Enclosure B

{Callaway Plant Unit 2}

EAL Comparisons
and
Technical Bases for Changes

{Callaway Plant Unit 2} TO NEI 99-01 Rev 5 IC CROSS REFERENCE TABLES

The following tables provide cross-references between the NEI 99-01 IC identification number and the {Callaway Plant Unit 2} IC identification number:

NEI Rev 5 to {Callaway Plant Unit 2}

NEI	{Unit 2}	NEI	{Unit 2}
FU1	FU1	SU1	SU1
FA1	FA1	SU2	SU5
FS1	FS1	SU3	SU4
FG1	FG1	SU4	SU9
		SU5	SU7
FC1	N/A	SU6	SU6
FC2	FC7	SU8	SU3
FC3	FC3	SA2	SA3
FC4	FC4	SA4	SA4
FC6	FC2	SA5	SA1
FC7	N/A	SS1	SS1
FC8	FC10	SS2	SS3
		SS3	SS2
RC1	N/A	SS6	SS4
RC2	RC5	SG1	SG1
RC4	RC6	SG2	SG3
RC6	RC2		
RC7	N/A	CU1	CU7
RC8	RC10	CU2	CU8
		CU3	CU1
CT1	N/A	CU4	CU10
CT2	CT8	CU6	CU6
CT3	CT3	CU7	CU2
CT4	CT6	CU8	CU3
CT5	CT9	CA1	CA7
CT6	CT2	CA3	CA1
CT7	N/A	CA4	CA10
CT8	CT10	CS1	CS7
		CG1	CG7
AU1	RU1		
AU2	RU2	HU1	HU3
AA1	RA1	HU2	HU4
AA2	RA2	HU3	HU5
AA3	RA3	HU4	HU1
AS1	RS1	HU5	HU6
AG1	RG1	HA1	HA3
		HA2	HA4
		HA3	HA5
		HA4	HA1
		HA5	HA2
		HA6	HA6
		HS2	HS2
		HS3	HS6
		HS4	HS1
		HG1	HG1
		HG2	HG6

{Callaway Plant Unit 2} to NEI Rev 5

{Unit 2}	NEI	{Unit 2}	NEI
FG1	FG1	SG1	SG1
FS1	FS1	SS1	SS1
FA1	FA1	SA1	SA5
FU1	FU1	SU1	SU1
		SS2	SS3
N/A	FC1	SG3	SG2
FC2	FC6	SS3	SS2
FC3	FC3	SA3	SA2
FC4	FC4	SU3	SU8
FC7	FC2	SS4	SS6
N/A	FC7	SA4	SA4
FC10	FC8	SU4	SU3
		SU5	SU2
N/A	RC1	SU6	SU6
RC2	RC6	SU7	SU5
RC5	RC2	SU9	SU4
RC6	RC4		
N/A	RC7	CA1	CA3
RC10	RC8	CU1	CU3
		CU2	CU7
N/A	CT1	CU3	CU8
CT2	CT6	CU6	CU6
CT3	CT3	CG7	CG1
CT6	CT4	CS7	CS1
N/A	CT7	CA7	CA1
CT8	CT2	CU7	CU1
CT9	CT5	CU8	CU2
CT10	CT8	CA10	CA4
		CU10	CU4
RG1	AG1		
RS1	AS1	HG1	HG1
RA1	AA1	HS1	HS4
RU1	AU1	HA1	HA4
RA2	AA2	HU1	HU4
RU2	AU2	HS2	HS2
RA3	AA3	HA2	HA5
		HA3	HA1
		HU3	HU1
		HA4	HA2
		HU4	HU2
		HA5	HA3
		HU5	HU3
		HG6	HG2
		HS6	HS3
		HA6	HA6
		HU6	HU5

SUMMARY OF DEVIATIONS FROM NEI 99-01

The following tables identify EAL changes that have been evaluated as deviations from the NEI guidance documents and will require prior NRC approval before implementation. A detailed description of the changes and basis for the changes are contained in a following section.

Deviations from NEI 99-01 Rev 5

#	NEI	Unit 2	NEI Guidance	Deviation
1	CT2	CT8	Includes PL threshold for loss of containment depressurization equipment.	U.S. EPR design is such that this threshold is not applicable.
2	SS6 SA6 SU6	SS4 SA4 SU4	Specifies loss of approximately greater than 75% of plant monitoring instruments in the control room.	U.S. EPR design includes digital monitoring system. Compensatory indication is not applicable to U.S. EPR. Removed significant transient from the Alert to provide progression to SAE EAL.

Deviation 1

NEI EAL: CT2 **U.S. EPR EAL:** CT8

Operational Modes: 1, 2, 3, 4

Description of the Deviation

NEI potential loss threshold 3 specifies containment pressure at the depressurization actuation setpoint with insufficient equipment (sprays and coolers) in operation.

U.S. EPR containment design is such that the design basis accidents do not reach containment design pressure, and therefore there is no automatic depressurization actuation setpoint.

Technical Basis

The U.S. EPR containment volume, condensation surface area, and heat capacities are such that the containment design pressure is not exceeded during design basis Loss of Coolant Accident (LOCA) and Main Steam Line Break (MSLB) events, In addition, the containment pressure decreases to less than 50% of the accident analysis values in less than 24 hours thus ensuring that radiological dose consequences are acceptable. Mass and energy releases to the containment during LOCA and MSLB events were calculated using RELAP5/MOD2 (B&W), which is an NRC approved methodology. Containment pressure responses were calculated using the GOTHIC code, also an NRC approved methodology. An automatically actuated containment spray system is therefore not required to mitigate the consequences of a Design Basis Accident, so no automatic actuation setpoint exists for this EAL threshold to be based.

Supporting Information

U.S. EPR FSAR – Section 6.2.1

U.S. EPR FSAR – Section 6.2.2

U.S. EPR FSAR – Section 6.5.2

U.S. EPR FSAR – Section 15.0.3

U.S. EPR FSAR – Section 19.2.3.3

Deviation 2

NEI EAL: SS6, SA6, SU6 **U.S. EPR EAL:** SS4, SA4 and SU4

Operational Modes: 1, 2, 3, 4

Description of the Deviation

NEI specified plant annunciation and safety indication EALs to be set at a loss of *all or most* (*approximately greater than 75%*).

U.S. EPR specified the EALs to involve a complete loss of the systems that provide annunciation and safety indication (PICS and SICS). Additionally, it removed the Alert significant transient condition to provide progression to the SAE EAL.

Technical Basis

Annunciation/Indication:

The operator-managed control system of the U.S. EPR consists of two integrated subsystems (Process Information Control System (PICS) and Safety Information and Control System (SICS)) each having a substantial degree of redundancy. The U.S. EPR design provides redundant safety system indications powered from separate uninterruptible power supplies. Being one integrated system managing multiple redundant inputs, the availability of annunciation (alarms) and indication are not separable. Therefore, the loss of annunciation will occur only concurrent with the loss of indication. The loss of safety system indicators impacts the determination of the operability status of that specific system or component. System operability status will be further addressed by the system-based EALs directly impacted by those systems.

Quantification of Failure:

Quantification of percentage failure is not useful in a digital control system. The digital control system is an integrated set of fault-tolerant components as compared to an analog control system, which is an assembly of multiple unrelated independent circuits. The failure of fault-tolerant components will likely not show degraded performance in an escalating manner. Failure is anticipated to be a step change (functional to non-functional) instead of a gradual degradation. Once the step change in performance has occurred, the system will likely no longer be operational. This contrasts with the gradual degradation of analog systems as individual circuits are lost.

Compensatory Indicators:

Each subsystem (PICS or SICS) is designed to be independently capable of providing necessary alarms and indications. The total loss of annunciators or indications would therefore require the loss of both PICS and SICS subsystems. The loss of either a PICS or SICS subsystem alone would leave one fully operable subsystem which would continue to provide all indication and annunciation necessary to manage transients. This exceeds the typical “compensatory indications” which would still be burdened by the loss of alarms/annunciation.

PICS Operability:

PICS will be considered inoperable if:

a. Less than two PICS workstations operable (a workstation is considered operable if 3 or more screens are fully functional)

   OR

b. Data on the PICS is unreliable (e.g. system froze due to common mode application software failure)

SICS Operability:

Based on the fact that the SICS includes a reduced inventory of alarms and indications, one operator should be able to manage all alarms and indications for the safety related parameters on the SICS. Therefore, a loss of all four divisions on both workstations would constitute this loss because the qualified display system monitors of the SICS have the capability to display all four divisions of SICS indications on a single qualified display system monitor.

EAL Comparison

UNUSUAL EVENT - This Initiating Condition (IC) and its associated EAL are intended to recognize the difficulty associated with monitoring plant conditions with degradation of a major portion of the annunciation/indication equipment.

Each subsystem (PICS or SICS) is designed to be fully capable of providing alarms and indications of key safety-related parameters. The total loss of annunciators or indications would require the loss of both PICS and SICS subsystems. The loss of both PICS and SICS subsystems would necessarily include loss of compensatory indications which would meet Alert EAL SA4 criteria (therefore no NOUE could be declared).

Total failure of a single subsystem is a highly unlikely event and establishing an escalation pathway from Unusual Event to Alert to Site Area Emergency is desirable. Therefore, the U.S. EPR has chosen to conservatively establish the total failure of either subsystem (PICS or SICS) as an Unusual Event.

ALERT - This IC and its associated EALs are intended to recognize the difficulty associated with monitoring plant conditions with loss of a major portion of the annunciation/indication equipment.

Two distinct EAL combinations exists under this NEI EAL:

1. NEI EAL 1A and 1B Bullet 1 (Loss of Annunciation/Indication and Transient)

   Each subsystem (PICS or SICS) is designed to be fully capable of providing key safety-related alarms and indications for detecting and managing the transient. Since the total loss of annunciator/indications (Loss of both PICS and SICS) excludes the availability compensatory indications (Operability of either PICS or

SICS), there is no equivalent condition to loss of annunciator/indications and transient WITH compensatory indicators available. Conditions meeting NEI EAL Criteria 1A , 1B Bullet 1, and 1B Bullet 2 would instead meet the criteria for a Site Area Emergency under EAL SS4.

The U.S. EPR therefore takes exception to this combination of EAL criteria.

2. NEI EAL 1A and 1B Bullet 2 (Loss of Annunciation/Indication and Compensatory Indication)

U.S. EPR condition 1A and 1B (Loss of PICS and Loss of SICS) is equivalent to NEI conditions 1A and 1B bullet 2 (Loss of annunciation/indication and Loss of compensatory indication).

While there is a difference due to the inherent integration of compensatory indication into each of the two digital subsystems (PICS and SICS), there is no deviation from the intent of this EAL threshold combination.

SITE AREA EMERGENCY - This IC is intended to recognize the threat to plant safety associated with the complete loss of capability of the control room staff to monitor plant response to a SIGNIFICANT TRANSIENT.

A Site Area Emergency is considered to exist if the control room staff cannot monitor safety functions needed for protection of the public while a significant transient is in progress. Quantification is arbitrary; however, if most or all safety system annunciators or indicators are fully lost, there is an increased risk that a degraded plant condition could go undetected.

The U.S. EPR is designed to survive a full offsite load rejection and maintain onsite house loads. Although actions will automatically occur, the inability of the operators to verify proper response increases risk and justifies escalation of emergency classification. A 50% change in power/electrical load was chosen as a reasonable value, less than the design criteria, which was still a substantial challenge to the systems as the threshold criteria.

U.S. EPR deviation in the definition of a significant transient is appropriate for this type of design and is consistent with the conditions warranting an SAE for other reactor design types.

Supporting Information

None

NEI 99-01 Rev. 5	New EALs	Difference or Deviation
UNPLANNED: A parameter change or an event that is not the result of an intended evolution and requires corrective or mitigative actions.	**UNPLANNED:** A parameter change or an event, the reasons for which may be known or unknown, that is not the result of an intended evolution and requires corrective or mitigative actions.	**Differences** Added words to allow the term 'unexplained' to fall within the broader context of unplanned. **Deviations** None
Fission Product Barrier Degradation		
FG1 Loss of ANY two barriers AND Loss or Potential Loss of the third barrier. **Operating Mode Applicability:** Power Operation, Hot Standby, Startup, Hot Shutdown	**FG1** **Initiating Condition:** Loss of any two barriers and loss or potential loss of the third barrier. **Operating Mode Applicability:** 1, 2, 3, 4 **EALs:** Refer to fission product barrier loss and potential loss threshold values to determine barrier status.	**Differences** None **Deviations** None
FS1 Loss or Potential Loss of ANY two barriers. **Operating Mode Applicability:** Power Operation, Hot Standby, Startup, Hot Shutdown	**FS1** **Initiating Condition:** Loss or potential loss of any two barriers. **Operating Mode Applicability:** 1, 2, 3, 4 **EALs:** Refer to fission product barrier loss and potential loss threshold values to determine barrier status.	**Differences** None **Deviations** None
FA1 ANY Loss or ANY Potential Loss of EITHER Fuel Clad OR RCS. **Operating Mode Applicability:** Power Operation, Hot Standby, Startup, Hot Shutdown	**FA1** **Initiating Condition:** Any loss or any potential loss of either fuel clad or RCS. **Operating Mode Applicability:** 1, 2, 3, 4 **EALs:** Refer to fission product barrier loss and potential loss threshold values to determine barrier status.	**Differences** None **Deviations** None
FU1 ANY Loss or ANY Potential Loss of Containment. **Operating Mode Applicability:** Power Operation, Hot Standby, Startup, Hot Shutdown	**FU1** **Initiating Condition:** Any loss or any potential loss of containment. **Operating Mode Applicability:** 1, 2, 3, 4 **EALs:** Refer to fission product barrier loss and potential loss threshold values to determine barrier status.	**Differences** None **Deviations** None

NEI 99-01 Rev. 5	New EALs	Difference or Deviation
Fuel Clad Barrier		
1. Critical Safety Function Status **Loss** A. Core Cooling - Red Entry Conditions Met. **Potential Loss** A. Core Cooling - Orange Entry Conditions Met. **OR** B. Heat Sink - Red Entry Conditions Met.	N/A	**Note:** U.S. EPR does not use CSFST for plant operations. **Differences** N/A **Deviations** N/A
6. Containment Radiation Monitoring **Loss** A. Containment radiation monitor reading greater than (site specific value). **Potential Loss** Not Applicable	**FC2: Containment Radiation Monitoring** **Loss** 1. Containment radiation monitor ({JYK15 CR101}) **> {Graph FC2(L)1}**. **Potential Loss** None	**Differences** Removed the word 'reading' for human factors considerations (minimize extraneous words). **Deviations** None
3. Core Exit Thermocouple Readings **Loss** A. Core exit thermocouples reading greater than (site specific degree F). **Potential Loss** A. Core exit thermocouples reading greater than (site specific degree F).	**FC3: Core Temperature** **Loss** 1. **{**Calculated Clad Temperature in **Region 3 or higher}**. **Potential Loss** 1. **{**Calculated Clad Temperature in **Region 2}**.	**Differences** Used a generalized FPB category title as U.S. EPR does not use CETCs. U.S. EPR uses in-core TCs to develop calculated clad temps, which are approximately equivalent to the generic bases. **Deviations** None
4. Reactor Vessel Water Level **Loss** Not Applicable **Potential Loss** A. RCS/RPV level less than (site specific level for TOAF).	**FC4: RPV Level** **Loss** None **Potential Loss** 1. a. RCS level ({JEF10 CL081}) **< {FC4(PL)1.a}**. **AND** b. **{**Calculated Clad Temperature in **Region 2 or higher}**.	**Differences** U.S. EPR cannot measure to TOAF in hot modes. Level indicates lowest measurable value in these modes and includes a threshold for loss of subcooling. This combination is consistent with the meaning and intent of NEI 99-01. **Deviations** None
2. Primary Coolant Activity Level **Loss** A. Coolant activity greater than (site specific value). **Potential Loss** Not Applicable	**FC7: RCS Activity** **Loss** 1. Coolant activity **> 300 µCi/gm** Dose Equivalent I-131. **Potential Loss** None	**Differences** None **Deviations** None
7. Other Site Specific Indications **Loss** A. (Site specific) as applicable. **Potential Loss** A. (Site specific) as applicable.	N/A	**Note:** U.S. EPR does not have any additional FPB thresholds in this category. **Differences** N/A **Deviations** N/A

NEI 99-01 Rev. 5	New EALs	Difference or Deviation
8. Emergency Director Judgment **Loss** A. Any condition in the opinion of the Emergency Director that indicates Loss of the Fuel Clad Barrier. **Potential Loss** A. Any condition in the opinion of the Emergency Director that indicates Potential Loss of the Fuel Clad Barrier.	**FC10: {Emergency Coordinator} Judgment** **Loss** 1. Any condition in the opinion of the {Emergency Coordinator} that indicates loss of the fuel clad barrier. **Potential Loss** 1. Any condition in the opinion of the {Emergency Coordinator} that indicates potential loss of the fuel clad barrier.	**Differences** Change to the site-specific emergency position title is considered administrative. **Deviations** None
RCS Barrier		
1. Critical Safety Function Status **Loss** Not Applicable **Potential Loss** A. RCS Integrity - Red Entry Conditions Met. **OR** B. Heat Sink - Red Entry Conditions Met.	N/A	**Note:** U.S. EPR does not use CSFST for plant operations. **Differences** N/A **Deviations** N/A
6. Containment Radiation Monitoring **Loss** A. Containment radiation monitor reading greater than (site specific value). **Potential Loss** Not Applicable	**RC2: Containment Radiation Monitoring** **Loss** 1. Containment radiation monitor ({JYK15 CR101}) **> {RC2(L)1} R/hr**. **Potential Loss** None	**Differences** Removed the word 'reading' for human factors considerations (minimize extraneous words). **Deviations** None
2. RCS Leak Rate **Loss** A. RCS leak rate greater than available makeup capacity as indicated by a loss of RCS subcooling. **Potential Loss** A. RCS leak rate greater than (site specific capacity of one charging pump in the normal charging mode) with Letdown isolated.	**RC5: RCS Leak Rate** **Loss** 1. RCS leak rate greater than available makeup capacity as indicated by **{**Calculated Clad Temperature in **Region 2 or higher}**. **Potential Loss** 1. RCS leak rate requires operation of second charging pump to maintain pressurizer level.	**Differences** None **Deviations** None
4. SG Tube Rupture **Loss** A. RUPTURED SG results in an ECCS (SI) actuation. **Potential Loss** Not Applicable	**RC6: SG Tube Leakage / Rupture** **Loss** 1. RUPTURED SG results in an MHSI actuation. **Potential Loss** None	**Differences** Added leakage to FPB category title to allow for consistent numbering with CT6 (NEI CT4). **Deviations** None
7. Other Site Specific Indications **Loss** A. (site specific) as applicable. **Potential Loss** A. (site specific) as applicable.	N/A	**Note:** U.S. EPR does not have any additional FPB thresholds in this category. **Differences** N/A **Deviations** N/A

NEI 99-01 Rev. 5	New EALs	Difference or Deviation
8. Emergency Director Judgment **Loss** A. Any condition in the opinion of the Emergency Director that indicates Loss of the RCS Barrier. **Potential Loss** A. Any condition in the opinion of the Emergency Director that indicates Potential Loss of the RCS Barrier.	**RC10: {Emergency Coordinator} Judgment** **Loss** 1. Any condition in the opinion of the {Emergency Coordinator} that indicates loss of the RCS barrier. **Potential Loss** 1. Any condition in the opinion of the {Emergency Coordinator} that indicates potential loss of the RCS barrier.	**Differences** Change to the site-specific emergency position title is considered administrative. **Deviations** None
Containment Barrier		
1. Critical Safety Function Status **Loss** Not Applicable **Potential Loss** A. Containment - Red Entry Conditions Met.	N/A	**Note:** U.S. EPR does not use CSFST for plant operations. **Differences** N/A **Deviations** N/A
6. Containment Radiation Monitoring **Loss** Not Applicable **Potential Loss** A. Containment radiation monitor reading greater than (site specific value).	**CT2: Containment Radiation Monitoring** **Loss** None **Potential Loss** 1. Containment radiation monitor ({JYK15 CR101}) **> {Graph CT2(L)1}**.	**Differences** Removed the word 'reading' for human factors considerations (minimize extraneous words). **Deviations** None
3. Core Exit Thermocouple Readings **Loss** Not Applicable **Potential Loss** A. a. Core exit thermocouples in excess of (site specific)° F. **AND** b. Restoration procedures not effective within 15 minutes. **OR** B. a. Core exit thermocouples in excess of (site specific)° F. **AND** b. Reactor vessel level below (site specific level). **AND** c. Restoration procedures not effective within 15 minutes.	**CT3: Core Temperature** **Loss** None **Potential Loss** 1. a. **{**Calculated Clad Temperature in **Region 4}**. **AND** b. Restoration procedures not effective within **15 minutes**. **OR** 2. a. **{**Calculated Clad Temperature in **Region 3}**. **AND** b. RCS level ({JEF10 CL081}) **< {CT3(PL)2.b}**. **AND** c. Restoration procedures not effective within **15 minutes**.	**Differences** Used a generalized FPB category title as U.S. EPR does not use CETCs. U.S. EPR uses in-core TCs to develop calculated clad temps, which are approximately equivalent to the generic bases. **Deviations** None

NEI 99-01 Rev. 5	New EALs	Difference or Deviation
4. SG Secondary Side Release with P to S Leakage **Loss** A. RUPTURED SG is also FAULTED outside of containment. **OR** B. a. Primary-to-Secondary leak rate greater than 10 gpm. **AND** b. UNISOLABLE steam release from affected SG to the environment. **Potential Loss** Not Applicable	**CT6: SG Tube Leakage / Rupture** **Loss** 1. RUPTURED SG is also FAULTED outside of containment. **OR** 2. a. Primary-to-Secondary leak rate **> 10 gpm**. **AND** b. UNISOLABLE steam release from affected SG to the environment. **Potential Loss** None	**Differences** Revised FPB category title to allow for consistent numbering with RC6 (NEI RC4). **Deviations** None
2. Containment Pressure **Loss** A. A containment pressure rise followed by a rapid unexplained drop in containment pressure. **OR** B. Containment pressure or sump level response not consistent with LOCA conditions. **Potential Loss** A. Containment pressure greater than (site specific value) and rising. **OR** B. Explosive mixture exists inside containment. **OR** C. a. Pressure greater than containment depressurization actuation setpoint. **AND** b. Less than one full train of depressurization equipment operating.	**CT8: Containment Pressure** **Loss** 1. A containment pressure rise followed by a rapid UNPLANNED drop in containment pressure. **OR** 2. Containment pressure or IRWST level response not consistent with LOCA conditions. **Potential Loss** 1. Containment pressure **> 62 psig** and rising. **OR** 2. Containment Hydrogen **> 4%.**	**Differences** Replace 'unexplained' with unplanned to prevent potential confusion in the use of separate terms. **Deviations (Deviation #1)** (PL)C: This FPB threshold was not used. Containment spray and coolers are not safety related or credited for emergency depressurization actuation conditions at U.S. EPR.
5. CNMT Isolation Failure or Bypass **Loss** A. a. Failure of all isolation valves in any one line to close. **AND** b. Direct downstream pathway to the environment exists after containment isolation signal. **Potential Loss** Not Applicable	**CT9: Containment Isolation Failure or Bypass** **Loss** 1. a. Failure of **ALL** isolation valves in any one line to close. **AND** b. Direct downstream pathway to the environment exists after containment isolation signal. **Potential Loss** None	**Differences** None **Deviations** None
7. Other Site Specific Indications **Loss** A. (site specific) as applicable. **Potential Loss** A. (site specific) as applicable.	N/A	**Note:** U.S. EPR does not have any additional FPB thresholds in this category. **Differences** N/A **Deviations** N/A

NEI 99-01 Rev. 5	New EALs	Difference or Deviation
8. Emergency Director Judgment **Loss** A. Any condition in the opinion of the Emergency Director that indicates Loss of the Containment Barrier. **Potential Loss** A. Any condition in the opinion of the Emergency Director that indicates Potential Loss of the Containment Barrier.	**CT10: {Emergency Coordinator} Judgment** **Loss** 1. Any condition in the opinion of the {Emergency Coordinator} that indicates loss of the containment barrier. **Potential Loss** 1. Any condition in the opinion of the {Emergency Coordinator} that indicates potential loss of the containment barrier.	**Differences** Change to the site-specific emergency position title is considered administrative. **Deviations** None
Abnormal Radiological Condition / Abnormal Rad Effluent Releases		
AG1 **Initiating Condition - GENERAL EMERGENCY** Off-site dose resulting from an actual or IMMINENT release of gaseous radioactivity greater than 1000 mrem TEDE or 5000 mrem Thyroid CDE for the actual or projected duration of the release using actual meteorology. **Operating Mode Applicability:** All **Example Emergency Action Levels:** (1 or 2 or 3 or 4) **Note:** The Emergency Director should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the condition will likely exceed the applicable time. If dose assessment results are available, declaration should be based on dose assessment instead of radiation monitor values. Do not delay declaration awaiting dose assessment results. 1. VALID reading on **ANY** of the following radiation monitors greater than the reading shown for 15 minutes or longer: (site specific monitor list and threshold values) 2. Dose assessment using actual meteorology indicates doses greater than 1000 mrem TEDE or 5000 mrem thyroid CDE at or beyond the site boundary. 3. VALID perimeter radiation monitoring system reading greater than 1000 mR/hr for 15 minutes or longer. [for sites having telemetered perimeter monitors] 4. Field survey results indicate closed window dose rates greater than 1000 mR/hr expected to continue for 60 minutes or longer; or analyses of field survey samples indicate thyroid CDE greater than 5000 mrem for one hour of inhalation, at or beyond site boundary.	**RG1** **Initiating Condition:** Offsite dose resulting from an actual or IMMINENT release of gaseous radioactivity greater than 1000 mRem TEDE or 5000 mRem Thyroid CDE for the actual or projected duration of the release using actual meteorology. **Operating Mode Applicability:** 1, 2, 3, 4, 5, 6, D **EALs:** **Note:** If dose assessment results are available, declaration should be based on dose assessment instead of radiation monitor values. Do not delay declaration awaiting dose assessment results. 1. Vent Stack Noble Gas ({KLK90 FR001}) **> {RG1.1} µCi/hr** for **15 minutes** or longer. **OR** 2. Dose assessment using actual meteorology indicates doses at or beyond the site boundary of **EITHER** of the following: • **> 1000 mRem** TEDE • **> 5000 mRem** CDE Thyroid **OR** 3. Field survey results at or beyond the site boundary indicate **EITHER** of the following: • Gamma (closed window) dose rate **> 1000 mR/hr** for **60 minutes** or longer. • Air samples analysis **> 5000 mRem** CDE Thyroid for one hour of inhalation.	**Note:** Changes to the nesting format of EALs RG1.2 and RG1.3 are considered administrative. **Differences** The first note sentence has been moved to the classification description and instructions section as it is applicable to all time imbedded EALs and is a fundamental instruction for classification, not a threshold criterion. Removed 'VALID'. All EALs and FBPs presume valid indications, reports or conditions as explained in the classification description and instructions section. Valid is a fundamental instruction for classification, not a threshold criterion. Removed the word 'reading' for human factors considerations (minimize extraneous words). NEI AG1.3 is N/A for {Callaway Plant Unit 2} because the plant is not equipped with a perimeter radiation monitoring system. **Deviations** None

NEI 99-01 Rev. 5	New EALs	Difference or Deviation
AS1 **Initiating Condition - SITE AREA EMERGENCY** Off-site dose resulting from an actual or IMMINENT release of gaseous radioactivity greater than 100 mrem TEDE or 500 mrem Thyroid CDE for the actual or projected duration of the release. **Operating Mode Applicability:** All **Example Emergency Action Levels:** (1 or 2 or 3 or 4) **Note:** The Emergency Director should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the condition will likely exceed the applicable time. If dose assessment results are available, declaration should be based on dose assessment instead of radiation monitor values. Do not delay declaration awaiting dose assessment results. 1. VALID reading on **ANY** of the following radiation monitors greater than the reading shown for 15 minutes or longer: (site specific monitor list and threshold values) 2. Dose assessment using actual meteorology indicates doses greater than 100 mrem TEDE or 500 mrem thyroid CDE at or beyond the site boundary. 3. VALID perimeter radiation monitoring system reading greater than 100 mR/hr for 15 minutes or longer. [for sites having telemetered perimeter monitors] 4. Field survey results indicate closed window dose rates greater than 100 mR/hr expected to continue for 60 minutes or longer; or analyses of field survey samples indicate thyroid CDE greater than 500 mrem for one hour of inhalation, at or beyond the site boundary.	**RS1** **Initiating Condition:** Offsite dose resulting from an actual or IMMINENT release of gaseous radioactivity greater than 100 mRem TEDE or 500 mRem Thyroid CDE for the actual or projected duration of the release using actual meteorology. **Operating Mode Applicability:** 1, 2, 3, 4, 5, 6, D **EALs:** **Note:** If dose assessment results are available, declaration should be based on dose assessment instead of radiation monitor values. Do not delay declaration awaiting dose assessment results. 1. Vent Stack Noble Gas ({KLK90 FR001}) **> {RS1.1} µCi/hr** for **15 minutes** or longer. **OR** 2. Dose assessment using actual meteorology indicates doses at or beyond the site boundary of **EITHER** of the following: • **> 100 mRem** TEDE • **> 500 mRem** CDE Thyroid **OR** 3. Field survey results at or beyond the site boundary indicate **EITHER** of the following: • Gamma (closed window) dose rate **> 100 mR/hr** for **60 minutes** or longer. • Air sample analysis **> 500 mRem** CDE Thyroid for one hour of inhalation.	**Note:** Changes to the nesting format of EALs RS1.2 and RS1.3 are considered administrative. **Differences** Added IC wording “using actual meteorology” to be consistent with the EAL, basis and RG1 IC (NEI AG1). The first note sentence has been moved to the classification description and instructions section as it is applicable to all time imbedded EALs and is a fundamental instruction for classification, not a threshold criterion. Removed ‘VALID’. All EALs and FBPs presume valid indications, reports or conditions as explained in the classification description and instructions section. Valid is a fundamental instruction for classification, not a threshold criterion. Removed the word ‘reading’ for human factors considerations (minimize extraneous words). NEI AS1.3 is N/A for {Callaway Plant Unit 2} because the plant is not equipped with a perimeter radiation monitoring system. **Deviations** None

NEI 99-01 Rev. 5	New EALs	Difference or Deviation
AA1 **Initiating Condition - ALERT** Any release of gaseous or liquid radioactivity to the environment greater than 200 times the Radiological Effluent Technical Specifications/ODCM for 15 minutes or longer. **Operating Mode Applicability:** All **Example Emergency Action Levels:** (1 or 2 or 3 or 4 or 5) **Note:** The Emergency Director should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the release duration has exceeded, or will likely exceed, the applicable time. In the absence of data to the contrary, assume that the release duration has exceeded the applicable time if an ongoing release is detected and the release start time is unknown. 1. VALID reading on **ANY** of the following radiation monitors greater than the reading shown for 15 minutes or longer: (site specific monitor list and threshold values) 2. VALID reading on any effluent monitor reading greater than 200 times the alarm setpoint established by a current radioactivity discharge permit for 15 minutes or longer. 3. Confirmed sample analyses for gaseous or liquid releases indicates concentrations or release rates greater than 200 times (site specific RETS values) for 15 minutes or longer. 4. VALID reading on perimeter radiation monitoring system reading greater than 10.0 mR/hr above normal* background for 15 minutes or longer. [for sites having telemetered perimeter monitors] 5. VALID indication on automatic real-time dose assessment capability indicating greater than (site specific value) for 15 minutes or longer. [for sites having such capability] * Normal can be considered as the highest reading in the past twenty-four hours excluding the current peak value.	**RA1** **Initiating Condition:** Any release of gaseous or liquid radioactivity to the environment greater than 200 times the ODCM limit for 15 minutes or longer. **Operating Mode Applicability:** 1, 2, 3, 4, 5, 6, D **EALs:** **Note:** In the absence of data to the contrary, assume that the release duration has exceeded the applicable time if an ongoing release is detected and the release start time is unknown. 1. Vent Stack Noble Gas ({KLK90 FR001}) **> {RA1.1} µCi/hr** for **15 minutes** or longer. **OR** 2. **ANY** of the following effluent monitors **> 200 times the ODCM limit** established by a current radioactivity discharge permit for **15 minutes** or longer: • Rad Waste Building Transfer Tank Discharge Line Activity Monitor ({KPK29 CR001/002}) • Discharge permit specified monitor **OR** 3. Confirmed sample analysis for gaseous or liquid releases **> 200 times the ODCM limit** for **15 minutes** or longer.	**Differences** The first note sentence has been moved to the classification description and instructions section as it is applicable to all time imbedded EALs and is a fundamental instruction for classification, not a threshold criterion. Removed 'VALID'. All EALs and FBPs presume valid indications, reports or conditions as explained in the classification description and instructions section. Valid is a fundamental instruction for classification, not a threshold criterion. Removed the words 'reading' and 'indicate' for human factors considerations (minimize extraneous words). RU1.2 specifies the ODCM limit as the high alarm is set at a fraction of the ODCM. NEI AA1.4 is N/A for {Callaway Plant Unit 2} because the plant is not equipped with a perimeter radiation monitoring system. NEI AA1.5 is N/A for {Callaway Plant Unit 2} because the plant is not equipped with an automatic real-time dose assessment system. **Deviations** None

NEI 99-01 Rev. 5	New EALs	Difference or Deviation
AU1 **Initiating Condition - NOTIF OF UNUSUAL EVENT** Any release of gaseous or liquid radioactivity to the environment greater than 2 times the Radiological Effluent Technical Specifications/ODCM for 60 minutes or longer. **Operating Mode Applicability:** All **Example Emergency Action Levels:** (1 or 2 or 3 or 4 or 5) **Note:** The Emergency Director should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the release duration has exceeded, or will likely exceed, the applicable time. In the absence of data to the contrary, assume that the release duration has exceeded the applicable time if an ongoing release is detected and the release start time is unknown. 1. VALID reading on **ANY** of the following radiation monitors greater than the reading shown for 60 minutes or longer: (site specific monitor list and threshold values) 2. VAILD reading on any effluent monitor reading greater than 2 times the alarm setpoint established by a current radioactivity discharge permit for 60 minutes or longer. 3. Confirmed sample analyses for gaseous or liquid releases indicates concentrations or release rates greater than 2 times (site specific RETS values) for 60 minutes or longer. 4. VAILD reading on perimeter radiation monitoring system reading greater than 0.10 mR/hr above normal* background for 60 minutes or longer. [for sites having telemetered perimeter monitors] 5. VAILD indication on automatic real-time dose assessment capability indicating greater than (site specific value) for 60 minutes or longer. [for sites having such capability] * Normal can be considered as the highest reading in the past twenty-four hours excluding the current peak value.	**RU1** **Initiating Condition:** Any release of gaseous or liquid radioactivity to the environment greater than 2 times the ODCM limit for 60 minutes or longer. **Operating Mode Applicability:** 1, 2, 3, 4, 5, 6, D **EALs:** **Note:** In the absence of data to the contrary, assume that the release duration has exceeded the applicable time if an ongoing release is detected and the release start time is unknown. 1. Vent Stack Noble Gas ({KLK90 FR001}) **> {RU1.1} µCi/hr** for **60 minutes** or longer. **OR** 2. **ANY** of the following effluent monitors **> 2 times the ODCM limit** established by a current radioactivity discharge permit for **60 minutes** or longer: • Rad Waste Building Transfer Tank Discharge Line Activity Monitor ({KPK29 CR001/002}) • Discharge permit specified monitor **OR** 3. Confirmed sample analysis for gaseous or liquid releases **> 2 times the ODCM limit** for **60 minutes** or longer.	**Differences** The first note sentence has been moved to the classification description and instructions section as it is applicable to all time imbedded EALs and is a fundamental instruction for classification, not a threshold criterion. Removed 'VALID'. All EALs and FBPs presume valid indications, reports or conditions as explained in the classification description and instructions section. Valid is a fundamental instruction for classification, not a threshold criterion. Removed the words 'reading' and 'indicate' for human factors considerations (minimize extraneous words). RU1.2 specifies the ODCM limit as the high alarm is set at a fraction of the ODCM. NEI AU1.4 is N/A for {Callaway Plant Unit 2} because the plant is not equipped with a perimeter radiation monitoring system. NEI AU1.5 is N/A for {Callaway Plant Unit 2} because the plant is not equipped with an automatic real-time dose assessment system. **Deviations** None

NEI 99-01 Rev. 5	New EALs	Difference or Deviation
AA2 **Initiating Condition - ALERT** Damage to irradiated fuel or loss of water level that has resulted or will result in the uncovering of irradiated fuel outside the reactor vessel. **Operating Mode Applicability**: All **Example Emergency Action Levels**: (1 or 2) 1. A water level drop in the reactor refueling cavity, spent fuel pool or fuel transfer canal that will result in irradiated fuel becoming uncovered. 2. A VALID alarm or (site specific elevated reading) on **ANY** of the following due to damage to irradiated fuel or loss of water level. (site specific radiation monitors)	**RA2** **Initiating Condition:** Damage to irradiated fuel or loss of water level that has resulted or will result in the uncovering of irradiated fuel outside the reactor vessel. **Operating Mode Applicability:** 1, 2, 3, 4, 5, 6, D **EALs:** 1. A water level drop in the reactor refueling cavity, spent fuel pool or fuel transfer canal that will result in irradiated fuel becoming uncovered. **OR** 2. **>1000 mR/hr** on **ANY** of the following due to damage to irradiated fuel or loss of water level: • Reactor Building Refueling Bridge Area Dose Rate Monitor ({JYK15 CR003}) • Fuel Building Spent Fuel Mast Bridge Dose Rate Monitor ({JYK28 CR002}) • Fuel Building Fuel Pool Dose Rate Monitor ({JYK28 CR001}) • Transfer Pit Dose Rate Monitor ({JYK23 CR001})	**Differences** Removed 'VALID'. All EALs and FBPs presume valid indications, reports or conditions as explained in the classification description and instructions section. Valid is a fundamental instruction for classification, not a threshold criterion. **Deviations** None
AU2 **Initiating Condition - NOTIF OF UNUSUAL EVENT** UNPLANNED rise in plant radiation levels. **Operating Mode Applicability**: All **Example Emergency Action Levels**: (1 or 2) 1. a. UNPLANNED water level drop in a reactor refueling pathway as indicated by (site specific level or indication). **AND** b. VALID Area Radiation Monitor reading rise on (site specific list). 2. UNPLANNED VALID Area Radiation Monitor readings or survey results indicate a rise by a factor of 1000 over normal* levels. *Normal levels can be considered as the highest reading in the past twenty-four hours excluding the current peak value.	**RU2** **Initiating Condition:** UNPLANNED rise in plant radiation levels. **Operating Mode Applicability:** 1, 2, 3, 4, 5, 6, D **EALs:** 1. a. UNPLANNED water level drop in the reactor refueling cavity, spent fuel pool or fuel transfer canal as indicated by **ANY** of the following: • Reactor refueling cavity level ({FAK31 CL003 or CL004}) **< {RU2.1.a(b1)} feet**. • Spent fuel pool level ({FAL18 CL001}) **< {RU2.1.a(b2)} feet**. • Fuel transfer canal level ({FAL18 CL004 or CL005}) **< {RU2.1.a(b3)} feet**. • Report of visual observation. **AND** b. Area radiation monitor rise on **ANY** of the following: • Reactor Building Refueling Bridge Area Dose Rate Monitor ({JYK15 CR003}) • Fuel Building Spent Fuel Mast Bridge Dose Rate Monitor ({JYK28 CR002}) • Fuel Building Fuel Pool Dose Rate Monitor ({JYK28 CR001}) • Transfer Pit Dose Rate Monitor ({JYK23 CR001}) **OR** 2. UNPLANNED area radiation monitor or radiation survey > **1000 times NORMAL LEVELS**.	**Differences** Specified components of 'reactor refueling pathway' to be consistent with RA2 (AA2). Created NORMAL LEVELS as a defined term for consistency within the scheme. Removed 'VALID'. All EALs and FBPs presume valid indications, reports or conditions as explained in the classification description and instructions section. Valid is a fundamental instruction for classification, not a threshold criterion. Removed the words 'reading' and 'indicate' for human factors considerations (minimize extraneous words). **Deviations** None

NEI 99-01 Rev. 5	New EALs	Difference or Deviation
AA3 **Initiating Condition - ALERT** Rise in radiation levels within the facility that impedes operation of systems required to maintain plant safety functions. **Operating Mode Applicability**: All **Example Emergency Action Levels**: (1 or 2) 1. Dose rate greater than 15 mR/hr **ANY** of the following areas requiring continuous occupancy to maintain plant safety functions: (site specific area list)	**RA3** **Initiating Condition:** Rise in radiation levels within the facility that impedes operation of systems required to maintain plant safety functions. **Operating Mode Applicability:** 1, 2, 3, 4, 5, 6, D **EALs:** 1. Dose rate **> 15 mR/hr** in **ANY** of the following areas requiring continuous occupancy to maintain plant safety functions: • Control Room • Central Alarm Station	**Differences** None **Deviations** None
Hazards and Other Conditions Affecting Plant Safety		
HG1 **Initiating Condition - GENERAL EMERGENCY** HOSTILE ACTION resulting in loss of physical control of the facility. **Operating Mode Applicability:** All **Example Emergency Action Level:** (1 or 2) 1. A HOSTILE ACTION has occurred such that plant personnel are unable to operate equipment required to maintain safety functions. 2. A HOSTILE ACTION has caused failure of Spent Fuel Cooling Systems and IMMINENT fuel damage is likely for a freshly off-loaded reactor core in pool.	**HG1** **Initiating Condition:** HOSTILE ACTION resulting in loss of physical control of the facility. **Operating Mode Applicability:** 1, 2, 3, 4, 5, 6, D **EALs:** 1. A HOSTILE ACTION has occurred such that plant personnel are unable to operate equipment required to maintain safety functions. **OR** 2. A HOSTILE ACTION has caused failure of spent fuel cooling systems and IMMINENT fuel damage is likely.	**Differences** Removed 'for a freshly off-loaded reactor core in pool' to eliminate unnecessary complication. Operators do not track days since offload in the Control Room and imminent damage will apply to any type of fuel in the pool. **Deviations** None
HS4 **Initiating Condition - SITE AREA EMERGENCY** HOSTILE ACTION within the PROTECTED AREA. **Operating Mode Applicability:** All **Example Emergency Action Level:** 1. A HOSTILE ACTION is occurring or has occurred within the PROTECTED AREA as reported by the (site security shift supervision).	**HS1** **Initiating Condition:** HOSTILE ACTION within the PROTECTED AREA. **Operating Mode Applicability:** 1, 2, 3, 4, 5, 6, D **EALs:** 1. A HOSTILE ACTION is occurring or has occurred within the PROTECTED AREA as reported by the Security Shift Supervisor.	**Differences** None **Deviations** None
HA4 **Initiating Condition - ALERT** HOSTILE ACTION within the OWNER CONTROLLED AREA or airborne attack threat. **Operating Mode Applicability:** All **Example Emergency Action Level:** (1 or 2) 1. A HOSTILE ACTION is occurring or has occurred within the OWNER CONTROLED AREA as reported by the (site specific security shift supervision). 2. A validated notification from NRC of an airliner attack threat within 30 minutes of the site.	**HA1** **Initiating Condition:** HOSTILE ACTION within the OWNER CONTROLLED AREA or airborne attack threat. **Operating Mode Applicability:** 1, 2, 3, 4, 5, 6, D **EALs:** 1. A HOSTILE ACTION is occurring or has occurred within the OWNER CONTROLLED AREA as reported by the Security Shift Supervisor. **OR** 2. A validated notification from the NRC of a LARGE AIRCRAFT attack threat within **30 minutes** of the site.	**Differences** Changed airliner to large aircraft. Using large aircraft includes non-airline owned large aircraft and is therefore more comprehensive and appropriate, while maintaining the meaning and intent. **Deviations** None

NEI 99-01 Rev. 5	New EALs	Difference or Deviation
HU4 **Initiating Condition – NOTIF OF UNUSUAL EVENT** Confirmed SECURITY CONDITION or threat which indicates a potential degradation in the level of safety of the plant. **Operating Mode Applicability:** All **Example Emergency Action Levels:** (1 or 2 or 3) 1. A SECURITY CONDITION that does NOT involve a HOSTILE ACTION as reported by the (site specific security shift supervision). 2. A credible site specific security threat notification. 3. A validated notification from NRC providing information of an aircraft threat.	**HU1** **Initiating Condition:** Confirmed SECURITY CONDITION or threat, which indicates a potential degradation in the level of safety of the plant. **Operating Mode Applicability:** 1, 2, 3, 4, 5, 6, D **EALs:** 1. A SECURITY CONDITION that does not involve a HOSTILE ACTION as reported by the Security Shift Supervisor. **OR** 2. A credible site-specific security threat notification. **OR** 3. A validated notification from the NRC providing information of an aircraft threat.	**Differences** None **Deviations** None
HS2 **Initiating Condition - SITE AREA EMERGENCY** Control room evacuation has been initiated and plant control cannot be established. **Operating Mode Applicability:** All **Example Emergency Action Level:** 1. a. Control room evacuation has been initiated. **AND** b. Control of the plant cannot be established within (site specific minutes).	**HS2** **Initiating Condition:** Control Room evacuation has been initiated and plant control cannot be established. **Operating Mode Applicability:** 1, 2, 3, 4, 5, 6, D **EALs:** 1. a. Control Room evacuation has been initiated. **AND** b. Control of the plant cannot be established within **15 minutes**.	**Differences** None **Deviations** None
HA5 **Initiating Condition - ALERT** Control room evacuation has been initiated. **Operating Mode Applicability:** All **Example Emergency Action Level:** 1. (Site-specific procedure) requires control room evacuation.	**HA2** **Initiating Condition:** Control Room evacuation has been initiated. **Operating Mode Applicability:** 1, 2, 3, 4, 5, 6, D **EALs:** 1. Control Room evacuation has been initiated.	**Differences** Reworded EAL to be consistent with IC and to eliminate the need to rely on a procedure reference as a threshold (human factors). This does not change the meaning or intent. **Deviations** None

NEI 99-01 Rev. 5	New EALs	Difference or Deviation
HA1 **Initiating Condition - ALERT** Natural or destructive phenomena affecting VITAL AREAS. **Operating Mode Applicability:** All **Example EALs:** (1 or 2 or 3 or 4 or 5 or 6) 1. a. Seismic event greater than Operating Basis Earthquake (OBE) as indicated by (site specific seismic instrumentation) reading (site-specific OBE limit). **AND** b. Earthquake confirmed by **ANY** of the following: • Earthquake felt in plant • National Earthquake Center • Control Room indication of degraded performance of systems required for the safe shutdown of the plant. 2. Tornado striking or high winds greater than (site specific mph) resulting in VISIBLE DAMAGE to **ANY** of the following structures containing safety systems or components **OR** control room indication of degraded performance of those safety systems: (site specific structure list) 3. Internal flooding in **ANY** of the following areas resulting in an electrical shock hazard that precludes access to operate or monitor safety equipment **OR** control room indication of degraded performance of those safety systems: (site specific area list) 4. Turbine failure-generated PROJECTILES resulting in VISIBLE DAMAGE to or penetration of **ANY** of the following structures containing safety systems or components **OR** control room indication of degraded performance of those safety systems: (site specific structure list) 5. Vehicle crash resulting in VISIBLE DAMAGE to **ANY** of the following structures containing safety systems or components **OR** control room indication of degraded performance of those safety systems: (site specific structure list) 6. (Site specific occurrences) resulting in VISIBLE DAMAGE to **ANY** of the following structures containing safety systems or components **OR** control room indication of degraded performance of those safety systems: (site specific structure list)	**HA3** **Initiating Condition:** Natural or destructive phenomena affecting VITAL AREAS. **Operating Mode Applicability:** 1, 2, 3, 4, 5, 6, D **EALs:** 1. a. Seismic event **> OBE** as indicated by PICS seismic monitoring system. **AND** b. Earthquake confirmed by **ANY** of the following: • Earthquake felt in plant • National Earthquake Center • Control Room indication of degraded performance of systems required for the safe shutdown of the plant. **OR** 2. Tornado or high winds **> {45 m/sec (100 mph)}** resulting in **EITHER** of the following: • VISIBLE DAMAGE to **ANY** structures in **Table H-1** areas containing safety systems or components. • Control Room indication of degraded performance of those safety systems. **OR** 3. Internal flooding in **Table H-1** areas resulting in **EITHER** of the following: • Electrical shock hazard that precludes access to operate or monitor safety equipment. • Control Room indication of degraded performance of those safety systems. **OR** 4. { } 5. Turbine failure-generated PROJECTILES resulting in **EITHER** of the following: • VISIBLE DAMAGE to or penetration of **ANY** structures in **Table H-1** areas containing safety systems or components. • Control Room indication of degraded performance of those safety systems. **OR** 6. Vehicle crash resulting in **EITHER** of the following: • VISIBLE DAMAGE to **ANY** structures in **Table H-1** areas containing safety systems or components. • Control Room indication of degraded performance of those safety systems.	**Note:** Changes to the nesting format of EALs HA3.2-6 are considered administrative. **Differences** Removed HA3.2 tornado 'striking' as it is irrelevant whether it strikes or not if it causes visible damage to structures containing safety systems or components. {NEI HA1.6 is N/A for Callaway Plant Unit 2 since there are no other site-specific occurrences that could result in either: • VISIBLE DAMAGE to **ANY** structures in **Table H-1** areas containing safety systems or components. • Control Room indication of degraded performance of those safety systems.} **Deviations** None **Table** **Table H-1: Safe Shutdown Vital Areas** • Control Room • Safeguards Buildings • Containment • Nuclear Auxiliary Building • Emergency Power Generating Buildings • ESW Cooling Towers

NEI 99-01 Rev. 5	New EALs	Difference or Deviation
HU1 **Initiating Condition - NOTIF OF UNUSUAL EVENT** Natural or destructive phenomena affecting the PROTECTED AREA. **Operating Mode Applicability:** All **Example Emergency Action Level:** (1 or 2 or 3 or 4 or 5) 1. Seismic event identified by **ANY** 2 of the following: • Seismic event confirmed by (site-specific indication or method) • Earthquake felt in plant • National Earthquake Center 2. Tornado striking within the PROTECTED AREA or high winds greater than (site-specific mph). 3. Internal flooding that has the potential to affect safety related equipment required by Technical Specifications for the current operating mode in **ANY** of the following areas: (site specific area list) 4. Turbine failure resulting in casing penetration or damage to turbine or generator seals 5. (Site specific occurrences affecting PROTECTED AREA).	**HU3** **Initiating Condition:** Natural or destructive phenomena affecting the PROTECTED AREA. **Operating Mode Applicability:** 1, 2, 3, 4, 5, 6, D **EALs:** 1. a. Seismic event trigger as indicated by PICS seismic monitoring system. **AND** b. Earthquake confirmed by **EITHER** of the following: • Earthquake felt in plant • National Earthquake Center **OR** 2. a. Tornado within the PROTECTED AREA. **OR** b. High winds **> {45 m/sec (100 mph)}**. **OR** 3. Internal flooding in **Table H-1** areas that has the potential to affect safety related equipment required by Technical Specifications for the current operating mode. **OR** 4. { } 5. Turbine failure resulting in casing penetration or damage to turbine or generator seals. **Table H-1: Safe Shutdown Vital Areas** • Control Room • Safeguards Buildings • Containment • Nuclear Auxiliary Building • Emergency Power Generating Buildings • ESW Cooling Towers	**Note:** Changes to the nesting format of EAL HU3.2 is considered administrative. **Differences** Nested HU3.1 to match HA3.1. U.S. EPR is capable of measuring ground motion at the UE level. Removed HU3.2 tornado 'striking' as it is irrelevant whether it strikes within the protected area if the tornado itself is within the protected area. {NEI HA1.6 is N/A for Callaway Plant Unit 2 since there are no other site-specific occurrences that could result in either: • VISIBLE DAMAGE to **ANY** structures in **Table H-1** areas containing safety systems or components. • Control Room indication of degraded performance of those safety systems.} **Deviations** None

NEI 99-01 Rev. 5	New EALs	Difference or Deviation
HA2 **Initiating Condition - ALERT** FIRE or EXPLOSION affecting the operability of plant safety systems required to establish or maintain safe shutdown. **Operating Mode Applicability:** All **Example Emergency Action Level:** 1. FIRE or EXPLOSION resulting in VISIBLE DAMAGE to **ANY** of the following structures containing safety systems or components **OR** control room indication of degraded performance of those safety systems: (site specific structure list)	**HA4** **Initiating Condition:** FIRE or EXPLOSION affecting the operability of plant safety systems required to establish or maintain safe shutdown. **Operating Mode Applicability:** 1, 2, 3, 4, 5, 6, D **EALs:** 1. FIRE or EXPLOSION resulting in **EITHER** of the following: • VISIBLE DAMAGE to **ANY** structures in **Table H-1** areas containing safety systems or components. • Control Room indication of degraded performance of those safety systems. **Table H-1: Safe Shutdown Vital Areas** • Control Room • Safeguards Buildings • Containment • Nuclear Auxiliary Building • Emergency Power Generating Buildings • ESW Cooling Towers	**Note:** Changes to the nesting format of EAL HA4.1 is considered administrative. **Differences** None **Deviations** None
HU2 **Initiating Condition - NOTIF OF UNUSUAL EVENT** FIRE within the PROTECTED AREA not extinguished within 15 minutes of detection or EXPLOSION within the PROTECTED AREA. **Operating Mode Applicability:** All **Example Emergency Action Level:** (1 or 2) **Note:** The Emergency Director should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the duration has exceeded, or will likely exceed, the applicable time. 1. FIRE not extinguished within 15 minutes of control room notification or verification of a control room FIRE alarm in **ANY** of the following areas: (site specific area list) 2. EXPLOSION within the PROTECTED AREA.	**HU4** **Initiating Condition:** FIRE within the PROTECTED AREA not extinguished within 15 minutes of detection or EXPLOSION within the PROTECTED AREA. **Operating Mode Applicability:** 1, 2, 3, 4, 5, 6, D **EALs:** 1. FIRE not extinguished within **15 minutes** of Control Room notification or verification of a Control Room FIRE alarm in actual contact with or immediately adjacent to **ANY** of the **Table H-1** areas. **Table H-1: Safe Shutdown Vital Areas** • Control Room • Safeguards Buildings • Containment • Nuclear Auxiliary Building • Emergency Power Generating Buildings • ESW Cooling Towers **OR** 2. EXPLOSION within the PROTECTED AREA.	**Differences** Note content has been moved to the classification description and instructions section as it is applicable to all time imbedded EALs and is a fundamental instruction for classification, not a threshold criterion. Added ‘in actual contact with or immediately adjacent to’ from the basis section to HU4.1 to support the use of table H-1. **Deviations** None

NEI 99-01 Rev. 5	New EALs	Difference or Deviation
HA3 **Initiating Condition - ALERT** Access to a VITAL AREA is prohibited due to toxic, corrosive, asphyxiant or flammable gases which jeopardize operation of operating equipment required to maintain safe operations or safely shutdown the reactor. **Operating Mode Applicability:** All **Example Emergency Action Levels:** Note: If the equipment in the stated area was already inoperable, or out of service, before the event occurred, then this EAL should not be declared as it will have no adverse impact on the ability of the plant to safely operate or safely shutdown beyond that already allowed by Technical Specifications at the time of the event. 1. Access to a VITAL AREA is prohibited due to toxic, corrosive, asphyxiant or flammable gases which jeopardize operation of systems required to maintain safe operations or safely shutdown the reactor.	**HA5** **Initiating Condition:** Access to a VITAL AREA is prohibited due to toxic, corrosive, asphyxiant or flammable gases, which jeopardize the ability to safely operate or shutdown the reactor. **Operating Mode Applicability:** 1, 2, 3, 4, 5, 6, D **EALs:** **Note:** If the equipment in the VITAL AREA was inoperable or out of service before the event occurred, then this EAL should not be declared as it will have no adverse impact on the ability to safely operate or shutdown the plant beyond that allowed by Technical Specifications at the time of the event. 1. Access to a VITAL AREA is prohibited due to toxic, corrosive, asphyxiant or flammable gases, which jeopardize the ability to safely operate or shutdown the reactor.	**Differences** Reworded IC, note and EAL for readability. **Deviations** None
HU3 **Initiating Condition – NOTIF OF UNUSUAL EVENT** Release of toxic, corrosive, asphyxiant or flammable gases deemed detrimental to NORMAL PLANT OPERATIONS. **Operating Mode Applicability:** All **Example Emergency Action Levels:** (1 or 2) 1. Toxic, corrosive, asphyxiant or flammable gases in amounts that have or could adversely affect NORMAL PLANT OPERATIONS. 2. Report by local, county or state officials for evacuation or sheltering of site personnel based on an off-site event.	**HU5** **Initiating Condition:** Release of toxic, corrosive, asphyxiant or flammable gases deemed detrimental to NORMAL PLANT OPERATIONS. **Operating Mode Applicability:** 1, 2, 3, 4, 5, 6, D **EALs:** 1. Toxic, corrosive, asphyxiant or flammable gases in amounts that have or could adversely affect NORMAL PLANT OPERATIONS. **OR** 2. Report by local, county or state officials for evacuation or sheltering of site personnel based on an offsite event.	**Differences** None **Deviations** None
HG2 **Initiating Condition - GENERAL EMERGENCY** Other conditions exist which in the judgment of the Emergency Director warrant declaration of a General Emergency. **Operating Mode Applicability:** All **Example Emergency Action Level:** 1. Other conditions exist which in the judgment of the Emergency Director indicate that events are in progress or have occurred which involve actual or IMMINENT substantial core degradation or melting with potential for loss of containment integrity or HOSTILE ACTION that results in an actual loss of physical control of the facility. Releases can be reasonably expected to exceed EPA Protective Action Guideline exposure levels off-site for more than the immediate site area.	**HG6** **Initiating Condition:** Other conditions exist which in the judgment of the {Emergency Coordinator} warrant declaration of General Emergency. **Operating Mode Applicability:** 1, 2, 3, 4, 5, 6, D **EALs:** 1. Other conditions exist which in the judgment of the {Emergency Coordinator} indicate that events are in progress or have occurred which involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity or HOSTILE ACTION that results in an actual loss of physical control of the facility. Releases can be reasonably expected to exceed EPA Protective Action Guideline exposure levels offsite for more than the immediate site area.	**Differences** Change to the site-specific emergency position title is considered administrative. **Deviations** None

NEI 99-01 Rev. 5	New EALs	Difference or Deviation
HS3 **Initiating Condition - SITE AREA EMERGENCY** Other conditions exist which in the judgment of the Emergency Director warrant declaration of a Site Area Emergency. **Operating Mode Applicability:** All **Example Emergency Action Level:** 1. Other conditions exist which in the judgment of the Emergency Director indicate that events are in progress or have occurred which involve actual or likely major failures of plant functions needed for protection of the public or 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) that prevent effective access to equipment needed for the protection of the public. Any releases are not expected to result in exposure levels which exceed EPA Protective Action Guideline exposure levels beyond the site boundary.	**HS6** **Initiating Condition:** Other conditions exist which in the judgment of the {Emergency Coordinator} warrant declaration of Site Area Emergency. **Operating Mode Applicability:** 1, 2, 3, 4, 5, 6, D **EALs:** 1. Other conditions exist which in the judgment of the {Emergency Coordinator} indicate that events are in progress or have occurred which involve actual or likely major failures of plant functions needed for protection of the public or 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) that prevent effective access to equipment needed for the protection of the public. Any releases are not expected to result in exposure levels, which exceed EPA Protective Action Guideline exposure levels beyond the site boundary.	**Differences** Change to the site-specific emergency position title is considered administrative. **Deviations** None
HA6 **Initiating Condition - ALERT** Other conditions exist which in the judgment of the Emergency Director warrant declaration of an Alert. **Operating Mode Applicability:** All **Example Emergency Action Level:** 1. Other conditions exist which in the judgment of the Emergency Director indicate that events are in progress or have occurred which involve actual or potential substantial degradation of the level of safety of the plant or a security event that involves probable life threatening risk to site personnel or damage to site equipment because of HOSTILE ACTION. Any releases are expected to be limited to small fractions of the EPA Protective Action Guideline exposure levels.	**HA6** **Initiating Condition:** Other conditions exist which in the judgment of the {Emergency Coordinator} warrant declaration of an Alert. **Operating Mode Applicability:** 1, 2, 3, 4, 5, 6, D **EALs:** 1. Other conditions exist which in the judgment of the {Emergency Coordinator} indicate that events are in progress or have occurred which involve actual or potential substantial degradation of the level of safety of the plant or a security event that involves probable life threatening risk to site personnel or damage to site equipment because of HOSTILE ACTION. Any releases are expected to be limited to small fractions of the EPA Protective Action Guideline exposure levels.	**Differences** Change to the site-specific emergency position title is considered administrative. **Deviations** None
HU5 **Initiating Condition – NOTIF OF UNUSUAL EVENT** Other conditions exist which in the judgment of the Emergency Director warrant declaration of a NOUE. **Operating Mode Applicability:** All **Example Emergency Action Level:** 1. Other conditions exist which in the judgment of the Emergency Director indicate that events are in progress or have occurred which indicate a potential degradation of the level of safety of the plant or indicate a security threat to facility protection has been initiated. No releases of radioactive material requiring off-site response or monitoring are expected unless further degradation of safety systems occurs.	**HU6** **Initiating Condition:** Other conditions exist which in the judgment of the {Emergency Coordinator} warrant declaration of an Unusual Event. **Operating Mode Applicability:** 1, 2, 3, 4, 5, 6, D **EALs:** 1. Other conditions exist which in the judgment of the {Emergency Coordinator} indicate that events are in progress or have occurred which indicate a potential degradation of the level of safety of the plant or indicate a security threat to facility protection has been initiated. No releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of safety systems occurs.	**Differences** Change to the site-specific emergency position title is considered administrative. **Deviations** None

NEI 99-01 Rev. 5	New EALs	Difference or Deviation
System Malfunctions - Hot		
SG1 **Initiating Condition - GENERAL EMERGENCY** Prolonged loss of all Off-site and all On-Site AC power to emergency busses. **Operating Mode Applicability:** Power Operation, Startup, Hot Standby, Hot Shutdown **Example Emergency Action Level:** 1. a. Loss of all off-site and on-site AC power to (site specific emergency busses). **AND** b. **EITHER** of the following: • Restoration of at least one emergency bus in less than (site specific hours) is not likely. • (Site specific Indication of continuing degradation of core cooling based on Fission Product Barrier monitoring.)	**SG1** **Initiating Condition:** Prolonged loss of all offsite and all onsite AC power to emergency busses. **Operating Mode Applicability:** 1, 2, 3, 4 **EALs:** 1. a. Loss of **ALL** offsite and **ALL** onsite AC power to 31, 32, 33 and 34 BDA busses. **AND** b. **EITHER** of the following: • Restoration of at least one emergency bus within **2 hours** is not likely. • **{**Calculated Clad Temperature in **Region 4}**.	**Differences** None **Deviations** None
SS1 **Initiating Condition - SITE AREA EMERGENCY** Loss of all Off-site and all On-Site AC power to emergency busses for 15 minutes or longer. **Operating Mode Applicability:** Power Operation, Startup, Hot Standby, Hot Shutdown **Example Emergency Action Level:** **Note:** The Emergency Director should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the condition has exceeded, or will likely exceed, the applicable time. 1. Loss of all Off-Site and all On-Site AC power to (site specific emergency busses) for 15 minutes or longer.	**SS1** **Initiating Condition:** Loss of all offsite and all onsite AC power to emergency busses for 15 minutes or longer. **Operating Mode Applicability:** 1, 2, 3, 4 **EALs:** 1. Loss of **ALL** offsite and **ALL** onsite AC power to 31, 32, 33 and 34 BDA busses for **15 minutes** or longer.	**Differences** Note content has been moved to the classification description and instructions section as it is applicable to all time imbedded EALs and is a fundamental instruction for classification, not a threshold criterion. **Deviations** None
SA5 **Initiating Condition - ALERT** AC power capability to emergency busses reduced to a single power source for 15 minutes or longer such that any additional single failure would result in station blackout. **Operating Mode Applicability:** Power Operation, Startup, Hot Standby, Hot Shutdown **Example Emergency Action Level:** **Note:** The Emergency Director should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the condition has exceeded, or will likely exceed, the applicable time. 1. a. AC power capability to (site-specific emergency busses) reduced to a single power source for 15 minutes or longer. **AND** b. Any additional single failure will result in station blackout.	**SA1** **Initiating Condition:** AC power capability to emergency busses reduced to a single source for 15 minutes or longer such that any additional single failure would result in a loss of all AC power to the emergency busses. **Operating Mode Applicability:** 1, 2, 3, 4 **EALs:** 1. a. AC power to 31, 32, 33 and 34 BDA busses is reduced to a single source for **15 minutes** or longer. **AND** b. Any additional single failure will result in a loss of all AC power to 31, 32, 33 and 34 BDA busses.	**Differences** Replaced station blackout with a loss of all AC to emergency busses. The additional loss to emergency bus may not result in a station blackout on U.S. EPR if power is being backfed to non-vital busses. Note content has been moved to the classification description and instructions section as it is applicable to all time imbedded EALs and is a fundamental instruction for classification, not a threshold criterion. **Deviations** None

NEI 99-01 Rev. 5	New EALs	Difference or Deviation
SU1 **Initiating Condition - NOTIF OF UNUSUAL EVENT** Loss of all Off-site AC power to emergency busses for 15 minutes or longer. **Operating Mode Applicability:** Power Operation, Startup, Hot Standby, Hot Shutdown **Example Emergency Action Level:** **Note:** The Emergency Director should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the condition has exceeded, or will likely exceed, the applicable time. 1. Loss of all off-site AC power to (site specific emergency busses) for 15 minutes or longer.	**SU1** **Initiating Condition:** Loss of all offsite AC power to emergency busses for 15 minutes or longer. **Operating Mode Applicability:** 1, 2, 3, 4 **EALs:** 1. Loss of **ALL** offsite AC power to 31, 32, 33 and 34 BDA busses for **15 minutes** or longer.	**Differences** Note content has been moved to the classification description and instructions section as it is applicable to all time imbedded EALs and is a fundamental instruction for classification, not a threshold criterion. **Deviations** None
SS3 **Initiating Condition - SITE AREA EMERGENCY** Loss of all vital DC power for 15 minutes or longer. **Operating Mode Applicability:** Power Operation, Startup, Hot Standby, Hot Shutdown **Example Emergency Action Level:** **Note:** The Emergency Director should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the condition has exceeded, or will likely exceed, the applicable time. 1. Less than (site specific bus voltage indication) on all (site specific Vital DC busses) for 15 minutes or longer.	**SS2** **Initiating Condition:** Loss of required DC power for 15 minutes or longer. **Operating Mode Applicability:** 1, 2, 3, 4 **EALs:** 1. **< 210 VDC** on the required 31, 32, 33 and 34 BUC busses for **15 minutes** or longer.	**Differences** Note content has been moved to the classification description and instructions section as it is applicable to all time imbedded EALs and is a fundamental instruction for classification, not a threshold criterion. **Deviations** None
SG2 **Initiating Condition - GENERAL EMERGENCY** Automatic Scram (Trip) and all manual actions fail to shutdown the reactor and indication of an extreme challenge to the ability to cool the core exists. **Operating Mode Applicability:** Power Operation, Startup **Example Emergency Action Level:** 1. a. An automatic scram (trip) failed to shutdown the reactor. **AND** b. All manual actions do not shutdown the reactor as indicated by (site specific indications of reactor not shutdown). **AND** c. **EITHER** of the following exist or have occurred due to continued power generation: • (Site specific indication that core cooling is extremely challenged.) • (Site specific indication that heat removal is extremely challenged.)	**SG3** **Initiating Condition:** Automatic trip and all manual actions failed to shutdown the reactor and indication of an extreme challenge to the ability to cool the core exists. **Operating Mode Applicability:** 1, 2 **EALs:** 1. a. An automatic reactor trip failed to shutdown the reactor as indicated by reactor power **> 5%**. **AND** b. All manual actions failed to shutdown the reactor as indicated by reactor power **> 5%**. **AND** c. **EITHER** of the following have occurred: • **{**Calculated Clad Temperature **in Region 3 or higher}**. • Loss of all four trains of Emergency Feedwater.	**Differences** Added reactor power threshold to SG3.1.a to provide consistent wording throughout the escalation pathway. Reworded SG3.1.b from 'do not shutdown' to 'failed to shutdown' to match IC and SG3.1.a wording (human factors). This does not change the meaning or intent. Removed the SG3.1.c words 'exist or' for human factors considerations (minimize extraneous words). Removed the SG3.1.c words 'due to continued power generation' since continued power generation will not cause a loss of all four EFW trains. **Deviations** None

NEI 99-01 Rev. 5	New EALs	Difference or Deviation
SS2 **Initiating Condition - SITE AREA EMERGENCY** Automatic Scram (Trip) fails to shutdown the reactor and manual actions taken from the reactor control console are not successful in shutting down the reactor. **Operating Mode Applicability:** Power Operation, Startup **Example Emergency Action Level:** 1. a. An automatic scram (trip) failed to shutdown the reactor. **AND** b. Manual actions taken at the reactor control console do not shutdown the reactor as indicated by (site specific indications of reactor not shutdown).	**SS3** **Initiating Condition:** Automatic trip failed to shutdown the reactor and manual actions taken from the reactor control console failed to shutdown the reactor. **Operating Mode Applicability:** 1, 2 **EALs:** 1. a. An automatic reactor trip failed to shutdown the reactor as indicated by reactor power **> 5%**. **AND** b. Manual actions taken at the reactor control console failed to shutdown the reactor as indicated by reactor power **> 5%**.	**Differences** Added reactor power threshold to SS3.1.a to provide consistent wording throughout the escalation pathway. Reworded IC and SS3.1.b from 'do not shutdown' to 'failed to shutdown' to match SG3 IC and SS3.1.a wording (human factors). This does not change the meaning or intent. **Deviations** None
SA2 **Initiating Condition - ALERT** Automatic Scram (Trip) fails to shutdown the reactor and the manual actions taken from the reactor control console are successful in shutting down the reactor. **Operating Mode Applicability:** Power Operation, Startup **Example Emergency Action Level:** 1. a. An automatic scram (trip) failed to shutdown the reactor. **AND** b. Manual actions taken at the reactor control console successfully shutdown the reactor as indicated by (site specific indications of plant shutdown).	**SA3** **Initiating Condition:** Automatic trip failed to shutdown the reactor and the manual actions taken from the reactor control console are successful in shutting down the reactor. **Operating Mode Applicability:** 1, 2 **EALs:** 1. a. An automatic reactor trip failed to shutdown the reactor as indicated by reactor power **> 5%**. **AND** b. Manual actions taken at the reactor control console successfully shutdown the reactor as indicated by reactor power **< 5%**.	**Differences** Added reactor power threshold to SA3.1.a to provide consistent wording throughout the escalation pathway. **Deviations** None
SU8 **Initiating Condition - NOTIF OF UNUSUAL EVENT** Inadvertent Criticality. **OPERATING MODE APPLICABILITY:** Hot Standby, Hot Shutdown **Example Emergency Action Level:** 1. UNPLANNED sustained positive period observed on nuclear instrumentation. [*BWR*] 1. UNPLANNED sustained positive startup rate observed on nuclear instrumentation. [*PWR*]	**SU3** **Initiating Condition:** Inadvertent criticality. **Operating Mode Applicability:** 3, 4 **EALs:** 1. UNPLANNED sustained positive startup rate observed on nuclear instrumentation.	**Differences** None **Deviations** None

NEI 99-01 Rev. 5	New EALs	Difference or Deviation
SS6 **Initiating Condition - SITE AREA EMERGENCY** Inability to monitor a SIGNIFICANT TRANSIENT in progress. **Operating Mode Applicability:** Power Operation, Startup, Hot Standby, Hot Shutdown **Example Emergency Action Level:** **Note:** The Emergency Director should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the condition has exceeded, or will likely exceed, the applicable time. 1. a. Loss of greater than approximately 75% of the following for 15 minutes or longer: • (Site specific control room safety system annunciation) **OR** • (Site specific control room safety system indication) **AND** b. A SIGNIFICANT TRANSIENT is in progress. **AND** c. Compensatory indications are unavailable.	**SS4** **Initiating Condition:** Loss of all monitoring functions for 15 minutes or longer with a SIGNIFICANT TRANSIENT in progress. **Operating Mode Applicability:** 1, 2, 3, 4 **EALs:** 1. a. Loss of SICS for **15 minutes** or longer. **AND** b. Loss of PICS for **15 minutes** or longer. **AND** c. **ANY** of the following SIGNIFICANT TRANSIENTS are in progress: • Automatic runback **> 50%** thermal power • Electrical load rejection **> 50%** full electrical load • Reactor trip • MHSI actuation	**Differences** Reworded IC to reflect EAL conditions and provide logical intuitive progression pathway. Note content has been moved to the classification description and instructions section as it is applicable to all time imbedded EALs and is a fundamental instruction for classification, not a threshold criterion. **Deviations (Deviation #2)** Loss of greater than approximately 75% removed to account for U.S. EPR digital monitoring system design. Compensatory indication criterion was removed. Compensatory indication is not applicable U.S. EPR.
SA4 **Initiating Condition - ALERT** UNPLANNED Loss of safety system annunciation or indication in the Control Room with EITHER (1) a SIGNIFICANT TRANSIENT in progress, or (2) compensatory indicators unavailable. **Operating Mode Applicability:** Power Operation, Startup, Hot Standby, Hot Shutdown **Example Emergency Action Level:** **Note:** The Emergency Director should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the condition has exceeded, or will likely exceed, the applicable time. 1. a. UNPLANNED loss of greater than approximately 75% of the following for 15 minutes or longer: • (Site specific control room safety system annunciation) • (Site specific control room safety system indication) b. **EITHER** of the following: • A SIGNIFICANT TRANSIENT is in progress. • Compensatory indications are unavailable.	**SA4** **Initiating Condition:** Loss of all monitoring functions for 15 minutes or longer. **Operating Mode Applicability:** 1, 2, 3, 4 **EALs:** 1. a. Loss of SICS for **15 minutes** or longer. **AND** b. Loss of PICS for **15 minutes** or longer.	**Differences** Reworded IC to reflect EAL conditions and provide logical intuitive progression pathway. Removed the unplanned restriction from the IC and EAL since U.S. EPR operations do not allow for the removal of SICS or PICS while in the hot modes. Note content has been moved to the classification description and instructions section as it is applicable to all time imbedded EALs and is a fundamental instruction for classification, not a threshold criterion. **Deviations (Deviation #2)** Loss of greater than approximately 75% removed to account for U.S. EPR digital monitoring system design. Compensatory indication criterion was removed. Compensatory indication is not applicable U.S. EPR. Removed significant transient to provide progression to SAE EAL.

NEI 99-01 Rev. 5	New EALs	Difference or Deviation
SU3 **Initiating Condition - NOTIF OF UNUSUAL EVENT** UNPLANNED loss of safety system annunciation or indication in the control room for 15 minutes or longer. **Operating Mode Applicability:** Power Operation, Startup, Hot Standby, Hot Shutdown **Example Emergency Action Level:** **Note:** The Emergency Director should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the condition has exceeded, or will likely exceed, the applicable time. 1. UNPLANNED loss of greater than approximately 75% of the following for 15 minutes or longer: a. (Site specific control room safety system annunciation) **OR** b. (Site specific control room safety system indication)	**SU4** **Initiating Condition:** Degradation of monitoring functions for 15 minutes or longer. **Operating Mode Applicability:** 1, 2, 3, 4 **EALs:** 1. Loss of SICS for **15 minutes** or longer. **OR** 2. Loss of PICS for **15 minutes** or longer.	**Differences** Reworded IC to reflect EAL conditions and provide logical intuitive progression pathway. Removed the unplanned restriction from the IC and EAL since U.S. EPR operations do not allow for the removal of SICS or PICS while in the hot modes. Note content has been moved to the classification description and instructions section as it is applicable to all time imbedded EALs and is a fundamental instruction for classification, not a threshold criterion. **Deviations (Deviation #2)** Loss of greater than approximately 75% removed to account for U.S. EPR digital monitoring system design.
SU2 **Initiating Condition - NOTIF OF UNUSUAL EVENT** Inability to reach required shutdown within Technical Specification limits. **Operating Mode Applicability:** Power Operation, Startup, Hot Standby, Hot Shutdown **Example Emergency Action Level:** 1. Plant is not brought to required operating mode within Technical Specifications LCO Action Statement Time.	**SU5** **Initiating Condition:** Inability to reach required operating mode within Technical Specification limits. **Operating Mode Applicability:** 1, 2, 3, 4 **EALs:** 1. Plant is not brought to required operating mode within Technical Specifications LCO action completion time.	**Differences** Replaced 'shutdown' with 'operating mode' in the IC to more accurately reflect the EAL wording and the intent of the bases. **Deviations** None
SU6 **Initiating Condition - NOTIF OF UNUSUAL EVENT** Loss of all On-site or Off-site communications capabilities. **Operating Mode Applicability:** Power Operation, Startup, Hot Standby, Hot Shutdown **Example Emergency Action Levels:** (1 or 2) 1. Loss of all of the following on-site communication methods affecting the ability to perform routine operations. (site specific list of communications methods) 2. Loss of all of the following off-site communication methods affecting the ability to perform offsite notifications. (site specific list of communications methods)	**SU6** **Initiating Condition:** Loss of all onsite or offsite communications capabilities. **Operating Mode Applicability:** 1, 2, 3, 4 **EALs:** 1. Loss of **ALL** of the following onsite communication methods affecting the ability to perform routine operations: • {Radios} • {Plant Page} • {Internal Telephone Systems} **OR** 2. Loss of **ALL** of the following offsite communications methods affecting the ability to perform offsite notifications: • {SENTRY} • NRC Emergency Notification System - ENS • NRC Health Physics Network - HPN • {External Telephone Systems}	**Differences** None **Deviations** None

NEI 99-01 Rev. 5	New EALs	Difference or Deviation
SU5 **Initiating Condition - NOTIF OF UNUSUAL EVENT** RCS leakage. **Operating Mode Applicability:** Power Operation, Startup, Hot Standby, Hot Shutdown **Example Emergency Action Levels:** (1 or 2) 1. Unidentified or pressure boundary leakage greater than 10 gpm. 2. Identified leakage greater than 25 gpm.	**SU7** **Initiating Condition:** RCS leakage. **Operating Mode Applicability:** 1, 2, 3, 4 **EALs:** 1. Unidentified or pressure boundary leakage **> 10 gpm**. **OR** 2. Identified leakage **> 25 gpm**.	**Differences** None **Deviations** None
SU4 **Initiating Condition - NOTIF OF UNUSUAL EVENT** Fuel Clad degradation. **Operating Mode Applicability:** Power Operation, Startup, Hot Standby, Hot Shutdown **Example Emergency Action Levels:** (1 or 2) 1. (Site specific radiation monitor readings indicating fuel clad degradation greater than Technical Specification allowable limits.) 2. (Site specific coolant sample activity value indicating fuel clad degradation greater than Technical Specification allowable limits.)	**SU9** **Initiating Condition:** Fuel clad degradation. **Operating Mode Applicability:** 1, 2, 3, 4 **EALs:** 1. Gross Failed Fuel Monitor ({KUA66 CR001}) **> {SU9.1} cpm**. **OR** 2. Coolant sample activity **> 1.0 µCi/gm** dose equivalent I-131.	**Differences** None **Deviations** None
System Malfunctions - Cold		
CA3 **Initiating Condition - ALERT** Loss of all Off-site and all On-Site AC power to emergency busses for 15 minutes or longer. **Operating Mode Applicability:** Cold Shutdown, Refueling, Defueled **Example Emergency Action Level:** **Note:** The Emergency Director should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the condition will likely exceed the applicable time. 1. Loss of all Off-Site and On-Site AC Power to (site specific emergency busses) for 15 minutes or longer.	**CA1** **Initiating Condition:** Loss of all offsite and all onsite AC power to emergency busses for 15 minutes or longer. **Operating Mode Applicability:** 5, 6, D **EALs:** 1. Loss of **ALL** offsite and **ALL** onsite AC power to 31, 32, 33 and 34 BDA busses for **15 minutes** or longer.	**Differences** Note content has been moved to the classification description and instructions section as it is applicable to all time imbedded EALs and is a fundamental instruction for classification, not a threshold criterion. **Deviations** None

NEI 99-01 Rev. 5	New EALs	Difference or Deviation
CU3 **Initiating Condition - NOTIF OF UNUSUAL EVENT** AC power capability to emergency busses reduced to a single power source for 15 minutes or longer such that any additional single failure would result in station blackout **Operating Mode Applicability:** Cold Shutdown, Refueling **Example Emergency Action Level:** **Note:** The Emergency Director should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the condition will likely exceed the applicable time. 1. a. AC power capability to (site specific emergency busses) reduced to a single power source for 15 minutes or longer. **AND** b. Any additional single power source failure will result in station blackout.	**CU1** **Initiating Condition:** AC power capability to emergency busses reduced to a single source for 15 minutes or longer such that any additional single failure would result in a loss of all AC power to the emergency busses. **Operating Mode Applicability:** 5, 6 **EALs:** 1. a. AC power to 31, 32, 33 and 34 BDA busses is reduced to a single source for **15 minutes** or longer. **AND** b. Any additional single failure will result in a loss of all AC power to 31, 32, 33 and 34 BDA busses.	**Differences** Replaced station blackout with a loss of all AC to emergency busses. The additional loss to emergency bus may not result in a station blackout on U.S. EPR if power is being backfed to non-vital busses. Note content has been moved to the classification description and instructions section as it is applicable to all time imbedded EALs and is a fundamental instruction for classification, not a threshold criterion. **Deviations** None
CU7 **Initiating Condition - NOTIF OF UNUSUAL EVENT** Loss of required DC power for 15 minutes or longer. **Operating Mode Applicability:** Cold Shutdown, Refueling **Example Emergency Action Level:** **Note:** The Emergency Director should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the condition will likely exceed the applicable time. 1. Less than (site specific bus voltage indication) on required (site specific Vital DC busses) for 15 minutes or longer.	**CU2** **Initiating Condition:** Loss of required DC power for 15 minutes or longer. **Operating Mode Applicability:** 5, 6 **EALs:** 1. **< 210 VDC** on the required 31, 32, 33 and 34 BUC busses for **15 minutes** or longer.	**Differences** Note content has been moved to the classification description and instructions section as it is applicable to all time imbedded EALs and is a fundamental instruction for classification, not a threshold criterion. **Deviations** None
CU8 **Initiating Condition - NOTIF OF UNUSUAL EVENT** Inadvertent criticality. **Operating Mode Applicability:** Cold Shutdown, Refueling **Example Emergency Action Levels:** 1. UNPLANNED sustained positive period observed on nuclear instrumentation. (BWR) 1. UNPLANNED sustained positive startup rate observed on nuclear instrumentation. (PWR)	**CU3** **Initiating Condition:** Inadvertent criticality. **Operating Mode Applicability:** 5, 6 **EALs:** 1. UNPLANNED sustained positive startup rate observed on nuclear instrumentation.	**Differences** None **Deviations** None

NEI 99-01 Rev. 5	New EALs	Difference or Deviation
CU6 **Initiating Condition - NOTIF OF UNUSUAL EVENT** Loss of all On-site or Off-site communications capabilities. **Operating Mode Applicability:** Cold Shutdown, Refueling, Defueled **Example Emergency Action Levels:** (1 or 2) 1. Loss of all of the following on-site communication methods affecting the ability to perform routine operations. (site specific list of communications methods) 2. Loss of all of the following off-site communication methods affecting the ability to perform offsite notifications. (site specific list of communications methods)	**CU6** **Initiating Condition:** Loss of all onsite or offsite communications capabilities. **Operating Mode Applicability:** 5, 6, D **EALs:** 1. Loss of **ALL** of the following onsite communication methods affecting the ability to perform routine operations: • {Radios} • {Plant Page} • {Internal Telephone Systems} **OR** 2. Loss of **ALL** of the following offsite communications methods affecting the ability to perform offsite notifications: • {SENTRY} • NRC Emergency Notification System - ENS • NRC Health Physics Network - HPN • {External Telephone Systems}	**Differences** None **Deviations** None

NEI 99-01 Rev. 5	New EALs	Difference or Deviation
CG1 **Initiating Condition - GENERAL EMERGENCY** Loss of RCS/RPV inventory affecting fuel clad integrity with containment challenged. **Operating Mode Applicability:** Cold Shutdown, Refueling **Example Emergency Action Level:** (1 or 2) **Note:** The Emergency Director should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the condition will likely exceed the applicable time. 1. a. RCS/RPV level less than (site specific level for TOAF) for 30 minutes or longer. **AND** b. **ANY** containment challenge indication (see Table): 2. a. RCS/RPV level cannot be monitored with core uncovery indicated by **ANY** of the following for 30 minutes or longer. • (Site specific radiation monitor) reading greater than (site specific setpoint). • Erratic source range monitor indication. • UNPLANNED level rise in (site specific sump or tank). • [*Other site specific indications*] **AND** b. **ANY** containment challenge indication (see Table): **Table: Containment Challenge Indications** • CONTAINMENT CLOSURE not established. • (Site specific explosive mixture) inside containment. • UNPLANNED rise in containment pressure. • Secondary containment radiation monitor reading above (site specific value). [*BWR only*]	**CG7** **Initiating Condition:** Loss of RPV inventory affecting fuel clad integrity with containment challenged. **Operating Mode Applicability:** 5, 6 **EALs:** 1. a. RPV level **< {96.0 feet (29.3 meters)}** (top of active fuel) for **30 minutes** or longer. **AND** b. **ANY Table C-1** containment challenge indications. **OR** 2. a. RPV level cannot be monitored with core uncovery indicated by **ANY** of the following for **30 minutes** or longer: • Reactor Building Refueling Bridge Area Dose Rate Monitor ({JYK15 CR003}) **> {CG7.2.a(b1)} mR/hr**. • Erratic source range monitor indication. • UNPLANNED level rise in IRWST. **AND** b. **ANY Table C-1** containment challenge indications. **Table C-1: Containment Challenge Indications** • CONTAINMENT CLOSURE not established. • Hydrogen concentration > 4% inside containment. • UNPLANNED rise in containment pressure.	**Note:** Changes to the nesting format of EAL CG7.2.a is considered administrative. **Differences** Note content has been moved to the classification description and instructions section as it is applicable to all time imbedded EALs and is a fundamental instruction for classification, not a threshold criterion. Removed the word 'reading' CG7.2.a bullet 1 (NEI CG1.2.a bullet 1) for human factors considerations (minimize extraneous words). **Deviations** None

NEI 99-01 Rev. 5	New EALs	Difference or Deviation
CS1 **Initiating Condition - SITE AREA EMERGENCY** Loss of RCS/RPV inventory affecting core decay heat removal capability. **Operating Mode Applicability:** Cold Shutdown, Refueling **Example Emergency Action Levels:** (1 or 2 or 3) **Note:** The Emergency Director should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the condition will likely exceed the applicable time. 1. With CONTAINMENT CLOSURE not established, RCS/RPV level less than (site specific level). [*6" below the bottom ID of the RCS loop) (PWR)*] [*6" below the low-low ECCS actuation setpoint) (BWR)*] **OR** 2. With CONTAINMENT CLOSURE established, RCS/RPV level less than (site specific level for TOAF). **OR** 3. RCS/RPV level cannot be monitored for 30 minutes or longer with a loss of RCS/RPV inventory as indicated by **ANY** of the following: • (Site specific radiation monitor) reading greater than (site specific value). • Erratic Source Range Monitor Indication. • Unexplained level rise in (site specific sump or tank).	**CS7** **Initiating Condition:** Loss of RPV inventory affecting core decay heat removal capability. **Operating Mode Applicability:** 5, 6 **EALs:** 1. a. CONTAINMENT CLOSURE not established. **AND** b. Loss of RPV inventory as indicated by RCS level ({JEF10 CL081}) **< {CS7.1.b}**. **OR** 2. a. CONTAINMENT CLOSURE established. **AND** b. RPV level **< {96.0 feet (29.3 meters)}** (top of active fuel). **OR** 3. a. RCS level cannot be monitored for **30 minutes** or longer. **AND** b. Loss of RPV inventory as indicated by **ANY** of the following: • Reactor Building Refueling Bridge Area Dose Rate Monitor ({JYK15 CR003}) **> {CS7.3.b(b1)} mR/hr**. • Erratic source range monitor indication. • UNPLANNED level rise in IRWST.	**Note:** Changes to the nesting format of EALs CS7.1, CS7.2 and CS7.3 are considered administrative. **Differences** Note content has been moved to the classification description and instructions section as it is applicable to all time imbedded EALs and is a fundamental instruction for classification, not a threshold criterion. The CS7.1 RCS level indication is the lowest accurate reading possible, but is higher than the guidance setpoint. Added wording 'Loss of RPV inventory as indicated by' to CS7.1.b to maintain consistency with CA7.1 wording in the escalation pathway. Removed the word 'reading' CS7.3.a bullet 1 (NEI CS1.3.a bullet 1) for human factors considerations (minimize extraneous words). Replace 'unexplained' with 'unplanned' to match wording of CG7.2 (NEI CG1.2) and to prevent potential confusion in the use of separate terms. **Deviations** None
CA1 **Initiating Condition - ALERT** Loss of RCS/RPV inventory. **Operating Mode Applicability:** Cold Shutdown, Refueling **Example Emergency Action Levels:** (1 or 2) **Note:** The Emergency Director should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the condition will likely exceed the applicable time. 1. Loss of RCS/RPV inventory as indicated by level less than (site specific level). [*Low-Low ECCS actuation setpoint / Level 2 (BWR)*] [*Bottom ID of the RCS loop (PWR)*] 2. RCS/RPV level cannot be monitored for 15 minutes or longer with a loss of RCS/RPV inventory as indicated by an unexplained level rise in (site specific sump or tank).	**CA7** **Initiating Condition:** Loss of RPV inventory. **Operating Mode Applicability:** 5, 6 **EALs:** 1. Loss of RPV inventory as indicated by RCS level ({JEF10 CL081}) **< {CA7.1}**. **OR** 2. a. RCS level cannot be monitored for **15 minutes** or longer. **AND** b. Loss of RPV inventory as indicated by UNPLANNED level rise in IRWST.	**Note:** Changes to the nesting format of EAL CA7.2 is considered administrative. **Differences** Note content has been moved to the classification description and instructions section as it is applicable to all time imbedded EALs and is a fundamental instruction for classification, not a threshold criterion. The CA7.1 RCS level indication is the lowest accurate reading possible, but is higher than the guidance setpoint. Replace 'unexplained' with 'unplanned' to match wording of CG7.2 (NEI CG1.2) and to prevent potential confusion in the use of separate terms. **Deviations** None

NEI 99-01 Rev. 5	New EALs	Difference or Deviation
CU1 **Initiating Condition - NOTIF OF UNUSUAL EVENT** RCS Leakage. **Operating Mode Applicability:** Cold Shutdown **Example Emergency Action Levels:** **Note:** The Emergency Director should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the condition will likely exceed the applicable time. 1. RCS leakage results in the inability to maintain or restore RPV level greater than (site specific low level RPS actuation setpoint) for 15 minutes or longer. [*BWR*] 1. RCS leakage results in the inability to maintain or restore level within (site specific pressurizer or RCS/RPV level target band) for 15 minutes or longer. [*PWR*]	**CU7** **Initiating Condition:** RCS leakage. **Operating Mode Applicability:** 5 **EALs:** 1. RCS leakage results in the inability to maintain or restore RCS level **> Procedure Established Minimum Level** for **15 minutes** or longer.	**Differences** Note content has been moved to the classification description and instructions section as it is applicable to all time imbedded EALs and is a fundamental instruction for classification, not a threshold criterion. **Deviations** None
CU2 **Initiating Condition - NOTIF OF UNUSUAL EVENT** UNPLANNED Loss of RCS/RPV inventory. **Operating Mode Applicability:** Refueling **Example Emergency Action Levels:** (1 or 2) **Note:** The Emergency Director should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the condition will likely exceed the applicable time. 1. UNPLANNED RCS/RPV level drop as indicated by either of the following: • RCS/RPV water level drop below the RPV flange for 15 minutes or longer when the RCS/RPV level band is established above the RPV flange. • RCS water level drop below the RCS level band for 15 minutes or longer when the RCS/RPV level band is already below the RPV flange. 2. RCS/RPV level cannot be monitored with a loss of RCS/RPV inventory as indicated by an unexplained level rise in (site specific sump or tank).	**CU8** **Initiating Condition:** UNPLANNED loss of RCS inventory. **Operating Mode Applicability:** 6 **EALs:** 1. a. UNPLANNED RCS level drop below the RPV flange for **15 minutes** or longer when the RCS level band is established above the RPV flange. **OR** b. UNPLANNED RCS level drop **< Procedure Established Minimum Level** for **15 minutes** or longer when the RCS level band is established below the RPV flange. **OR** 2. a. RCS level cannot be monitored. **AND** b. Loss of RPV inventory as indicated by UNPLANNED level rise in IRWST.	**Note:** Changes to the nesting format of EAL CU8 is considered administrative. **Differences** Note content has been moved to the classification description and instructions section as it is applicable to all time imbedded EALs and is a fundamental instruction for classification, not a threshold criterion. Replace 'unexplained' with 'unplanned' to match wording of CG7.2 (NEI CG1.2) and to prevent potential confusion in the use of separate terms. **Deviations** None

<table>
<tr><th>NEI 99-01 Rev. 5</th><th>New EALs</th><th>Difference or Deviation</th></tr>
<tr>
<td><u>CA4</u>
Initiating Condition - ALERT
Inability to maintain plant in cold shutdown.
Operating Mode Applicability: Cold Shutdown, Refueling
Example Emergency Action Levels: (EAL 1 or 2)
1. An UNPLANNED event results in RCS temperature greater than (site specific Technical Specification cold shutdown temperature limit) for greater than the specified duration on table.
<table>
<tr><th colspan="3">Table: RCS Reheat Duration Thresholds</th></tr>
<tr><th>RCS</th><th>Containment Closure</th><th>Duration</th></tr>
<tr><td>Intact (but not RCS Reduced Inventory [PWR])]</td><td>N/A</td><td>60 minutes*</td></tr>
<tr><td rowspan="2">Not Intact or RCS Reduced Inventory (PWR)</td><td>Established</td><td>20 minutes*</td></tr>
<tr><td>Not Established</td><td>0 minutes</td></tr>
</table>
* If an RCS heat removal system is in operation within this time frame and RCS temperature is being reduced, the EAL is not applicable.
2. An UNPLANNED event results in RCS pressure increase greater than 10 psi due to a loss of RCS cooling. (PWR-This EAL does not apply in Solid Plant conditions.)</td>
<td><u>CA10</u>
Initiating Condition:
Inability to maintain plant in cold shutdown.
Operating Mode Applicability: 5, 6
EALs:
1. RCS temperature > 200° F for the specified duration on Table C-2.
<table>
<tr><th colspan="3">Table C-2: RCS Reheat Duration Thresholds</th></tr>
<tr><th>RCS</th><th>Containment Closure</th><th>Duration</th></tr>
<tr><td>Intact with Full RCS Inventory</td><td>N/A</td><td>> 60 minutes*</td></tr>
<tr><td rowspan="2">Not Intact OR Reduced RCS Inventory</td><td>Established</td><td>> 20 minutes*</td></tr>
<tr><td>Not Established</td><td>0 minutes</td></tr>
</table>
* If an RCS heat removal system is in operation within this time frame and RCS temperature is being reduced, this EAL is not applicable.
OR
2. RCS pressure rise > 10 psig due to a loss of RCS cooling (this EAL does not apply in solid plant conditions).</td>
<td><u>Differences</u>
Removed ‘An unplanned event results in’ from CA10.1 as no planned evolutions are conducted that intentionally violate the TS cold shutdown temperature limit (irrelevant wording).
Removed ‘An unplanned event results in’ from CA10.2 as no planned event would include a loss of RCS cooling causing RCS pressure to rise > 10 psi (irrelevant wording).
Modified generic basis wording to reflect ‘intact’ terminology.
<u>Deviations</u>
None</td>
</tr>
<tr>
<td><u>CU4</u>
Initiating Condition - NOTIF OF UNUSUAL EVENT
UNPLANNED loss of decay heat removal capability with irradiated fuel in the RPV.
Operating Mode Applicability: Cold Shutdown, Refueling
Example Emergency Action Levels: (1 or 2)
Note: The Emergency Director should not wait until the applicable time has elapsed, but should declare the event as soon as it is determined that the condition will likely exceed the applicable time.
1. UNPLANNED event results in RCS temperature exceeding the Technical Specification cold shutdown temperature limit.
2. Loss of all RCS temperature and RCS/RPV level indication for 15 minutes or longer.</td>
<td><u>CU10</u>
Initiating Condition:
UNPLANNED loss of decay heat removal capability.
Operating Mode Applicability: 5, 6
EALs:
1. RCS temperature > 200° F due to an UNPLANNED loss of decay heat removal capability.
OR
2. Loss of ALL RCS temperature and RCS level indication for 15 minutes or longer.</td>
<td><u>Differences</u>
Removed IC wording ‘with Irradiated Fuel in the RPV’ since it is redundant with mode 5 and 6 and to be consistent with the other C recognition category mode 5 and 6 ICs.
Note content has been moved to the classification description and instructions section as it is applicable to all time imbedded EALs and is a fundamental instruction for classification, not a threshold criterion.
Specified the ‘unplanned event’ as an UNPLANNED loss of decay heat removal capability to match IC wording and basis intent.</td>
</tr>
</table>