

SNC Fleet License Amendment Request for Changes to Emergency Action Level Scheme

January 7, 2026

Agenda

- Introduction
- Opening Remarks
- Staff Discussion
 - Summary of Technical Inadequacies for Acceptance
 - Examples of Technical Inadequacies from application
 - Questions
- Closing Remarks
- Public Comment to NRC

Background

- By letter dated September 30, 2025 (ML25273A375), Southern Nuclear Operating Company (SNC) submitted a license amendment request (LAR) for the SNC Fleet.
- The proposed LAR would change the emergency action level (EAL) schemes for the SNC fleet. For Vogtle Units 3 and 4, SNC proposes a unique EAL scheme in addition to those in NEI 99-01, Rev. 7, that accommodate the passive features of the AP-1000 design.

Background - Continued

- On June 4, 2025, a public meeting was held to discuss licensing review of NEI 99-01, Revision 7, where NRC staff discussed the submittal contents, technical evaluation and format of applications (ML25149A206).
- A pre-submittal meeting was held with Southern Nuclear Operating Company on June 5, 2025 (ML25161A094), where NRC staff discussed the submittal contents, technical evaluation, format and validation of EALs.
- By letter dated December 30, 2025 (ML25346A274), the NRC notified SNC that supplemental information was needed for the NRC review.
- On December 19, 2025 (ML25353A552), this public meeting was noticed.

Regulatory Requirements/Guidance

- 10 CFR 50, Appendix E.IV.B.2 states in part,
A licensee desiring to change its entire emergency action level scheme shall submit an application for an amendment to its license and receive NRC approval before implementing the change.
- 10 CFR 50.90 states in part,
...application for an amendment must be filed with the Commission, as specified in §§ 50.4 or 52.3 of this chapter, as applicable, fully describing the changes desired, and following as far as applicable, the form prescribed for original applications.

Regulatory Requirements/Guidance

- On April 19, 2011, the NRC issued Regulatory Issue Summary 2005-02, Revision 1, “Clarifying the process for making emergency plan changes” (ML100340545).
 - Enclosure 2 provides guidance to licensees in the development of their application and provides elements that should also be included in the application.

Results of Acceptance Review

- The application appears to lack sufficient documentation to confirm that all the applicable calculations supporting adoption of NEI 99-01, Revision 7, were either previously approved in Revision 6, or new and revised.
- The application provides a mark-up of proposed changes but does not include a clean and complete proposed version of the EAL schemes including the front matter for each of the sites.

Results of Acceptance Review Con't

- The application does not fully describe the changes desired.
 1. The variances are not conspicuously identified from NEI 99-01, Revision 7.
 2. For each difference or deviation, there was insufficient or no technical justification.
 3. The application does not provide a complete and accurate mapping to the EAL revision 7 scheme that should include explanations for:
 - a. changes to the as-built/as-modified plant,
 - b. changes to instruments and values, or
 - c. substantial additions or deletions of text in the EAL bases.

Examples

Farley, Hatch, Vogtle EAL - HU5

All differences and deviations (variances) should be identified and justification provided

HU5

ECL: Notification of Unusual Event

Initiating Condition: Hazardous event.

Operating Mode Applicability: All

Emergency Action Levels: (1 or 2)

Notes:

- EAL #2 does not apply to routine traffic impediments such as fog, snow, ice, or vehicle breakdowns or accidents.
- EAL #2 does not apply if the ERO members needed to staff emergency response facilities are prepositioned onsite prior to the event.

(1) Internal room or area flooding of a magnitude sufficient to require manual or automatic electrical isolation of a SAFETY SYSTEM component needed for the current operating mode.

(2) A hazardous event that results in on-site conditions sufficient to prohibit the plant staff from accessing the site via personal vehicles.

Basis:

This IC addresses hazardous events that are considered to represent a potential degradation of the level of safety of the plant.

EAL #1 addresses flooding of a building room or area that results in operators isolating power to a SAFETY SYSTEM component. Classification is also required if the flooding causes an automatic isolation of a SAFETY SYSTEM component from its power source (e.g., a breaker or relay trip). To warrant classification, operability of the affected component must be required by Technical Specifications for the current operating mode.

EAL HU5 – The intent is to declare this EAL based upon the effects that natural or technological hazard events may have on the facility. These hazard events are considered to be precursors to a more significant event or condition or have potential impacts that warrant emergency notification to local, state, and federal authorities. EAL #1 and EAL #3 from Rev. 6 (HU3) were deleted in Rev. 7 and the EALs were renumbered accordingly.

Examples

Vogtle 3 and 4 EAL - CA4

All differences and deviations (variances) should be identified and justification provided

CA4

ECL: Alert

Initiating Condition: Loss of all required Class 1E DC power or Class 1E UPS bus power for 15 minutes or longer.

Operating Mode Applicability: Cold Shutdown, Refueling, Defueled

Emergency Action Levels: (1 or 2)

Note: The Shift Manager/Emergency Director should declare the Alert promptly upon determining that 15 minutes has been exceeded or will likely be exceeded.

(1) Indicated voltage is less than 210 VDC on **ALL** required Class 1E 24-hr. DC buses (IDSA/B/C/D-DS-1) for 15 minutes or longer.

OR

(2) Loss of power to **ALL** 24-hr. Class 1E UPS buses (IDSA/B/C/D-EA-1) for 15 minutes or longer.

Basis:

Load shedding strategies implemented by procedure are planned actions to cope with an extended loss of AC power and therefore do not warrant classification under this IC; provided operators maintain the ability to re-energize the class 1E buses when required.

EAL CU4 and CA4 – The intent of this EAL set is to ensure that an EAL is declared when there is a loss of vital direct current (DC) power, or a loss of the capability to charge the applicable DC power sources.

- CA4 is a site-specific IC/EAL that is not included in Rev. 7. The EAL results in an Alert declaration upon loss of all required Class 1E DC power or Class 1E UPS bus power for 15 minutes or longer. This IC/EAL was approved as part of licensing Vogtle 3&4's current scheme.

Examples

Farley 1 and 2 EAL - RA2

Sufficient technical justification was not provided

EAL #2

This EAL addresses a release of radioactive material caused by mechanical damage to irradiated fuel. Damaging events may include the dropping, bumping or binding of an assembly, or dropping a heavy load onto an assembly. A rise in readings on radiation monitors should be considered in conjunction with in-plant reports or observations of a potential fuel damaging event (e.g., a fuel handling accident). **Containment Purge Ventilation Monitors are not available during all modes. Also, conservative operations may necessitate that the Spent Fuel Pool Ventilation system be operated in an alternate configuration during fuel manipulations. In this alternate configuration, RE-25 A and B will not provide accurate indications of radiation in the spent fuel pool room and RE-5 should be relied upon to evaluate this EAL.**

EAL set RU2, RA2, RS2, and RG2 – The intent of this EAL set is to ensure that an EAL is declared upon indications of potential or actual damage to an irradiated fuel assembly or multiple assemblies. Rev. 7 made no changes to the ICs or EALs in this set. The location of the spent fuel pool instrumentation is added to the Basis of RA2, RS2, and RG2. In RG2, the wording in the last sentence of the Basis is modified from Rev. 7 as it's likely that another GE IC would be met prior to RG2 (consistent with the Rev. 6 scheme). Site-specific information is added to the Basis of RA2 EAL #2 regarding the operation of the ventilation systems, consistent with the Rev. 7 Developer Notes.

Examples

Farley, Hatch, Vogtle EAL – CU5, SU4

All deviations should be identified and justification provided

CU5

ECL: Notification of Unusual Event

Initiating Condition: Loss of all onsite or offsite communications capabilities.

Operating Mode Applicability: Cold Shutdown, Refueling, Defueled

Emergency Action Levels: (1 or 2 or 3)

(1) Loss of ALL of the following onsite communication methods:

Plant telephones (includes hardwired and wireless) [*]
Plant page
Plant radio systems

(2) Loss of ALL of the following ORO communications methods:

ENN (Emergency Notification Network)
Commercial phones [*]

(3) Loss of ALL of the following NRC communications methods:

ENS on Federal Telecommunications System (FTS)
Commercial phones [*]

Basis:

This IC addresses a significant loss of on-site or offsite communications capabilities. While not a direct challenge to plant or personnel safety, this event warrants prompt notifications to OROs and the NRC. FTS is the site-specific name of the system used to communicate with the NRC.

This IC should be assessed only when extraordinary means are being utilized to make communications possible (e.g., ~~use of non-plant, privately-owned equipment~~; relaying of on-site information via individuals or multiple radio transmission points, individuals being sent to offsite locations, etc.).

^{*} Use of mobile/cellular or satellite devices from within the Control Room is not considered "extraordinary means" as the practice occurs during normal daily work activities. Being able to establish contact with the NRC and OROs is the key factor. Limiting the use of mobile/cellular or satellite phones within the Control Room could result in unnecessary declarations as contact with the NRC and OROs would be maintained without extraordinary effort.

EAL CU5 – The intent is to highlight the importance of emergency communications by ensuring that an EAL is declared if normal communications methods for onsite and offsite personnel, or with OROs, including NRC, are lost. There is no change to the CU5 IC or EALs. Personal electronic devices (e.g., cell phones) are routinely used from within the Control Room as part of conducting daily work activities. Therefore, limiting their use could result in unnecessary declarations since contact with the NRC and OROs would be maintained without extraordinary effort. Therefore, the Basis is updated to reflect use of this practice. Note that "use of non-plant, privately owned equipment" is removed from the parenthetical in the second paragraph of the Basis regarding what constitutes "extraordinary means."

Examples

Vogtle 3 and 4 EAL CA2

The application does not provide a complete and accurate mapping to the EAL revision 7 scheme

CA2

ECL: Alert

Initiating Condition: Loss of all offsite and all onsite AC power to **emergency** buses **ECS-ES-1** and **2** ~~for 45 minutes or longer.~~

Operating Mode Applicability: Cold Shutdown, Refueling, ~~Defueled~~

Emergency Action Level: (1)

Notes: The Shift Manager/Emergency Director should declare the Alert promptly upon determining that **45 minutes** the applicable time has been exceeded or will likely be exceeded.

~~A bus may be considered repowered if the AC power source can supply the bus loads associated with decay heat removal functions and is subject to a formal maintenance program. The power source may be classed as safety-related or not.~~

(1) Loss of **ALL** offsite and **ALL** onsite AC Power to buses **ECS-ES-1** **AND 2** for **45 minutes** ~~or longer~~ the condition duration specified in Table C-5.

Table C-5: RCS Loss of Forced Cooling Thresholds	
RCS Status	Duration
INTACT AND not at REDUCED INVENTORY	120 min.
Not INTACT OR at REDUCED INVENTORY	60 min.

Basis:

This IC addresses a total loss of AC power that compromises the performance of all **SAFETY** plant systems requiring electric power including those necessary for ~~emergency core cooling~~ containment heat removal ~~pressure control~~, spent fuel heat removal and the ~~ultimate heat sink~~ active inventory makeup systems. The event can be classified as an Alert when in the cold shutdown or refueling modes because of the significantly reduced decay heat and lower temperature and pressure, increasing the time to restore one of the buses in accordance with the condition duration found in Table C-5. When defueled, forced cooling of the fuel in the reactor vessel is not required, as all fuel is in the spent fuel pool, and pool inventory is monitored through the R2 chart for potential event classification. In the event AC power is unavailable, and the normal spent fuel pool cooling system is unavailable, spent fuel cooling is provided by the heat capacity of the spent fuel pool and the available makeup sources

EAL CA2 – The intent is that this EAL be declared upon a loss of available alternating current (AC) power to power electrical buses.

- CU2 was deleted in its entirety in Rev. 7.
- In Rev. 7, CA2 IC/EAL remains unchanged, but information was added as a Note and in the Basis for crediting non-safety-related power sources. However, this is not relevant for Vogtle 3&4 and is not being adopted as part of the proposed scheme.
- The proposed scheme removes the operating mode applicability when the plant is defueled. When defueled, forced cooling of the RCS is not required and if the normal spent fuel pool cooling system is unavailable, cooling is provided by the heat capacity of the spent fuel pool inventory and the available makeup sources. This information is provided in the Basis Section. The proposed change represents a deviation from Rev. 7 but is acceptable based on the plant's licensing and design basis.

Examples

Farley EAL set RA1, RS1, RG1
Vogtle 1 and 2 EAL RA1
Vogtle 3 and 4 RS1

The application does not provide justification for changes to instruments or values

RA1

ECL: Alert

Initiating Condition: Release of gaseous radioactivity resulting in offsite dose greater than 10 mrem TEDE or 50 mrem thyroid CDE.

Operating Mode Applicability: All

Emergency Action Levels: (1 or 2 or 3)

Notes:

- If dose assessment results based on actual conditions are available, then the radiation monitor readings in EAL #1 should not be used for emergency classification assessments.
- The Shift Manager/Emergency Director should declare the Alert promptly upon determining that the applicable time has been exceeded or will likely be exceeded.
- If an ongoing release is detected and the release start time is unknown, then assume that the release duration has exceeded 15 minutes.
- If the flow past an effluent monitor has been stopped due to actions to isolate the release path, then the monitor reading is no longer valid for classification purposes.

- (1) Reading on **ANY** of the following radiation monitors greater than the reading shown for 15 minutes or longer:

RE-15B – Steam Jet Air Ejector	0.9 $\mu\text{Ci/cc}$ (27 mR/hr)
RE-29B – Plant Vent Stack	0.006 $\mu\text{Ci/cc}$

EAL set RA1, RS1, and RG1 – The intent of this EAL set is to ensure that an EAL is declared upon indications of a release of radioactivity. RU1 was deleted in its entirety in Rev. 7. A note was added to RA1, RS1, and RG1 to clarify that radiation monitor readings in EAL #1 should not be used for emergency classification assessments if dose assessment results are available. This is clarified in the Basis. Other wording enhancements were made to the EAL notes, but with no change of intent. For RA1, Rev. 6 EAL #3 was deleted in Rev. 7; EAL #4 was renumbered to EAL #3.

Summary

Revise the application to:

- Identify all changes (e.g., references to changes since revision 6, not included in revision 6 or 7, etc.)
- Provide justifications for ALL changes
- Document decision making criteria in the EAL – versus the EAL bases
- Provide the information in a format that maps the changes and the associated justification (e.g., as was provided for revision 6)

Questions ??