SUSAN PERKINS-GREW
Sr. Director, Nuclear Security & Incident Preparedness

1201 F Street, NW, Suite 1100
Washington, DC 20004
P: 202.739.8016
spg@nei.org
nei.org

NUCLEAR ENERGY INSTITUTE

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Mr. Joseph Anderson
Chief
Reactor Licensing Branch
Division of Preparedness and Response
Office of Nuclear Security and Incident Response
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: Industry Comments on NRC Proposed Responses to EPFAQs 2016-001 and 2016-002

Project Number: 689

Dear Mr. Anderson:

The Nuclear Energy Institute (NEI)[1] and the industry have reviewed the NRC staff's proposed responses to Emergency Preparedness Frequently Asked Questions (EPFAQs) 2016-001 and 2016-002. Our comments are presented below.

EPFAQ 2016-001

The industry considers the proposed NRC staff response to be problematic for the following reasons:

1. The criteria in the proposed EALs are ambiguous and subjective, and will not promote consistent emergency classification decision-making or evaluation. For example, assessing "probable" risk or damage would be a highly subjective determination based on a number of factors.
2. The information needed to assess the proposed EALs may be indeterminate or unavailable during the initial stages of a hostile action; this could lead to delayed or inaccurate emergency declarations. Under the circumstances described in this EPFAQ, the Control Room would direct immediate protective measures for site personnel, including the suspension of all movement and communications until directed otherwise (i.e., employees would enter "duck and cover" mode). It is not clear how the Shift Manager would know if "effective access" is compromised or when a

[1] The Nuclear Energy Institute (NEI) is the organization responsible for establishing unified industry policy on matters affecting the nuclear energy industry, including the regulatory aspects of generic operational and technical issues. NEI's members include all entities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect/engineering firms, fuel cycle facilities, nuclear materials licensees, and other organizations and entities involved in the nuclear energy industry.

system in stand-by mode has been "damaged" (e.g., an operable system train that is not in service).

3. The current hostile action Alert EAL was used in most Hostile Action-Based (HAB) drills and exercises during the first HAB exercise cycle (from 2013 through 2015), and no issues were identified with its meaning/interpretation or the resulting declarations. There is no apparent reason for changing it.

The security-related aspects of current Emergency Classification Level (ECL) definitions and EALs are derived from NRC Bulletin 2005-02, *Emergency Preparedness and Response Actions for Security-Based Events*, dated July 18, 2005. The Hostile Action definition provided in the bulletin was subsequently codified in 10 CFR 50, Appendix E, *Emergency Planning and Preparedness for Production and Utilization Facilities*, and cites "projectiles" as one attribute of a "hostile action." Additionally, since the bulletin, the NRC has twice endorsed industry EAL development guidance with security-related definitions and EALs that reflect the bulletin wording – in 2008 for NEI 99-01, Revision 5, and in 2013 for NEI 99-01, Revision 6. As expressed in these documents, a projectile is plainly a "hostile action," and a "hostile action" inside the Protected Area requires a Site Area Emergency declaration. The industry believes the proposed NRC response is not clarifying existing guidance; it is changing it.

The condition described in the "Question or Comment" and "Proposed Solution" sections of the EPFAQ have occurred in evaluated drills and exercises. In these instances, the licensee took the position that a projectile in the Protected Area represented a Hostile Action in the Protected Area, and evaluated the emergency classification performance opportunity accordingly. These emergency classification assessments have been subjected to subsequent NRC inspection and found to be acceptable.

The industry also notes that characterizing the proposed NRC response as a "Difference[2]" is inconsistent the guidance in Regulatory Guide 1.219, *Guidance on Making Changes to Emergency Plans for Nuclear Power Reactors*, Revision 1, including the examples in Section 4.4.e. If implemented, the proposed NRC position would change how a licensee classifies an event involving the conditions described in the EPFAQ. Modifying a licensee's emergency classification scheme in this manner would require the submittal and approval of a License Amendment Request (LAR).

The industry believes the proposed NRC response to EPFAQ 2016-001 would create a variety of issues more complex than the one the industry was attempting to address. Further, the industry feels that an EPFAQ is not a suitable vehicle for promulgating the type of change represented by the proposed NRC position. For this reason, we are withdrawing EPFAQ 2016-001. The issue can be revisited during the next revision to NEI 99-01, *Development of Emergency Action Levels for Non-Passive Reactors*. Alternatively, if the NRC staff desires a more expeditious resolution, the industry is prepared to meet and discuss the issue sooner in order to identify a workable solution. Given the comments provided above, we anticipate that such a meeting will include industry representatives from Operations, Security and Licensing Departments.

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[2] As defined in NRC Regulatory Issue Summary 2003-18, Supplement 2, *Use of Nuclear Energy Institute (NEI) 99-01, Methodology for Development of Emergency Action Levels, Revision 4, Dated January 2003.*

EPFAQ 2016-002

In order to provide better clarity to classification decision-makers, the proposed definition of VISIBLE DAMAGE should be enhanced to also address an event where one hazard causes damage to several components that all support the same system function. For example, a pump may have several components supporting its operation, all installed in close proximity on the pump assembly/skid – such components may include the pump, a motor, a cooler, a local maintenance/isolation valve, instrumentation and control equipment, a motor termination box, etc. In this case, the hazard from a pump failure (e.g., a fire) may damage two or more of these components; however, the operationally significant outcome – the loss of the pump's function - is the same whether one or all of the components is damaged by the fire.

To address this comment, the industry believes the proposed VISIBLE DAMAGE definition could be improved with wording that bounds the hazard-related damage to a component or multiple components at the system train level. Under this approach, an Alert declaration would not be warranted if the hazard-induced damage results in only the affected system train becoming inoperable, regardless of the number of affected components. If the damage were extensive enough to damage a component or components on another system train, then the Alert declaration would be required.

A revised NRC response, reflecting the above comment, is presented in Attachment 1. The industry believes the proposed wording is consistent with the current NRC-endorsed Alert classification language, and would support EAL decision-making by providing clear guidance for identifying the existence of "VISIBLE DAMAGE."

Questions concerning these comments should be directed to Mr. David Young (202-739-8127 or dly@nei.org).

Sincerely,

Susan Perkins-Grew

Attachment

c: Ms. Stephanie Coffin, NSIR/DPR, NRC
Ms. Marissa Bailey, NSIR/DSO, NRC
Mr. Ray Hoffman, NSIR/DPR/RLB/ORLT, NRC
Mr. Don Johnson, NSIR/DPR/RLB/ORLT, NRC
NRC Document Control Desk

Industry Proposed Changes to NRC Response to EPFAQ 2016-002

REVISED NRC RESPONSE:

The proposed guidance is intended to clarify that an Alert should only be declared when the components of more than one SAFETY SYSTEM train are visibly damaged by a hazardous event as defined in NEI 99-01, Revisions 4, 5, and 6. Additionally, the proposed guidance would provide greater clarity to the treatment of out of service equipment that may be affected by a hazardous event. As such, the proposed guidance will reduce the potential of declaring an Alert when events are in progress do not involve an actual or potential substantial degradation of the level of safety of the plant.

IC HA2 (NEI 99-01 R4 and R5), or ICs CA6 and SA9 (NEI 99-01 R6) do not directly escalate to a Site Area Emergency or a General Emergency due to a hazardous event. The Fission Product Barrier and/or Abnormal Radiation Levels/Radiological Effluent recognition categories would provide an escalation path to a Site Area Emergency or a General Emergency.

The proposed changes to notes applicable to ICs HA2 (NEI 99-01 R4 and R5), or ICs CA6 and SA9 (NEI 99-01 R6) provide further clarification to the guidance currently provided in NEI 99-01, Revisions 4, 5, and 6, and are more consistent with the current NRC-endorsed Alert classification language. The revised language would continue to meet the intent of the proposed response to the EPFAQs.

1. Adding the following note to the applicable EALs for this EPFAQ is acceptable as it meets the intent of the EALs and is consistent with other EALs (e.g., EAL HA5 from NEI 99-01, Revision 6; NEI-99-01 was endorsed by the NRC by letter dated March 28, 2013, available at ADAMS Accession No. ML12346A463) to ensure that declared events are based upon unplanned events with the potential to pose a radiological risk to the public.

   > *"If the affected safety system (or component) was already inoperable or out of service before the event occurred, then no emergency classification is warranted as long as the damage was limited to this affected safety system (or component)."*

The addition of the above note to the applicable EALs would be considered a "DIFFERENCE" in accordance with Regulatory Issue Summary (RIS) 2003-18, Supplement 2, *Use of Nuclear Energy Institute (NEI) 99-01, "Methodology for Development of Emergency Action Levels," Revision 4*, dated January 2003 because implementation of the proposed note would not result in event classification differences.

2. The definition of "explosion" and "fire" from NEI 99-01, Revision 6, already provides guidance for when to apply the definition to the event for EAL classification purposes. However, the definition of "visible damage," which is also used in the EALs applicable to this

EPFAQ, does not provide a commensurate level of guidance. If the visible damage exceeded this revised definition, then visible damage, as defined for EALs, would exist and therefore be available to support EAL decision-making.

> VISIBLE DAMAGE: Damage to components on two or more SAFETY SYSTEM trains, or one or more structures, that is readily observable without measurements, testing, or analysis. The visual impact of the damage is sufficient to cause concern regarding the operability or reliability of the affected SAFETY SYSTEM trains in the area. Events that result in visible damage to the components of one SAFETY SYSTEM train, and do not appear to affect the components of other SAFETY SYSTEM trains, do not meet the intent of this definition as the failure of a component(s) affecting the operability of one SAFETY SYSTEM train, regardless of cause, is well within the operational controls provided by a licensee's Technical Specifications and Operating Procedures. However, visible damage to the components of more than one SAFETY SYSTEM train does meet this definition, as well as visible damage to a structure.

The change to the definition for VISIBLE DAMAGE would be considered a "DEVIATION" in accordance with Regulatory Issue Summary (RIS) 2003-18, Supplement 2, *Use of Nuclear Energy Institute (NEI) 99-01, "Methodology for Development of Emergency Action Levels," Revision 4*, dated January 2003.

NOTE – as used in industry's proposed Revised NRC Response, above, SAFETY SYSTEM is the term and associated definition presented in NEI 99-01, Revision 6.