant personnel in a state of heightened awareness
- Not premised solely on the potential for a radiological release...Rather the issue includes the need for assistance due to the possibility for significant and indeterminate damage from such an attack
- Appropriate for OROs to activate to be better prepared should it be necessary to consider further actions.



# HA8 Basis Key Points

## IC - Notification of HOSTILE ACTION within the OCA

**EAL** -A notification from the site security force that an armed attack, explosive attack, airliner impact or other HOSTILE ACTION is occurring or has occurred within the OCA

## BASIS

- Addresses very rapid event progression due to hostile attacks including:
  - Air attack (airliner impacting the OCA)
  - Land-based attack (HOSTILE FORCE progressing across licensee property or directing projectiles at the site)
  - Waterborne attack (HOSTILE FORCE on water attempting forced entry, or directing projectiles at the site)
  - BOMBs
- Addresses possibility for additional attacking aircraft
- NOT intended to address accidental incidents or acts of civil disobedience, such as hunters or physical disputes between employees within the OCA



# HA8 Basis Key Points (cont)

## **BASIS (cont)**

- NOT intended to address accidental aircraft impact
- If not previously notified by NRC that an aircraft impact was intentional, then it would be expected, although not certain, that notification by an appropriate Federal agency would follow:
  - Appropriate federal agency is NORAD, FBI, FAA or NRC
  - Declaration should not be unduly delayed awaiting Federal notification
- Addresses immediacy of an expected threat arrival or impact on the site:
  - Minimal time available for further preparation
  - Requires implementation of protective measures that can be effective before arrival or impact (Onsite evacuation, dispersal or sheltering)
  - Appropriate for OROs to be notified and begin activation



# HS4 Basis Key Points

## IC – Site Attack

**EAL** -A notification from the site security force that an armed attack, explosive attack, airliner impact or other HOSTILE ACTION is occurring or has occurred within the PA

## BASIS

- Escalated threat to plant safety because HOSTILE FORCE has progressed from OCA into the PA and is threatening impact to site vital areas
- Addresses very rapid event progression due to terrorist attacks including:
  - Air attack (airliner impacting the protected area)
  - Land-based attack (hostile force penetrating protected area)
  - Waterborne attack (hostile force on water penetrating protected area)
  - BOMBS breaching the protected area
- Licensees should consider upgrading the classification to a General Emergency based on actual plant status after impact or attack.



# Summary of Bulletin EAL Changes

- Incorporates HOSTILE ACTION perspective into Emergency Classification Levels (ECLs)
- HOSTILE ACTION definition added
- Four new Initiation Conditions (ICs) and Emergency Action Levels (EALs) with basis added
  - One Unusual Event (UE) EAL
  - Two Alert EALs
  - One Site Area Emergency (SAE) EAL



# Summary of NEI Enhancements

- Adds reference HOSTILE FORCE definition from NEI 99-01 for use in NESP-007/NUREG-0654 schemes - inadvertently omitted.
- SAE ECL wording changed so that tampering by a non-hostile force does not result in an SAE declaration.
- Removes 30 minute time requirement for HU4 EAL 2 because it is not needed - an NUE declared based on an aircraft that is > 30 mins away will still be an NUE if the aircraft is < 30 mins away.
- Provides consistency between NESP- 007 and NEI 99-01 basis.
- Removes description of airliner since this has been categorized as sensitive information. Airliner is meant to be a large aircraft with the potential for causing significant damage to the plant. The plane status and size may be provided by NORAD through NRC.



# Security EAL Comparison

ECL	NEI 99-01	NESP-007	NUREG-0654
<b>UE</b>	<ul style="list-style-type: none"> <li>•Other Security events from Safeguards Contingency Plan</li> <li>•Credible site specific security threat notification</li> <li>•Aircraft threat notification-HU4</li> </ul>	<ul style="list-style-type: none"> <li>•Other Security events from Safeguards Contingency Plan</li> <li>•Credible site specific security threat notification</li> <li>•Aircraft threat notification-HU4</li> </ul>	<ul style="list-style-type: none"> <li>•Security threat or attempted entry or attempted sabotage (12)</li> <li>•Credible site specific security threat notification</li> <li>•Aircraft threat notification –HU4</li> </ul>
<b>Alert</b>	<ul style="list-style-type: none"> <li>•Other Security events from Safeguards Contingency Plan</li> <li>•Airliner attack threat &lt; 30 minutes-HA7</li> <li>•OCA HOSTILE ACTION-HA8</li> </ul>	<ul style="list-style-type: none"> <li>•Other Security events from Safeguards Contingency Plan</li> <li>•Airliner attack threat &lt; 30 minutes-HA7</li> <li>•OCA HOSTILE ACTION-HA8</li> </ul>	<ul style="list-style-type: none"> <li>•Ongoing Security Compromise (16)</li> <li>•Airliner attack threat &lt; 30 minutes-HA7</li> <li>•OCA HOSTILE ACTION-HA8</li> </ul>
<b>SAE</b>	<ul style="list-style-type: none"> <li>•Other Security events from Safeguards Contingency Plan</li> <li>•Protected Area HOSTILE ACTION -HS4</li> </ul>	<ul style="list-style-type: none"> <li>•Other Security events from Safeguards Contingency Plan</li> <li>•Protected Area HOSTILE ACTION -HS4</li> </ul>	<ul style="list-style-type: none"> <li>•Imminent Loss of physical control(14) ACTION</li> <li>•Protected Area HOSTILE ACTION –HS4</li> </ul>
<b>GE</b>	<ul style="list-style-type: none"> <li>•Loss of Physical control of the Facility</li> </ul>	<ul style="list-style-type: none"> <li>•Loss of Physical control of the Facility</li> </ul>	<ul style="list-style-type: none"> <li>•Loss of Physical control of the Facility (3)</li> </ul>



# Discussion