

## Emergency Preparedness Program Frequently Asked Question (EPFAQ)

**EPFAQ Number:** 2016-002

**Date Accepted for Review:** 28-June-2016

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**Organization:** NUCLEAR ENERGY INSTITUTE

**Relevant Guidance:** NEI 99-01, Revision 4, (ML030230250)

NEI 99-01, Revision 5, (ML080450149)

NEI 99-01, Revision 6, (ML12326A805)

NEI 07-01, Revision 0, (ML092030210)

**Applicable Section(s):** Definition of VISIBLE DAMAGE in NEI 99-01, Revisions 4, 5, and 6

Definition of VISIBLE DAMAGE in NEI 07-01, Revision 0

**Status:** Accepted

### QUESTION OR COMMENT:

A review of industry Operating Experience has identified a need to clarify an aspect of the definition of VISIBLE DAMAGE as it relates to the ICs cited above; adding this clarity is necessary to minimize the potential for an over-classification of an equipment failure. There may be cases where VISIBLE DAMAGE is the result of an equipment failure and limited to the failed component (i.e., the failure did not cause damage to any other component or a structure). The current definition of VISIBLE DAMAGE does not adequately differentiate between damage resulting from, and affecting only, the failed piece of equipment vs. an equipment failure causing damage to another component or a structure (e.g., by a failure-induced fire or explosion). Can the definition of VISIBLE DAMAGE be clarified to help avoid an inappropriate emergency declaration in cases where an equipment failure does not result in damage to another component or a structure (i.e., VISIBLE DAMAGE affects only the failed component)?

A related question is also posed. Consistent with the approach used in other ICs, should a note be added to preclude an emergency declaration if the safety system affected by a hazard was not functional before the event occurred (e.g., tagged out for maintenance)?

### PROPOSED SOLUTION:

Yes; the sentence below may be added to the definition of VISIBLE DAMAGE.

Damage resulting from an equipment failure and limited to the failed component (i.e., the failure did not cause damage to a structure or any other equipment) is not VISIBLE DAMAGE.

From a plant safety and change-in-risk perspective, the consequences from the failure of a piece of equipment, accompanied by a hazard (e.g., a fire or explosion) that does not damage any other equipment or a structure, are essentially the same as the equipment failing with no attendant hazard. Neither event would appear to meet the definition of an Alert because the outcome does not involve an actual or potential substantial degradation of the level of safety of the plant (e.g., there has been no significant reduction in the margin to a loss or potential loss of a fission product barrier). Nuclear power plants are designed with redundant safety system trains that are required to be separated (i.e., installed in separate plant areas or have separation within an individual area).

Absent any collateral damage to another component or a structure, a hazard associated with an equipment failure does not affect the ability to protect public health and safety, and there is no additional response benefit to be gained by declaring an emergency. The normal plant

organization has sufficient resources and adequate guidance to respond to an equipment failure. This guidance includes the following:

- Operating procedures
- Technical Specifications
- Fire protection program
- Safety Program
- Corrective action program
- Work management and maintenance requirements

Concerning the second question, an emergency declaration would not be appropriate in response to a hazard affecting a piece of equipment or system that was non-functional prior to the event (e.g., tagged out for maintenance). For this reason and consistent with the approach used in other ICs, the following note may be added to IC HA2 (NEI 99-01 R4 and R5), or ICs CA6 and SA9 (NEI 99-01 R6).

Note: If the affected safety system (or component) was already non-functional before the event occurred, then no emergency classification is warranted.

Consistent with the guidance in 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, it is reasonable to conclude that the changes proposed above would be considered as a "deviation."

**NRC RESPONSE:**

**RECOMMENDED FUTURE ACTION(S):**

- INFORMATION ONLY, MAINTAIN EPFAQ
- UPDATE GUIDANCE DURING NEXT REVISION