99-01 Rev 5 FAQ Summary

#	Section	EAL/IC	Issue	Developer	Notes:
1)	ALL	NOTES	Are notes part of the threshold or instructions	McCain	
2)	5.4	Definitions	Eliminate AFFECTING SAFE SHUTDOWN	Stobaugh	
3)	A	AU1 AA1 AS1 AG1	Clarify declaration if release path isolated	Egdorf	
4)	A	AU1 AU2 AA1 AA2 AS1 AG1	Use of "VALID" should apply	McCain	
5)	A	AU1.4 AU2.2 AA1.4	Suggest "normal levels" as a defined term	McCain	
6)	A	AU2.1	Consistent use of "water level drop"	McCain	
7)	A	AA1	Should we have an equal value between AU1 and AS1 or an equal multiple.	Egdorf	Old FAQ9(A6) - FAQ needs to be written - Keep Active per 10/09/08 meeting
8)	A	AS1 AG1	REM or Rem or rem?	McCain	
9)	A	AG1	Using actual meteorology?	McCain	
10)	C	CU2.2 CA1.2 CS1.3	"Unplanned" vs "Unexplained"	McCain	

99-01 Rev 5 FAQ Summary

#	Section	EAL/IC	Issue	Developer	Notes:
11)	C	CU4	"Irradiated fuel in RPV" not consistent with Mode	McCain	
12)	C	CU7	Matrix states UNPLANNED but not IC	Stobaugh	
13)	C	CA4.2	Description of loss not consistent with CU4	McCain	
14)	5F1	Notes – 4th Bullet	Delete second sentence - consistent w/07-01	Lee	
15)	5F1 5F2 5F3	CTMT Loss IC CTMT Pot Loss IC	Delete NUE IC "ANY Loss or ANY Potential Loss of Containment"	Baker	Old FAQ6(labeled 7) - Keep Active per 10/09/08 meeting – EAL 4 and 5 determine. Work with Loss threshold B from FAQ A2 (First part of FAQ A2 not an FAQ.
16)	5F2 S	Fuel Clad Loss 2A Fuel Clad Pot Loss 2A RCS Loss 2A SG2.1	Criteria for restoring/maintaining RPV level	Walker	Old FAQ7(labeled 9) - Keep Active per 10/09/08 meeting – consider making into 2 FAQs, one for 5F2 and one for SG2
17)	5F3	RCS Pot Loss 2A	Why have to determine leak rate?	McCain	
18)	5F3	Fuel Clad Pot Loss 1B RCS Pot Loss 1B	Potential loss on Heat Sink-Red?	McCain	
19)	5F3	CTMT Pot Loss 2C	EPR has no CTMT auto depress actuation	McCain	

99-01 Rev 5 FAQ Summary

#	Section	EAL/IC	Issue	Developer	Notes:
20)	5F3	CTMT Loss 4 and Basis	1) Size of unisolable fault for SGTR not clear 2) 3rd paragraph unclear 3) "Leaking and Ruptured" vice "ruptured"	Young	Old FAQ3(labeled 2) – Keep Active per 10/09/08 meeting – Revise basis only
21)	H	HU1.1	Clarify "felt earthquake"	Baker	Old FAQ5(labeled 6) - Keep Active per 10/09/08 meeting – Change "Plant" to "Site" in EAL#1; also may apply to HA1.
22)	H	HU2.1	Clarify validation of fire indications specifically "or verification of a Control Room fire alarm"	Baker Stobaugh	Old FAQ4(labeled 5) – Keep Active per 10/09/08 meeting – Originally written to address 99-01 Rev 4. Reword EAL.
23)	H	HU2.2	Consider warehouses and Admin Bldgs?	Baker	
24)	H	HU3 HA3	Peach Bottom CO2 discharge OE needed	Egdorf	
25)	H	HU4 HA4 HS4 HG1	Security - Status of incorporation of new security EALs changes into 03-12 Rev 6	Lee	Old FAQ1 - FAQ needs to be written - Keep Active per 10/09/08 meeting
26)	H	HA4.2	"Airliner" vs "large aircraft"	McCain	
27)	H	HA3.1	Use of the word "operate"	McCain	
28)	H	HA5.1	Control Room evacuation	McCain	

99-01 Rev 5 FAQ Summary

#	Section	EAL/IC	Issue	Developer	Notes:
29)	H	HG1.2	Use of "freshly offloaded reactor core"	McCain	Old FAQ8(A3) - Keep Active per 10/09/08 meeting – Delete "for a freshly off loaded reactor core in pool from EAL2.
30)	S	SU2	IC and EAL do not agree on "shutdown" vs "operating mode"	McCain	
31)	S	SU2 SA2 SS2 SG2	ATWS - Language on consistent across all EAL	McCain	
32)	S	SU3 SA4 SS6	Annunciators - Are RAD monitors considered annunciators	Young	Old FAQ3 – Not an FAQ per 10/09/08 meeting.
33)	S	SU3 SA4 SS6	Backfit digital I&C for advanced designs	McCain	
34)	S C	SU5.1 SU5.2 CU1.1, 1.2(Rev4)	Basis - Reference TS for leakage definitions…..Add "15 minutes or longer" to EALs	Egdorf	
35)	S	SA2.1.a	Declare if due to instr failure…no transient	Young	Old FAQ2(labeled 1) – Keep Active per 10/09/08 meeting – 4th paragraph in Rev 5 says there needs to be a transient or an actual RPS setpoint exceeded; Rev 4 contradicts. Revise 4th paragraph of Rev 5
36)	S C	SA5.1.b CU3.1.b	Additional loss of AC power supply	McCain	
37)	S	SG2.1.c	Need for "continued power generation"	McCain	
38)	5F3	CTMT LOSS 4A	SG Leakrate value change from 10 to 25 gpm	Walker	

99-01 Rev 5 FAQ Summary

#	Section	EAL/IC	Issue	Developer	Notes:
39)	5.4	Definitions	Delete SIGNIFICANT TRANSIENT	Stobaugh	See FAQ 45
40)	A	AU1, AA1,AS1, AG1	Release must last > 60 or 15 minutes	Egdorf	
41)	C	CU1, CU2	Rename CU1 IC to "Unplanned loss of RCS/RPV inventory"	Walker	
42)	H	HG1	Loss of Physical Control	Rick Walker	
43)	General	Most	Verbatim Implementation	Stobaugh	
44)	H	HU1, HU2, HA1, HA2	Better define AREAs of concern	Stobaugh	
45)	5.4	Definitions	Revise definition of SIGNIFICANT TRANSIENT for BWRs	Walker	See FAQ 39
46)	C	CA1, CS1	Revise BWR setpoints	Walker	
47)	5F2 & 3	Other Indications	Poorly written "Other specific indications "can cause misclassification	Lee	

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 01

Requestor to Complete This Section

Licensee: U.S. EPR		Date Submitted: 02/05/09
Licensee Contact: Scott McCain	Phone: 630.452.1704	E-Mail: MDSCScott@aol.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☒ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved:	Which EAL is involved:
Which Basis Paragraph(s) is involved:	Other: EALs that contain notes

Description of Question

Are notes included within the EAL section of NEI 99-01 Rev 5 EALs considered part of the EAL threshold or are they simply instruction for how to evaluate the EAL?

Proposed Solution

Add the following to section 5.1. "When providing EALs and user aids, such as wallboards, notes should be kept with each applicable EAL or moved to a common area and referenced by the applicable EAL."

Justification

Notes contained in the EAL section are considered part of the EAL threshold. Applying human factors to the EAL manual format and user aids does not constitute a deviation provided the note information is included in some manner and has not been changed.

Additional pages attached? ☐ Yes ☒ No

Instructions:
Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Added "When providing EALs and user aids, such as wallboards, notes should be kept with each applicable EAL or moved to a common area and referenced by the applicable EAL." to Section 5.1, at the end of the EAL bullet.

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 02

Requestor to Complete This Section

Licensee: NEI EAL Task Force		Date Submitted: 02/06/09
Licensee Contact: D. Stobaugh	Phone: 262-344-3832	E-Mail: epconsult@charter.net
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☐ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved:	Which EAL is involved:
Which Basis Paragraph(s) is involved:	Other: Definition

Description of Question

Section 5.4 Definitions contains the following:

AFFECTING SAFE SHUTDOWN, BOMB, CIVIL DISTURBANCE, EXTORTION, HOSTAGE, INTUSION, SABOTAGE, and STRIKE ACTION

None of these definitions are used in the document. Therefore the definitions are no longer needed.

Proposed Solution

Delete the definitions.

Justification

Not used in 99-01 Rev 5.

Additional pages attached? ☐ Yes ☒ No

Instructions: Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Removed the definitions from the definitions section.

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 03

Requestor to Complete This Section

Licensee: Kewaunee Power Station		Date Submitted: 12/8/08
Licensee Contact: John Egdorf	Phone: 920-388-8733	E-Mail: john.r.egdorf@dom.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☒ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved: AU1 and AA1	Which EAL is involved: AU1.1, AU1.2, AA1.1, and AA1.2
Which Basis Paragraph(s) is involved:	Other:

Description of Question

Should the following be added to clarify the EALs for AU1 and AA1?

"A radiation monitor reading is VALID when a release path is established. If the release path to the environment has been isolated, then the radiation monitor reading is not VALID for classification."

Proposed Solution

Add the below wording as clarification to the EAL basis section for AU1 and AA1.

A radiation monitor reading is VALID when a release path is established. If the release path to the environment has been isolated, then the radiation monitor reading is not VALID for classification.

Justification

This Initiating Condition for the listed EALs addresses a potential or actual decrease in the level of safety of the plant as indicated by a radiological release for an extended period of time. The occurrence of extended, uncontrolled radioactive releases to the environment is indicative of degradation in safety features and/or controls. Therefore if the release path to the environment is isolated, then the effluent monitor is no longer a valid indication for the EAL based upon an active release.

Additional pages attached? ☐ Yes ☐ No

Instructions: Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Added "A radiation monitor reading is VALID when a release path is established. If the release path to the environment has been isolated, then the radiation monitor reading is not VALID for classification." to the basis for AU1 and AA1.

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 04

Requestor to Complete This Section

Licensee: U.S. EPR		Date Submitted: 02/05/09
Licensee Contact: Scott McCain	Phone: 630.452.1704	E-Mail: MDSCScott@aol.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☐ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved: AG1, AS1, AA1, AU1, AA2, AU2	Which EAL is involved:
Which Basis Paragraph(s) is involved:	Other:

Description of Question

The term “VALID” is formally defined and used in a limited number of EAL thresholds. Why do some EALs explicitly use the term valid and others do not?

Proposed Solution

Provide the following in the NEI 99-01 EALs and FPBs discussion section, rather than as a definition that only applies to a limited subset of EALs.

"All EALs and FPBs (i.e., all thresholds) assume valid indications."

Justification

The term ‘valid’ should apply to all EALs and FPB indications.

Additional pages attached? ☐ Yes ☒ No

Instructions:
Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Added "All thresholds assume VALID indications." as the second sentence in section 3.9 paragraph 2.

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 05

Requestor to Complete This Section

Licensee: U.S. EPR		Date Submitted: 12/03/08
Licensee Contact: Scott McCain	Phone: 630.452.1704	E-Mail: MDSCScott@aol.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☒ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved:	Which EAL is involved: AU1.4, AU2.2, AA1.4, D-AU2.2, D-AA2.2
Which Basis Paragraph(s) is involved:	Other:

Description of Question

Rev 5 uses an asterisk to define the term 'normal' within the three EALs referenced above. This is inconsistent with the format of capitalization for defined terms used throughout the rest of the document.

Proposed Solution

Make 'normal levels' a defined term using the standard format of the document as follow:

NORMAL LEVELS: As applied to radiological IC/EALs, the highest reading in the past twenty-four hours excluding the current peak value.

Add the formal definition to the definitions section and remove the asterick definition from the EALs.

Justification

Provides a consistent use of format for defined terms within the document. This change does not alter the meaning or the intent of the EALs it applies to.

Additional pages attached? ☐ Yes ☒ No

Instructions:
Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Added the following as a new definition in section 5.4.
"NORMAL LEVELS: As applied to radiological IC/EALs, the highest reading in the past twenty-four hours excluding the current peak value."

Removed the asterick definition EALs from AU1.4, AU2.2, AA1.4, D-AU2.2, and D-AA2.2 and replaced "normal* background" or "*" in the EALs with NORMAL LEVELS

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 06

Requestor to Complete This Section

Licensee: U.S. EPR		Date Submitted: 12/03/08
Licensee Contact: Scott McCain	Phone: 630.452.1704	E-Mail: MDSCScott@aol.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☒ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved:	Which EAL is involved: AU2.1, AA2.1
Which Basis Paragraph(s) is involved:	Other:

Description of Question

AU2.1.a wording is inconsistent with AA2.1 wording with regard to use of terms. AU2.1 uses 'water level drop in a reactor refueling pathway' while AA2.1 uses 'water level drop in the reactor refueling cavity, spent fuel pool or fuel transfer canal'.

Proposed Solution

Revise AU2.1.a wording as follows:

UNPLANNED water level drop in (Site specific reactor refueling pathway) as indicated by (site specific level or indication).

Justification

Removes ambiguity and makes for consistent use of EAL wording within escalation pathway. This change does not alter the meaning or the intent of the EAL it applies to.

Additional pages attached? ☐ Yes ☒ No

Instructions:
Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

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EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Revised AU2.1.a wording as follows:

UNPLANNED water level drop in (Site specific reactor refueling pathway) as indicated by (site specific level or indication).

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	**NSIR/DPR**	**NSIR/DPR**	**TL:NSIR/DPR**	**BC:NSIR/DPR**	**D:NSIR/DPR/EPD**
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 07

Requestor to Complete This Section

Licensee: Kewaunee Power Station		Date Submitted: 12/8/08
Licensee Contact: John Egdorf	Phone: 920-388-8733	E-Mail: john.r.egdorf@dom.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☒ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved: AA1	Which EAL is involved: AA1-2
Which Basis Paragraph(s) is involved:	Other:

Description of Question

Should we have an equal value between AU1 and AS1 or anequal multiple?

The applicable section being referred to is "To ensure a realistic near-linear escalation path, a value should be selected roughly halfway between the AU1 and the value calculated for AS1 value". This is a confusing and misleading statement. I am sure what is desired is for the ALERT to be sset so that it falls equally between the UE and SAE. They should be straight-forward and tell exactly how to determine that Value.

Proposed Solution

The guidance should read, "[To ensure a realistic near-linear escalation path, a value should be roughly the geometric mean between the AU1 and the value calculated for AS1. The ALERT value should be set to the greater of either (200 x RETS/ODCM) OR the midpoint between the UE and SAE values, equivalent to ALERT = Sq. Root (UE x SAE)."

Justification

Clarifies the intent of the EAL threshold value to ensure consistent implementation by developers.

Additional pages attached? ☐ Yes ☐ No

Instructions: Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Revised guidance to read read, "[To ensure a realistic near-linear escalation path, a value should be roughly the geometric mean between the AU1 and the value calculated for AS1. The ALERT value should be set to the greater of either (200 x RETS/ODCM) OR the midpoint between the UE and SAE values, equivalent to ALERT = Sq. Root (UE x SAE)."

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 08

Requestor to Complete This Section

Licensee: U.S. EPR		Date Submitted: 02/05/09
Licensee Contact: Scott McCain	Phone: 630.452.1704	E-Mail: MDSCScott@aol.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☐ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved: AG1, AS1	Which EAL is involved:
Which Basis Paragraph(s) is involved:	Other:

Description of Question

Is there a technical reason for the capitalization or non-capitalization of the abbreviation REM?

Proposed Solution

The abbreviation can be stated as mRem, mrem, or mREM.

Justification

The term REM is an abbreviation for Roentgen Equivalent Man. Milli-Rem, or mRem is an abbreviation for 1/1000 of a Rem. The difference in capitalization of the 'R' is related to a preference in writer's style and is inconsequential to its use. A check of the FEMA, NRC, NCRP and NRRPT websites revealed that REM, rem and Rem conventions are used interchangeably. This is not a difference, deviation or an issue of standard terminology.

Additional pages attached? ☐ Yes ☒ No

Instructions:
Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Revised the Acronym and Abbreviations section as follows:

"Mr" changed to mR, mRem, mrem, mREM
"rem" changed to Rem, rem, REM

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 09

Requestor to Complete This Section

Licensee: U.S. EPR		Date Submitted: 12/03/08
Licensee Contact: Scott McCain	Phone: 630.452.1704	E-Mail: MDSCScott@aol.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☐ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved: AG1 / AS1	Which EAL is involved:
Which Basis Paragraph(s) is involved:	Other:

Description of Question

The IC wording of AG1 differs for the IC wording of AS1 in that is specifies using actual meteorology. While the dose assessment EALs do use actual meteorology, the effluent monitor readings are based on an average meteorology.

Proposed Solution

Add the wording 'using actual meteorology.' to AS1 IC. Delete the note and Threshold 1 from both AS1 and AG1 leaving these EALs as Dose Assessment/Projection only. Delete the basis wording which sends the user to the dose assessment/projection conclusion in any case.

Justification

Removes ambiguity and makes for consistent use of IC wording within an escalation pathway. The monitor values as originally written did not implement the IC in that they were based on annuall average meteorgical conditions and not actual meteorology. AG1.1 and AS1.1 are thresholds that rely on pre-determined values and are not accurate for existing Met conditions. Thresholds AG1.2 and AS1.2 utilize actual met conditions for determining release doses as related to PAGs. In order to reach values of this nature Fission Product Barrier EALs would have already been exceeded and the event classified. In addition time is required following the loss of sub cooling to start the fission product generation, since dose assessment can be performed a predetermined value threshold is not required.

Additional pages attached? ☐ Yes ☒ No

Instructions:
Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Added the wording 'using actual meteorology.' to AS1 IC. Deleted the note and Threshold 1 from both AS1 and AG1 leaving these EALs as Dose Assessment/Projection only. Deleted the basis wording which sends the user to the dose assessment/projection conclusion in any case.

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	**NSIR/DPR**	**NSIR/DPR**	**TL:NSIR/DPR**	**BC:NSIR/DPR**	**D:NSIR/DPR/EPD**
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 10

Requestor to Complete This Section

Licensee: U.S. EPR		Date Submitted: 12/03/08
Licensee Contact: Scott McCain	Phone: 630.452.1704	E-Mail: MDSCScott@aol.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☒ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved: CU2, CA1, CS1, BWR CT1.A.L, RWR CT2.A.L	Which EAL is involved: CU2.2, CA1.2, CS1.3, Table 5-F-2 Containment Loss 1A threshold/basis, Table 5-F-3 Containment Loss 2A threshold/ basis
Which Basis Paragraph(s) is involved:	Other:

Description of Question

Rev 5 provides a definition for UNPLANNED, but not for unexplained. Questions have arisen through OPs training regarding the specific difference between the two words. While an unexplained event would be UNPLANNED, an UNPLANNED event may or may not be explainable. This distinction can lead to confusion of terms. Note that CG1.2.a used 'UNPLANNED' in the same context as CS1.3 uses 'unexplained'.

Proposed Solution

Revise the definition of UNPLANNED to accommodate the concept of explained as follows:

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.

Replace all instances of the undefined term 'unexplained' with the defined term 'UNPLANNED'.

Justification

Removes ambiguity and makes for consistent use of defined terms. This change does not alter the meaning or the intent of the EALs or FPB thresholds it applies to.

Additional pages attached? ☐ Yes ☒ No

Instructions:
Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Revised the definition of UNPLANNED to accommodate the concept of explained as follows:

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.

Replaced all instances of the undefined term 'unexplained' with the defined term 'UNPLANNED'.

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	**NSIR/DPR**	**NSIR/DPR**	**TL:NSIR/DPR**	**BC:NSIR/DPR**	**D:NSIR/DPR/EPD**
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 11

Requestor to Complete This Section

Licensee: U.S. EPR		Date Submitted: 12/03/08
Licensee Contact: Scott McCain	Phone: 630.452.1704	E-Mail: MDSCScott@aol.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☒ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved: CU4	Which EAL is involved: CU4.1
Which Basis Paragraph(s) is involved:	Other:

Description of Question

IC includes the words 'with irradiated fuel in the RPV' which is irrelevant for the modes in which it applies (cold shutdown and refueling) and inconsistent with the IC wording in table 5-C-1. Note that this IC wording was removed from the other EALs in this series and appears to be an artifact.

EAL #1 specifies an unplanned event as the cause of a temperature rise while the IC is specific to an unplanned loss of decay heat removal capability.

Proposed Solution

Revise IC wording as follows: "UNPLANNED loss of decay heat removal capability."

Revise EAL #1 wording as follows: "RCS temperature greater than (site specific Technical Specification cold shutdown temperature limit) due to an UNPLANNED loss of decay heat removal capability."

Justification

Removes unnecessary wording used in the IC and ties the EAL language more appropriately to the IC. This change does not alter the meaning or the basis intent of the EAL it applies to.

Additional pages attached? ☐ Yes ☒ No

Instructions:
Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

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EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Revised IC wording as follows: "UNPLANNED loss of decay heat removal capability."

Revised EAL #1 wording as follows: "RCS temperature greater than (site specific Technical Specification cold shutdown temperature limit) due to an UNPLANNED loss of decay heat removal capability."

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	**NSIR/DPR**	**NSIR/DPR**	**TL:NSIR/DPR**	**BC:NSIR/DPR**	**D:NSIR/DPR/EPD**
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 12

Requestor to Complete This Section

Licensee: NEI EAL Task Force		Date Submitted: 10/29/08
Licensee Contact: D. Stobaugh	Phone: 262-344-3832	E-Mail: epconsult@charter.net
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☐ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved: CU7	Which EAL is involved: IC
Which Basis Paragraph(s) is involved:	Other:

Description of Question

The IC Matrix for CU7 starts with UNPLANNED where the IC on the EAL page does not.

Proposed Solution

Delete UNPLANNED from the IC matrix.

Justification

Editorial error while developing 99-01 Rev 5..

Additional pages attached? ☐ Yes ☒ No

Instructions: Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☒ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Delete UNPLANNED from the Cold Shutdown/Refueling Sytem Matrix.

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 13

Requestor to Complete This Section

Licensee: U.S. EPR		Date Submitted: 12/03/08
Licensee Contact: Scott McCain	Phone: 630.452.1704	E-Mail: MDSCScott@aol.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☒ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved:	Which EAL is involved: CA4.2
Which Basis Paragraph(s) is involved:	Other:

Description of Question

EAL #2 specifies an unplanned event as the cause of a pressure rise and then states that it is due to a loss of RCS cooling. Description of loss is not worded with consistent with CU4 (loss of RCS cooling vs. loss of decay heat removal capability).

Proposed Solution

Revise EAL wording from:

An UNPLANNED event results in RCS pressure increase greater than 10 psi due to a loss of RCS cooling.

To:

RCS pressure increase greater than 10 psi due to an UNPLANNED loss of decay heat removal capability.

Justification

Removes ambiguous wording used in the EAL and makes the language consistent with that used in the UE for the escalation series. This change does not alter the meaning or the intent of the EAL it applies to.

Additional pages attached? ☐ Yes ☒ No

Instructions:
Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

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EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Revised EAL wording as follows:

"RCS pressure increase greater than 10 psi due to an UNPLANNED loss of decay heat removal capability."

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	**NSIR/DPR**	**NSIR/DPR**	**TL:NSIR/DPR**	**BC:NSIR/DPR**	**D:NSIR/DPR/EPD**
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 14

Requestor to Complete This Section

Licensee: NEI EAL Task Force		Date Submitted: 03/25/09
Licensee Contact: W. Lee	Phone: 205-992-5627	E-Mail: whlee@southernco.com
NRC Contact: Don Johnson	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☐ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved: 5-F-1	Which EAL is involved: Note: Bullet 4
Which Basis Paragraph(s) is involved:	Other:

Description of Question

In NEI 07-01 review, the NRC staff raised this issue. The NRC staff agrees that technical specification issues involving containment integrity should not be declared in the absence of anevent needing containment barrier mitigatiion. However, the staff pointed out that the second sentence in the 4th bullet needs to be deleted because this sentence appears to expand this caveat to issues NOT associated with technoical specification integrity. For example, in Table 5-F-3, there are three potential loss thresholds that are reductions in the level of safety of the plant, regardless of the other barrier performance, and should be declared. These are (1) a containment pressure greater than 59 psig, (2) Hydrogen concentration in containment, and (3) containment Hi-Hi pressure with failure of passive containment cooling to actuate. A steam line break can pressurize containment without a loss of either fuel or RCS barriers.

Proposed Solution

Delete second sentence in 4th Bullet of the notes on Table 5-F-1.

Justification

NRC recommendation and consistency with NEI 07-01.

Additional pages attached? ☐ Yes ☒ No

Instructions: Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Deleted second sentence in 4th Bullet of the notes on Table 5-F-1.

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 15

Requestor to Complete This Section

Licensee: Exelon		Date Submitted: 11/17/08
Licensee Contact: Larry Baker	Phone: (610)765-5438	E-Mail: jamesl.baker@exeloncorp.com
NRC Contact: Don Johnson	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ? ☐ Site ☒ Generic		

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☐ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved: Fission Product Barrier	Which EAL is involved: Containment Unusual Event
Which Basis Paragraph(s) is involved:	Other:

Description of Question

To avoid confusion and possible over classifications of events, the following changes are proposed:

1) Remove the Containment Loss/Potential Loss Unusual Event classification option since the Containment Loss/Potential Loss thresholds require a Loss/Potential Loss of Fuel Clad or RCS to occur prior to reaching the magnitude of the Containment Loss/Potential Loss thresholds.

Proposed Solution

Remove FU1 to eliminate the possible option of declaring an Unusual Event for Loss or Potential Loss of Containment from Tables 5-F-1, 5-F-2 and 5-F-3.

Add new IC SU9, “Failure of Containment to Isolate Following a High-Energy Line Break” to support elimination of FU1. See attached Technical Analysis document.

Justification

NEI 99-01 provides the following insight in the development and application of the Fission Product Barrier EAL matrix:

> *Containment Barrier thresholds are used primarily as discriminators for escalation from an Alert to a Site Area Emergency or a General Emergency.*

NEI 99-01 further defines how the Containment Barrier thresholds function as escalators and when they would apply by providing the following description of how they relate to not only stand alone Containment events but also in conjunction with events that could affect multiple barriers:

> *The Containment barrier should not be declared lost or potentially lost based on exceeding Technical Specification action statement criteria, unless there is an event in progress requiring mitigation by the Containment barrier. When no event is in progress (Loss or Potential Loss of either Fuel Clad and/or RCS) the Containment barrier status is addressed by Technical Specifications.*

EAL Frequently Asked Question (EALFAQ) Request Form

When reviewing the thresholds for Containment it is clear the logic described above was applied. All Containment thresholds are either a magnitude of severity above what is already defined for the Fuel Clad and/or RCS or an event resulting in an established threshold for the Fuel Clad or RCS has been exceeded.

Since a Containment Loss/Potential Loss threshold can not be met without first having a Loss/Potential Loss of Fuel Clad/RCS occur it would be prudent to remove the option of declaring a stand alone Unusual Event associated with Containment Barrier from the matrix. This removes confusion and ensures fission product barrier classifications are declared in accordance with the guidance provided in NEI 99-01.

Additional pages attached? ☐ Yes ☐ No

Instructions: Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Removed FU1 and revised table in 5-F-1 to eliminate the possible option of declaring an Unusual Event for Loss or Potential Loss of Containment from Tables 5-F-1, 5-F-2 and 5-F-3.

Added new IC SU9, “Failure of Containment to Isolate Following a High-Energy Line Break” to support elimination of FU1. See attached Technical Analysis document.

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

Technical Analysis in Support of NEI 99-01 Revision 5 FAQ #15
Delete Fission Product Barrier IC FU1 "Any loss or potential loss of containment"

OBJECTIVE

Simplify the NEI 99-01 Fission Product Barrier classification scheme and reduce the likelihood of inaccurate or inappropriate Unusual Event classifications.

BACKGROUND

NEI 99-01 Revision 5 Section 5.9 "Fission Product Barrier EALs" IC FU1 specifies declaration of an Unusual Event for "Any loss or potential loss of containment". Specifically, Tables 5-F-2 (PWR) and 5-F-3 (BWR) specify containment barrier loss and potential loss thresholds as part of the fission product barrier based classification scheme. While the existing scheme indicates declaration of an Unusual Event for any such loss or potential loss of the containment barrier as defined by the specified loss and potential loss thresholds, it is noted on page 88 that "Containment Barrier thresholds are used primarily as discriminators for escalation from an Alert to a Site Area Emergency or a General Emergency." A clarifying note regarding fission product barrier based EALs on page 80 states "The Containment Barrier should not be declared lost or potentially lost based on exceeding Technical Specification action statement criteria, unless there is an event in progress requiring mitigation by the Containment barrier. When no event is in progress (Loss or Potential Loss of either Fuel Clad and/or RCS) the Containment Barrier status is addressed by Technical Specifications." These statements imply that a containment barrier loss or potential loss in the absence of a challenge to another barrier should not warrant classification under fission product barrier monitoring criteria.

ANALYSIS APPROACH

As summarized in the following tables, each containment loss or potential loss threshold of NEI 99-01 Revision 5 was examined as follows:

- The symptoms or events that would generate the threshold were identified.
- The conditions that must occur in order to identify the symptom or produce the event sequence were compared to the fuel clad and RCS fission product barrier thresholds.
- If another fission product barrier threshold would always be reached by one of the conditions, the containment threshold should be considered redundant to the other barrier threshold and, therefore, unnecessary because the fuel clad and RCS fission product barrier threshold alone requires a higher classification than the Unusual Event required by the containment threshold.
- If another fission product barrier threshold would not always be reached by one of the conditions, a determination was made whether either an existing Unusual Event IC/EAL would be applicable or existing containment Technical Specification criteria is deemed to adequately address the condition.

CONCLUSION

This technical analysis (see attached) supports the conclusion that the Section 5.9 fission product barrier IC FU1 should be deleted from the fission product barrier classification scheme based on the fact that each of the existing specific loss or potential loss thresholds, as defined, either:

- represents a challenge to one or more of the other barriers (escalatory to a SAE or GE), or
- would result in declaration of a UE under another existing EAL threshold, or
- is adequately controlled under Technical Specification containment operability requirements.

Technical Analysis in Support of NEI 99-01 Revision 5 FAQ #15
Delete Fission Product Barrier IC FU1 "Any loss or potential loss of containment"
Attachment 1 - Analysis

ANALYSIS

BWR Justification - Containment Loss

Loss #	Containment Loss Threshold	Justification
1	A. Primary containment pressure rise followed by a rapid unexplained drop in primary containment pressure. **OR** B. Primary containment pressure response not consistent with LOCA conditions.	The NEI 99-01 bases states " Rapid unexplained loss of pressure (i.e., not attributable to drywell spray or condensation effects) following an initial pressure increase from a high energy line break indicates a loss of containment integrity. Primary containment pressure should increase as a result of mass and energy release into containment from a LOCA. Thus, primary containment pressure not increasing under these conditions indicates a loss of containment integrity." By definition these conditions define a loss of RCS (LOCA) in combination with containment failure warranting a SAE.
2	Not Applicable	Not Applicable
3	A. Failure of all valves in any one line to close. **AND** Direct downstream pathway to the environment exists after primary containment isolation signal. **OR** B. Intentional primary containment venting per EOPs. **OR** C. UNISOLABLE primary system leakage outside primary containment as indicated by exceeding EITHER of the following: a. Max Safe Operating Temperature. **OR** b. Max Safe Area Radiation.	A. This threshold is based on a failure to isolate following a primary containment isolation signal. Primary Containment isolation signals are generated based on exceeding parameters indicative of a LOCA (high drywell pressure or low RPV water level) and thus represent a loss/potential loss of RCS barrier (e.g., RCS loss 1A, 2A or RCS potential loss 3A). B. Intentional venting in BWR EOPs is directed when PC pressure cannot be maintained below extremely high containment pressures (PC Pressure Limit) or for combustible gas control. Both conditions by definition represent a loss of RCS and/or loss of fuel clad barriers. Furthermore, such elevated pressures and combustible gas concentrations cannot be reached before the requirement for emergency RPV depressurization occurs which is, by definition, a loss of the RCS barrier per RCS loss 3B. C. This threshold is, by definition, a potential loss of RCS barrier per RCS potential loss 3.B.
4	Not Applicable	Not Applicable
5	A. (site specific) as applicable.	Any other unique site specific indicator of

		containment loss would either be indicative of a challenge to one of the other fission product barriers or would be adequately addressed via plant Technical Specification operability requirements.
6	A. Any condition in the opinion of the Emergency Director that indicates Loss of the Containment Barrier.	Any other unique site specific indicator of containment loss would either be indicative of a challenge to one of the other fission product barriers or would be adequately addressed via plant Technical Specification operability requirements.

BWR Justification - Containment Potential Loss

Loss #	Containment Loss Threshold	Justification
1	A. Primary containment pressure greater than (site specific value) and rising. **OR** B. Explosive mixture exists inside primary containment. **OR** C. RPV pressure and suppression pool temperature cannot be maintained below the HCTL.	A. Primary Containment pressure in excess of the containment design pressure is indicative of, as a minimum, a breach of the RCS barrier. Such an elevated pressure is not exceeded in any FSAR analyzed event and would require emergency RPV depressurization long before it is reached. Numerous RCS barrier loss and potential loss thresholds would therefore require at least a SAE emergency classification. B. Explosive mixtures inside containment can only exist as a result of an accident indicative of a loss of both the RCS and fuel clad barriers. C. The inability to maintain RPV pressure and suppression pool temperature below the HCTL requires Emergency RPV Depressurization which is, by definition, a loss of the RCS barrier per RCS loss 3.B.
2	A. Primary containment flooding required.	Primary Containment flooding entry conditions are by themselves representative of losses of the fuel clad (Fuel Clad loss 2.A) and RCS barrier (RCS loss 2.A). Primary Containment flooding is the BWR entry to the SAGs which requires a General Emergency classification.
3	Not Applicable	Not Applicable
4	A. Primary containment radiation monitor reading greater than (site specific value).	By definition, the value specified for use as a potential loss of containment is greater than that specified by Fuel Clad lose 4.A and RCS

		Loss 4.A. As stated in the bases: "The site specific reading is a value that indicates significant fuel damage well in excess of that required for loss of RCS and Fuel Clad."
5	A. (site specific) as applicable.	Any other unique site specific indicator of containment potential loss would either be indicative of a challenge to one of the other fission product barriers or would be adequately addressed via plant Technical Specification operability requirements.
6	A. Any condition in the opinion of the Emergency Director that indicates Potential Loss of the Containment Barrier.	Any other unique site specific indicator of containment potential loss would either be indicative of a challenge to one of the other fission product barriers or would be adequately addressed via plant Technical Specification operability requirements.

PWR Justification - Containment Loss

Loss #	Containment Loss Threshold	Justification
1	Not Applicable	Not Applicable
2	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.	A. The bases that supports part 'A' of this threshold states: "Rapid unexplained loss of pressure (i.e., not attributable to containment spray or condensation effects) following an initial pressure increase from a primary or secondary high energy line break indicates a loss of containment integrity." Any event that manifests this condition as a result of a RCS barrier breach (LOCA) would, by definition, escalate to a SAE. Should this threshold exist as a result of a recognizable secondary high energy line break, this condition would be classifiable as an Unusual Event under SU9, "Failure of Containment to Isolate Following a High-Energy Line Break (PWR)." A secondary high energy line break would not reasonably be expected to challenge containment structural integrity (i.e., not enough energy). The rapid containment pressure decrease would have to be due to an open penetration(s) and therefore addressed by SU9. B. The bases that supports part 'B' of this

		threshold states: "Containment pressure and sump levels should increase as a result of mass and energy release into containment from a LOCA. Thus, sump level or pressure not increasing indicates containment bypass and a loss of containment integrity." This threshold presupposes the occurrence of a LOCA (breach of the RCS barrier) in conjunction with an inconsistent LOCA response. This would lead to an SAE declaration.
3	Not Applicable	Not Applicable
4	A. RUPTURED SG is also FAULTED outside of containment. **OR** B. a. Primary-to-Secondary leakrate greater than 10[25] gpm. **AND** b. UNISOLABLE steam release from affected SG to the environment. (See proposed FAQ #38 to revised the threshold value to be consistent with SU5 for identified leakage of 25 gpm)	A. Part 'A' of this threshold is based on a ruptured SG which is by definition is at least a potential loss of the RCS barrier per RCS Potential loss 2.A. In conjunction with a steam generator fault outside containment, this would require declaration of a SAE. B. A Primary-to-Secondary leakrate greater than 25 gpm requires declaration of an Unusual Event based on IC SU5 RCS Leakage due to identified leakage greater than 25 gpm. (See proposed FAQ # 38 to revise the threshold value to be consistent with SU5 for identified leakage of 25 gpm).
5	A. a. Failure of all valves in any one line to close . **AND** b. Direct downstream pathway to the environment exists after containment isolation signal.	For containment isolation signals generated due to an RCS loss or potential loss, this condition escalates to a SAE. For containment isolation signals generated due to a secondary side high energy line break, classification of an Unusual Event would be required per IC SU9 " Failure of Containment to Isolate Following a High-Energy Line Break (PWR)."
6	Not Applicable	Not Applicable
7	A. (site specific) as applicable.	Any other unique site specific indicator of containment loss would either be indicative of a challenge to one of the other fission product barriers or would be adequately addressed via plant Technical Specification operability requirements.
8	A. Any condition in the opinion of the Emergency Director that indicates	Any other unique site specific indicator of containment loss would either be indicative of

	Loss of the Containment Barrier.	a challenge to one of the other fission product barriers or would be adequately addressed via plant Technical Specification operability requirements.

PWR Justification - Containment Potential Loss

Loss #	Containment Loss Threshold	Justification
1	A. Containment-Red Entry Conditions Met.	The bases supporting this threshold states: "Conditions leading to a containment RED path result from RCS barrier and/or Fuel Clad Barrier Loss. Thus, this threshold is primarily a discriminator between Site Area Emergency and General Emergency representing a potential loss of the third barrier."
2	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.	A. The site specific value specified in the bases for this threshold is the containment design pressure. Exceeding this containment pressure is indicative of a significant LOCA in combination with either extended loss of containment cooling function or core melt (metal water reaction), and would therefore escalate the event to either a SAE or GE. B. Explosive mixtures inside containment can only exist as a result of an accident indicative of a loss of both the RCS and fuel clad barriers. At a minimum, this would require declaration of a SAE. C. The site specific value specified in the bases for this threshold is the containment cooling system actuation pressure setpoint. Exceeding this containment pressure is indicative of a significant LOCA and would therefore escalate the event to at least a SAE.
3	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).	The conditions defined by thresholds 'A' and 'B' represent a severe or extreme challenge to the core cooling function, and indicate a loss or potential loss of both the fuel clad and RCS barriers. This is also the transition point into Severe Accident Guidelines, and at a minimum, would require declaration of a SAE.

Technical Analysis in Support of NEI 99-01 Revision 5 FAQ #15
Delete Fission Product Barrier IC FU1 "Any loss or potential loss of containment"
Attachment 1 - Analysis

	AND c. Restoration procedures not effective within 15 minutes.	
4	Not Applicable	Not Applicable
5	Not Applicable	Not Applicable
6	A. Containment radiation monitor reading greater than (site specific value).	By definition, the value specified for use as a potential loss of containment is greater than that specified by Fuel Clad Loss 6.A and RCS Loss 6.A. As stated in the bases: "The site specific reading is a value which indicates significant fuel damage well in excess of the thresholds associated with both loss of Fuel Clad and loss of RCS barriers." At a minimum, would require declaration of a SAE.
7	A. (site specific) as applicable.	Any other unique site specific indicator of containment potential loss would either be indicative of a challenge to one of the other fission product barriers or would be adequately addressed via plant Technical Specification operability requirements.
8	A. Any condition in the opinion of the Emergency Director that indicates Potential Loss of the Containment Barrier.	Any other unique site specific indicator of containment potential loss would either be indicative of a challenge to one of the other fission product barriers or would be adequately addressed via plant Technical Specification operability requirements.

SYSTEM MALFUNCTIONS

SU9

Initiating Condition - NOTIFICATION OF UNUSUAL EVENT

Failure of Containment to Isolate Following a High-Energy Line Break (PWR)

Operating Mode Applicability: Power Operation, Startup, Hot Standby, Hot Shutdown

Example Emergency Action Level: (1 and 2)

1. Failure of containment to automatically isolate as required following a non-RCS high-energy line break (e.g., main steam line or feed water line break).

2. Manual actions taken at the reactor control console do not result in closure of all required penetrations.

Basis:

This condition indicates a failure of one or more containment penetrations to automatically isolate (close) as required following a non-RCS high-energy line break, and the inability to manually isolate (close) the penetration(s) from the Control Room. Example initiating events include a main steam line or feed water line break. To receive consideration, the containment isolation signal must be generated as the result on an off-normal/accident condition; a failure resulting from testing or maintenance is not a classifiable event. An automatic containment isolation signal may be generated as a result of high containment pressure, a safety injection actuation, etc.

Absent a loss or potential loss of the Fuel Clad or RCS barrier, this condition represents a potential degradation of station safety.

The determination of containment and penetration status – isolated or not isolated – should be made in accordance with the appropriate criteria contained in the plant's AOPs and EOPs.

Manual actions taken at the reactor control console are any set of actions by the reactor operator(s) which causes or should cause a containment penetration (e.g., a valve) to isolate (close).

This event would escalate to a Site Area Emergency in accordance with the Fission Product Barrier Degradation Matrix (FS1) if there were a concurrent loss or potential loss of the Fuel Clad or RCS barrier. In particular, the containment barrier status would be assessed against the containment loss and potential loss criteria.

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 16

Requestor to Complete This Section

Licensee: OSSI		Date Submitted: April 24, 2008
Licensee Contact: C. Kelly Walker	Phone: 704-243-0501	E-Mail: ossikelly@aol.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☒ NESP-007 ☒ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved: SG2	Which EAL is involved: 1
Which Basis Paragraph(s) is involved:	Other: BWR Fission Product Barrier thresholds: Fuel Clad Loss 2A, Potential Loss 2A and RCS Loss 2A

Description of Question

Numerous BWR licensees have identified ambiguity in the EAL threshold criteria related to the inability to restore and maintain RPV water above the specified setpoint both in the Fission Product Barrier table and IC SG2. See attached detailed description. This FAQ applies to NEI 99-01 Rev. 5 and to those BWR licensees that have implemented similar wording in their NEI 99-01 Rev. 4 and NUMARC/NESP-007 Rev. 2 based EAL schemes.

Proposed Solution

Revise Table 5-F-2 Fuel Clad Loss and Potential Loss 2A threshold/basis, RCS Loss 2A basis, and SG2 basis per attached detailed discussion.

Justification

Improved understanding of EAL basis and application.

Additional pages attached? ☒ Yes ☐ No

Instructions: Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force: 10/9/08		Approved: ☒ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Revised Table 5-F-2 Fuel Clad Loss and Potential Loss 2A threshold/basis, RCS Loss 2A basis, and SG2 basis per attached detailed discussion.

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

CONTINUATION:

Issue & Purpose of FAQ:

Numerous BWR licensees have identified ambiguity in the EAL threshold criteria related to the inability to restore and maintain RPV water above the specified setpoint both in the Fission Product Barrier table and IC SG2. This could lead to inconsistent interpretation of the classification criteria.

This FAQ clarifies the intended interpretation and bases of the phrase "*RPV water level cannot be restored and maintained…*" as used within:

- BWR Fission Product Barrier thresholds: Fuel Clad Loss 2A, Potential Loss 2A and RCS Loss 2A
- SG2 Example EAL #1

Revision 5 of NEI 99-01 incorporated into the above EAL classification thresholds the terminology used in Revision 2 of the BWROG Emergency Procedure and Severe Accident Guidelines (EPGs/SAGs) related to EOP steps associated with RPV water level (inventory) control. The purpose for using wording similar to the EOPs (EPGs), as described in Section 3.9 of NEI 99-01, is to allow emergency classification to flow from the EOP assessment rather than being based on a separate EAL assessment. However, experience during training and drills with the specified EAL thresholds has resulted in inconsistent interpretation and questions as to which point within the EOP RPV water level control flowpath the appropriate determination is made that level cannot be restored and maintained above the specified level threshold for the purpose of emergency classification.

Fission Product Barrier Thresholds:

BWR Fuel Clad loss threshold 2A states:

> "*RPV water level cannot be restored and maintained above (site specific RPV water level corresponding to the requirement for primary containment flooding).*"

As described in the bases:

> "*Depending on the plant this may be the Minimum Steam Cooling RPV Water Level or the jet pump suction without the requisite Core Spray cooling flow. BWROG EPGs/SAGs provide explicit direction when RPV water level cannot be determined.*"

The operator is required to assess the ability to restore and maintain RPV water level relative to the Minimum Steam Cooling RPV Water Level (MSCRWL) threshold at various points within the RPV water level control flowpath of the EOPs (EPG Contingency #1 and Contingency #5)[1]. The intent of the NEI 99-01

[1] In EPG Contingency #1 alone, the condition pertaining to the ability to restore and maintain RPV water level above the MSCRWL must be assessed no less than three times, not including the final use of this condition for directing entry to the SAGs when Primary Containment Flooding is required.

threshold, however, is that RPV level cannot be restored or maintained such that Primary Containment Flooding is required. The Fuel Clad Loss threshold has been revised in NEI 99-01 Revision 5 to clarify this intent.

Additionally, the last two sentences of the developers guidance related to when "RPV water level cannot be determined" have been moved to the end of the Fuel Clad Potential Loss bases since that is the threshold with which it is associated.

BWR Fuel Clad potential loss threshold 2A and RCS loss threshold 2A state:

> "*RPV water level cannot be restored and maintained above (site specific RPV water level corresponding to the top of active fuel) or cannot be determined.*"

Again, the operator is required to assess the ability to restore and maintain RPV water level relative to the threshold at various points within the RPV water level control flowpath of the EOPs (for examples see EPG Steps RC/L-2 and C1-3 for non-ATWS events). Specifically, if RPV water level cannot be restored and maintained above the top of active fuel (TAF), the operator is directed by the last paragraph of EPG Step RC/L-2 to enter Contingency #1 where he is given the latitude to use available injection systems, injection subsystems and alternate injection subsystems to restore RPV water level above TAF. Definition of the phrase "restore and maintain" allows the operator to make this decision when actual RPV water level is above, at, or somewhat below TAF. Timing of this decision is event dependent and includes factors such as the availability of injection sources, RPV pressure relative to the shutoff heads of injection sources, status of primary containment parameters, etc. No matter where actual RPV water level is with respect to TAF, however, the operator believes when making this decision that more drastic measures (e.g., emergency depressurization of the RPV) may be required to avoid unnecessary core uncovery and challenge to the fuel clad barrier.

Until the RPV is depressurized and low-pressure RPV injection sources operate, it is difficult for the operator to determine if, in fact, the fuel clad barrier is being challenged. It is, therefore, the inability to restore or maintain RPV water level above TAF following RPV depressurization (either by automatic or manual action or a large break) that threatens adequate core cooling. The Fuel Clad Potential Loss threshold and bases have been revised to clarify that intent.

System Malfunction IC/EAL SG2:

The NEI 99-01 Rev. 5 bases for IC/EAL SG2 states that the BWR criteria associated with an extreme challenge to core cooling under ATWS conditions is:

> "*…intended to mean that the reactor vessel water level cannot be restored and maintained above Minimum Steam Cooling RPV Water Level as described in the EOP bases*".

Like the Fuel Clad Potential Loss threshold, the operator is required to assess the ability to restore and maintain RPV water level relative to the threshold at

various points within the RPV level control flowpath (in this case EPG Contingency #5, Level/Power Control). However, unlike the Fuel Clad Loss threshold, the bases states that:

> *"In the event either of these challenges exists at a time that the reactor has not been brought below the power associated with the safety system design a core melt sequence exists. In this situation, core degradation can occur rapidly. For this reason, the General Emergency declaration is intended to be anticipatory of the fission product barrier table declaration to permit maximum off-site intervention time."*

In EPG Contingency #5, RPV injection sources that inject directly into the core region are restricted from use until it is determined that sources that inject outside the core shroud cannot restore and maintain RPV water level above the MSCRWL. This is necessary in BWRs to avoid the rapid addition of cold unborated water into the core region and the possible consequent reactivity excursion that could result when the reactor is not shut down with control rods. So, when RPV water level cannot be restored and maintained above the MSCRWL in an ATWS event, emergency RPV depressurization is specified and low pressure injection sources and sources that inject inside the core shroud are placed in service. To reach the EOP decision that allows the operator to assess the ability to restore and maintain RPV water level above the MSCRWL with <u>all</u> possible injection sources (high and low pressure), the operator must:

1. Decide RPV water level cannot be restored and maintained above the MSCRWL (EPG Step C5-5, last paragraph).
2. Stop and prevent all significant injection into the RPV (EPG Step C5-5.1 1st paragraph).
3. Open ADS number of SRVs to rapidly depressurize the RPV (EPG Step C2-1.3).
4. Let RPV pressure drop below the Minimum Steam Cooling Pressure (EPG Step C5-5.1, 1st paragraph).
5. Commence and slowly increase RPV injection with preferred injection sources (EPG Step C5-5.2, 1st paragraph).
6. Attempt injection with all available sources if preferred sources cannot restore and maintain RPV water level above the MSCRWL (EPG Step C5-5.2, 2nd paragraph).

If allowance is given to RPV depressurization actions before evaluating whether RPV level can be restored and maintained above MSCRWL, it would not be until the last paragraph of Step C5-5.3 that the operator could fully determine if all possible injection sources can restore and maintain RPV water level above the MSCRWL and thereby assess this EAL[2].

[2] Note the above references to the EPGs/SAGs are based on Revision 2 of the guidelines and it is recognized, for the ATWS case in particular, that post-Revision 2 EPG changes have been approved that would further delay and restrict the requirement for emergency RPV depressurization in an ATWS event. BWRs that have implemented these

Therefore, based on the above basis, no allowance should be given for Emergency RPV Depressurization and the capability of low pressure injection systems to restore RPV water level above the MSCRWL before an emergency declaration would be required. Additionally, the inability to restore and maintain RPV water level above the MSCRWL following Emergency RPV Depressurization is an explicit EPG requirement for Primary Containment Flooding and an entry condition to the SAGs which, according to the NEI 99-01 BWR fission product barrier table, would require, in and of itself, a General Emergency declaration. Thus, it would negate the intent that the IC SG2 General Emergency declaration "…be anticipatory of the fission product barrier table declaration." The SG2 bases have been revised to clarify this intent.

approved changes would impose further criteria on the need to emergency depressurize the RPV in EPG Contingency #5. Consequently, the decision concerning the requirement for Primary Containment Flooding and the need for a General Emergency due to SG2 would be further obscured.

EAL Frequently Asked Question (EALFAQ) Request Form

Proposed Changes to the BWR Fission Product Barrier Thresholds Based on RPV Water Level:

[From NEI 99-01 Rev. 5, Table 5-F-2]

2. Reactor Vessel Water Level		**2. Reactor Vessel Water Level**		**2. Reactor Vessel Water Level**	
A. RPV water level cannot be restored and maintained above the water level corresponding to the requirement for primary containment flooding.	A. RPV water level cannot be restored and maintained above (site specific RPV water level corresponding to the top of active fuel) following depressurization of of the RPV or cannot be determined.	A. RPV water level cannot be restored and maintained above (site specific RPV water level corresponding to the top of active fuel) or cannot be determined.	Not Applicable	Not Applicable	A. Primary containment flooding required.

Fuel Clad Barrier Bases:

2. Reactor Vessel Water Level

Loss Threshold A

The Loss threshold corresponds to the requirement for primary containment flooding due to the inability to restore and maintain RPV water level above a site specific value. This site specific value corresponds to the level used in EOPs to indicate challenge of core cooling. This is the minimum value to assure core cooling without further degradation of the clad.

[*Depending on the plant this may be the Minimum Steam Cooling RPV Water Level or the jet pump suction without the requisite Core Spray cooling flow.*]

Potential Loss Threshold A

The site specific RPV water level threshold is the same as the RCS barrier Loss threshold A and corresponds to the site specific water level at the top of the active fuel. Thus, this threshold indicates a Potential Loss of the Fuel Clad barrier and a Loss of RCS barrier that appropriately escalates the emergency classification level to a Site Area Emergency. This threshold is considered to be exceeded when, as specified in the site specific EOPs, that RPV water cannot be restored and maintained above the specified level following depressurization of the RPV (either manually, automatically or by failure of the RCS barrier).

[*BWROG EPGs/SAGs provide explicit direction when RPV water level cannot be determined. Since the loss of ability to determine if adequate core cooling is being provided presents a significant challenge to the fuel clad barrier, a potential loss of the fuel clad barrier is specified.*]

RCS Barrier Bases:

2. Reactor Vessel Water Level

The Loss threshold site specific RPV water level corresponds to the level that is used in EOPs to indicate challenge of core cooling.

The threshold value is the same as Fuel Clad Barrier Potential Loss threshold #2.A and corresponds to a challenge to core cooling. Thus, this threshold indicates a Loss of RCS barrier and Potential Loss of Fuel Clad barrier that appropriately escalates the emergency classification level to a Site Area Emergency.

Unlike the Fuel Clad barrier Reactor Vessel Water Level potential loss threshold (top of the active fuel), the additional requirement that the RPV be depressurized is not associated with the RCS barrier potential loss. The significant loss of inventory that must occur to determine that RPV water level cannot be restored and maintained above the threshold is by itself a very strong indication that the RCS barrier is no longer capable of retaining sufficient inventory to keep the core submerged, and thus represents a loss of the RCS barrier.

There is no Potential Loss threshold associated with this item.

EAL Frequently Asked Question (EALFAQ) Request Form

Proposed Changes to the System Malfunction General Emergency EAL SG2 Based on Failure to Scram:

[From NEI 99-01 Rev. 5, IC SG2]

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.)

Bases:
Under these conditions, the reactor is producing more heat than the maximum decay heat load for which the safety systems are designed and efforts to bring the reactor subcritical are unsuccessful.

[*The reactor should be considered shutdown when it producing less heat than the maximum decay heat load for which the safety systems are designed (typically 3 to 5% power). For plants using CSFSTs, this EAL equates to the criteria used to determine a valid Subcriticality Red Path. For BWRs this EAL should be the APRM downscale trip setpoint.*]

[*For PWRs, the extreme challenge to the ability to cool the core is intended to mean that the core exit temperatures are at or approaching 1200 degrees F or that the reactor vessel water level is below the top of active fuel. For plants using CSFSTs, this EAL equates to a Core Cooling RED condition combined with a Subcriticality RED condition.*]

[*For BWRs, the extreme challenge to the ability to cool the core is intended to mean any time it is determined that RPV water level cannot be restored and maintained above Minimum Steam Cooling RPV Water Level (regardless of actions taken to depressurize the RPV) as described in the EOP bases.*]

[*Another consideration is the inability to initially remove heat during the early stages of this sequence. For PWRs, if emergency feedwater flow is insufficient to remove the amount of heat required by design from at least one steam generator, an extreme challenge should be considered to exist. For plants using CSFSTs, this EAL equates to a Heat Sink RED condition combined with a Subcriticality RED condition.*]

[*For BWRs, considerations include inability to remove heat via the main condenser, or via the suppression pool or torus (e.g., due to high pool water temperature).*]

EAL Frequently Asked Question (EALFAQ) Request Form

In the event either of these challenges exists at a time that the reactor has not been brought below the power associated with the safety system design, a core melt sequence may exist. In this situation, core degradation can occur rapidly. For this reason, the General Emergency declaration is intended to be anticipatory of the fission product barrier table declaration to permit maximum off-site intervention time.

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 17

Requestor to Complete This Section

Licensee: U.S. EPR		Date Submitted: 02/05/09
Licensee Contact: Scott McCain	Phone: 630.452.1704	E-Mail: MDSCScott@aol.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☒ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved: RC2.A (PL)	Which EAL is involved:
Which Basis Paragraph(s) is involved:	Other:

Description of Question

For RC2.A, why is the Potential Loss defined as a site specific leak rate value rather than a more readily identifiable condition that remains consistent with the technical basis for the EAL?

Proposed Solution

Revise Table 5-F-3, RCS potential loss 2A threshold to the following:

A. RCS leak resultingin the inability to maintain (site specific pressurizer level operating band) with Letdown isolated.

Justification

As evidenced in operator simulator training, the determination of an RCS gpm leak rate value for event classification is time consuming and error likely under transient conditions. No time period defines the duration of the leak rate. New potential loss wording, consistent with the current technical basis and based on common industry usage and the ability of an operator to recognize the event should be used.

Additional pages attached? ☐ Yes ☒ No

Instructions:
Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Revised Table 5-F-3, RCS potential loss 2A threshold to the following:

2A. RCS leak resultingin the inability to maintain (site specific pressurizer level operating band) with Letdown isolated.

Revised the basis to support changes in the threshold values.

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 18

Requestor to Complete This Section

Licensee: U.S. EPR		Date Submitted: 12/03/08
Licensee Contact: Scott McCain	Phone: 630.452.1704	E-Mail: MDSCScott@aol.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☒ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved: FC1.B-PL and RC1.B-PL (PWR)	Which EAL is involved:
Which Basis Paragraph(s) is involved:	Other:

Description of Question

Declaring a potential loss of fuel clad and RCS (SAE) based simply on entry into Heat Sink-Red is inappropriate. Typical EOPs enter the Heat Sink - Red flowpath prior to an actual loss of heat removal capability.

Proposed Solution

Revise FPB Table 5-F-3 Fuel Clad and RCS Barrier Potential Loss 1B thresholds to:

Heat Sink-Red entry conditions met.

AND

Heat Sink is required

Justification

RCS level may be intentionally dropped and other means of cooling established, making the potential loss determination premature when based on only Heat Sink - Red. The potential loss threshold should not be met until the EOP actions are not effective in providing adequate heat sink capability.

Additional pages attached? ☐ Yes ☒ No

Instructions:
Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Revised FPB Table 5-F-3 Fuel Clad and RCS Barrier Potential Loss 1B thresholds to:
Heat Sink-Red entry conditions met.
AND
Heat Sink is required

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 19

Requestor to Complete This Section

Licensee: U.S. EPR		Date Submitted: 03/10/09
Licensee Contact: Scott McCain	Phone: 630.452.1704	E-Mail: MDSCScott@aol.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☐ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved:	Which EAL is involved: CT2.C – Potential Loss
Which Basis Paragraph(s) is involved: All	Other:

Description of Question

NEI 99-01 Rev 5 specifies pressure greater than containment 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.

This creates a design specific deviation with the generic EAL guidance document to be used by all new U.S. EPR reactors.

Can guidance be added to 99-01 Rev 5 to address the removal of potential loss threshold CT2.C to eliminate the design specific deviation from the generic EAL guidance document?

Proposed Solution

Revise NEI 99-05 to include a section to address the design specific deviations for the U.S. EPR plants per the attached bases pages.

Justification

Eliminates a design specific deviation for the U.S. EPR EALs and establishes a standard IC, EAL and bases language for all new U.S. EPR EAL submittals within the NEI EAL guidance document.

Additional pages attached? ☒ Yes ☐ No

Instructions:
Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Added "This threhhold is not applicable to USEPR". to Table 5-F-3 Contianment Potential Loss C basis statement.

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

Table 5-F-3 for U.S. EPR: PWR EAL Fission Product Barrier Table

Thresholds for LOSS or POTENTIAL LOSS of Barriers*

*Determine which combination of the three barriers are lost or have a potential loss and use the following key to classify the event. Also, multiple events could occur which result in the conclusion that exceeding the loss or potential loss thresholds is IMMINENT. In this IMMINENT loss situation use judgment and classify as if the thresholds are exceeded.

GENERAL EMERGENCY	SITE AREA EMERGENCY	ALERT	UNUSUAL EVENT
Loss of ANY two barriers AND Loss or Potential Loss of third barrier.	Loss or Potential Loss of ANY two barriers.	ANY Loss or ANY Potential Loss of EITHER Fuel Clad or RCS.	ANY Loss or ANY Potential Loss of Containment.

Fuel Clad Barrier Thresholds		RCS Barrier Thresholds		Containment Barrier Thresholds	
LOSS	POTENTIAL LOSS	LOSS	POTENTIAL LOSS	LOSS	POTENTIAL LOSS
				2. Containment Pressure A. Containment pressure greater than (site specific value) and rising. **OR** B. Explosive mixture exists inside containment.	

CONTAINMENT BARRIER THRESHOLDS: (1 or 2 or 3 or 4 or 5 or 6 or 7 or 8)

2. Containment Pressure

Potential Loss Threshold C

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 the NRC approved RELAP5/MOD2 (B&W) methodology. Containment pressure responses were calculated using the NRC approved GOTHIC code methodology.

An automatically actuated containment spray system is therefore not required to mitigate the consequences of a Design Basis Accident for the U.S. EPR; therefore, there is no automatic actuation setpoint for this potential loss fission product barrier threshold to be based upon.

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 20

Requestor to Complete This Section

Licensee: FPLE Seabrook Station		Date Submitted: 10/31/08
Licensee Contact: David Young	Phone: 603-773-7287	E-Mail: david_young@fpl.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ? ☐ Site ☒ Generic		

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☒ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved: Containment Barrier Thresholds	Which EAL is involved: SG Secondary Side Release with P-to-S Leakage
Which Basis Paragraph(s) is involved: All	Other:

Description of Question

This EAL FAQ is addressing the basis for Loss of Containment Barrier, #4 - SG Secondary Side Release With Primary to Secondary Leakage - as presented in NEI 99-01, Rev. 5. [similar language is also contained in Rev. 4].

1) The lower limit of the "UNISOLABLE steam release from affected SG to the environment" is not clearly defined. The basis implies, but does not state, that a steam generator should be considered FAULTED for the steam release to be considered a bypass of containment. The classification of an unisolable steam release from a source other than the condensor and less than that required to declare the steam generator FAULTED is not addressed (e.g., break on a 1" main steam pressure transmitter line outside of containment and upstream of the MSIVs).

2) The third paragraph is confusing and does not aid in understanding of the EAL intent and application. In addition, this paragraph could be clearer on forced steaming of a leaking or RUPTURED generator.

3) The Loss Threshold B basis needs revision to specify a "leaking or RUPTURED steam generator", not just RUPTURED. The paragraph starts by discussing "SG tube leaks that exceed 10 gpm"; however, the next few sentences refer to a "RUPTURED steam generator". For most Westinghouse reactors, a steam generator is not considered RUPTURED unless the primary-to-secondary leakage requires a Safety Injection actuation (typically greater than the capacity of two charging pumps). Obviously, this is significantly greater than 10 gpm.

Marty – one related question on this topic that the task force may also wish to consider. This question may be unique for a large Westinghouse PWR or may apply to other PWR types. Following a plant trip and SI resulting from a SGTR, a steam line power operated relief valve (or similar type of valve) on the affected steam line will automatically and periodically lift to relieve steam line pressure. This intermittent lifting will continue until there is a sufficient reduction in primary side pressure. Under the current scheme, this implies that the RCS and Containment barriers are lost during periods when the pressure relieving valve is open. The concern is that any SGTR would thus automatically lead to a Site Area Emergency declaration. This seems to be an unwarranted declaration given the potential (and very small) risk to the public.

Proposed Solution

1) State that the lower bound for an "UNISOLABLE steam release" is a release of sufficient size to result in 1) any steam generator pressure decreasing in an uncontrolled manner, or 2) any steam generator

EAL Frequently Asked Question (EALFAQ) Request Form

completely depressurized.

2) See attached proposed basis for revised wording which addresses all items above.

Justification

Improved understanding of EAL basis and application.

Additional pages attached? ☒ Yes ☐ No

Instructions: Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Revised the Loss Threshold basis paragraph 1 and 3 as follows to clarify issues related to the EAL:

Loss Threshold A [FAQ38]

~~This~~ T~~t~~hreshold A addresses the condition in which a ~~RUPTURED~~ leaking steam generator is also FAULTED outside of containment, and the fault cannot be isolated. [FAQ20] This condition represents a bypass of the RCS and containment barriers ~~and is a subset of the second threshold~~. In conjunction with RCS leak rate barrier loss threshold, this would ~~always~~ result in the declaration of a Site Area Emergency.

~~Loss Threshold B~~

This threshold also addresses SG tube leaks ~~that exceed~~greater than ~~10~~ 25 gpm in conjunction with a~~n UNISOLABLE release path to the environment from the affected steam generator~~ FAULTED Steam Generator. The threshold for establishing the UNISOLABLE secondary side release is intended to be a prolonged release of radioactivity from the ~~RUPTURED~~ leaking steam generator directly to the environment. [FAQ38]

An UNISOLABLE steam release is one that can not be promptly isolated (from the Control Room or in the field), or one that may last continuously, or intermittently, for a protracted period. Examples of the latter case include a stuck open pressure relieving valve or uncontrolled intermittent lifting of a safety valve. Intermittent lifting of a SG safety valve does not meet the intent of a containment bypass. Releases associated with safety relief valve operation are evaluated as radioactive releases through using Abnormal Rad Levels / Radiological Effluent ICs. [FAQ20]

~~This~~ A release directly to the environment could be expected to occur when the main condenser is unavailable to accept the contaminated steam (i.e., SG tube rupture with concurrent loss of off-site power and the ~~RUPTURED~~ leaking steam generator is required for plant cooldown or a stuck open relief valve). If the main condenser is available, there may be releases via air ejectors, gland seal exhausters, and other similar controlled, and often monitored, pathways. These pathways do not meet the intent of an UNISOLABLE release path to the environment. These minor releases are assessed using Abnormal Rad Levels / Radiological Effluent ICs.-[FAQ38]

EAL Frequently Asked Question (EALFAQ) Request Form

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 21

Requestor to Complete This Section

Licensee: Exelon		Date Submitted: 11/17/08
Licensee Contact: Larry Baker	Phone: (610)765-5438	E-Mail: jamesl.baker@exeloncorp.com
NRC Contact: Don Johnson	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☐ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved: HU1	Which EAL is involved: 1
Which Basis Paragraph(s) is involved:	Other:

Description of Question

Clarification is needed regarding the declaration criteria for Threshold #1, which states "Earthquake felt in plant". Does this limit the vibratory motion being felt to reports from in-plant personnel only or should reports from personnel outside the plant but on-site be considered as satisfying this threshold?

Information contained in the Basis section is not clear and introduces confusion as to the threshold's intent.

Proposed Solution

Revise the EAL threshold to provide a plant specific indication or method of indication in conjunction with a non-instrumented criteria. Revise the basis to support the new EAL clarifying the intent of the Seismic threshold values.

Justification

Seismic events are large area events and not confined to being felt only in the Control Room. Equipment located in the Protected area of the plant is the equipment which is of primary importance for safe operation of the plant.

Additional pages attached? ☐ Yes ☐ No

Instructions: Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

EAL 1-1 was revised as follows:

1. Seismic event confirmed by (site specific indication or method) ~~identified by **ANY** 2 of the following:~~

~~Seismic event confirmed by (site specific indication or method)~~

AND

Either of the following:

- Earthquake felt in ~~plant~~the PROTECTED AREA.
- National Earthquake Information Center [FAQ21]

The EAL1-1 basis was revised as follows to clarify EAL 1

EAL #1

The site specific indication of a seismic event is used as the first indicator of an event. [*Typically the seismic "trigger" value is 0.01 g. If seismic instrumentation is not available, whatever site specific method that determines an earthquake has occurred is used.*] To eliminate instrument malfunctions, either a report from inside the PROTECTED AREA or a call to the National Earthquake Information Center is used to confirm the event. ~~Damage may be caused to some portions of the site, but should not affect ability of safety functions to operate.~~

~~As defined in the~~The EPRI-sponsored Guidelines for Nuclear Plant Response to an Earthquake, dated October 1989, a "felt earthquake" is: "An earthquake of sufficient intensity such that: (a) the vibratory ground motion is felt at the nuclear plant site and recognized as an earthquake based on a consensus of control room operators on duty at the time, and (b) for plants with operable seismic instrumentation, the seismic switches of the plant are activated." This definition is not used verbatim but is used as a guide for determining a felt earthquake by anyone inside the PROTECTED AREA. [*Control Rooms are often located in areas that experience movement from operating equipment and may not be a reliable location from which to judge an earthquake.*]

~~[*For most plants with seismic instrumentation, the seismic switches are set at an acceleration of about 0.01g. This EAL should be developed on site specific basis. The method of detection can be based on instrumentation, validated by a reliable source, or operator assessment.*]~~

~~The National Earthquake Center can confirm if an earthquake has occurred in the area of the~~

EAL Frequently Asked Question (EALFAQ) Request Form

~~plant.~~

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	**NSIR/DPR**	**NSIR/DPR**	**TL:NSIR/DPR**	**BC:NSIR/DPR**	**D:NSIR/DPR/EPD**
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 22

Requestor to Complete This Section

Licensee: Exelon		Date Submitted: 11/17/08
Licensee Contact: Larry Baker	Phone: (610)765-5438	E-Mail: jamesl.baker@exeloncorp.com
NRC Contact: Don Johnson	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☐ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved: HU2	Which EAL is involved: 1
Which Basis Paragraph(s) is involved:	Other:

Description of Question

Clarification is needed regarding the declaration criteria for Threshold #1. The Basis description as written could imply that a classification should be made on non-valid indications. This could result in inappropriate classifications for events that would not meet the conditions set forth in the threshold and would not meet the definition of an Unusual Event. Ever effort should be made to make the correct classification and not over or under classify events.

Information contained in the Basis section is not clear and introduces confusion as to the threshold's intent.

Proposed Solution

Add the following to the Basis to clearly define the intent of the 15 minute timer in threshold 1:

> The purpose of this threshold is to address the magnitude and extent of fires that may be potentially significant precursors to damage to safety systems. As used here, notification is visual observation and report by plant personnel or sensor alarm indication. The 15-minute period to extinguish the fire begins with a credible notification that a fire is occurring or indication of a valid fire detection system alarm. Determination of a valid fire detection system alarm includes actions that can be taken within the Control Room or at nearby Fire Panels to determine that the alarm is not spurious. These actions include the use of direct or indirect indications such as redundant alarms or instrumentation readings associated with the area to ensure the alarm is not spurious and is an indication of a fire. An alarm verified in this manner is assumed to be an indication of a fire unless personnel dispatched to the scene disprove the alarm within the 15-minute period. The report, however, shall not be required to verify the alarm. If the alarm cannot be verified by redundant Control Room or nearby Fire Panel indications, notification from the field that a fire exists would be required to start the 15-minute classification and fire extinguishment clocks.

EAL Frequently Asked Question (EALFAQ) Request Form

Justification

The Basis section of NEI 99-01 states the following concerning threshold 1:

> *The intent of this 15-minute duration is to size the FIRE and to discriminate against small FIRES that are readily extinguished (e.g., smoldering waste paper basket).*

It is clear from the above statement that this threshold is based solely on the size of an existing fire. The size criterion is determined from a site's ability to extinguish a fire within a set timeframe. The length of time fires actually exist does not play into the determination of size, but only whether or not the fire can be extinguished once its existence is known.

When control room personnel receive notification from the field or determine they have a valid fire alarm the Shift Manager activates the site Fire Brigade. Use of the 15 minutes is appropriate in those cases to make classifications should the fire not be extinguished within the specified time frame. However, if a single alarm is received with no other direct or indirect indications are available to support the alarm the Shift Manager may choose to send an operator to the area to determine the validity of the alarm. This action is prudent since non-fire conditions may cause the detector to alarm, for instance steam. Once the operator reports back to the control room that a fire exist, the Shift Manager then activates the Fire Brigade and the 15-minute clock should start from that point. As can be seen the determination of fire size based on ability to extinguish the fire is not altered in either condition. Therefore it would be appropriate to align threshold criteria with actual fire fighting actions in order to get a true determination on whether a fire can be extinguished within a set timeframe.

This alignment of threshold criteria with normal plant response ensures unnecessary classifications are not made and that non-valid alarm indications are not utilized to make classifications.

Additional pages attached? ☐ Yes ☐ No

Instructions: Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Tabled for further discussion

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 23

Requestor to Complete This Section

Licensee: Exelon		Date Submitted: 11/17/08
Licensee Contact: Larry Baker	Phone: (610)765-5438	E-Mail: jamesl.baker@exeloncorp.com
NRC Contact: Don Johnson	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☐ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved: HU2	Which EAL is involved: 2
Which Basis Paragraph(s) is involved:	Other:

Description of Question

Should warehouses and administrative buildings be considered permanent structures?

Clarification is needed regarding the declaration criteria for Threshold #2. The Threshold and Basis description implies that a classification should be made for any explosion within the Protected Area of sufficient force to damage permanent structures or equipment.

Proposed Solution

Revise threshold as follows: EXPLOSION within PROTECTED AREA resulting in damage to permanent structure or equipment associated with plant operations.

Add the following statement to the Basis:

> Permanent structures and equipment are those where an explosion could indicate a potential degradation of the level of safety of the plant and is not meant to include warehouses or administrative buildings.

Justification

There are a number of buildings within the Protected Area where an explosion could occur and have no effect on the level of safety of the plant. Examples could include air compressor or cylinder explosion in warehouses, gas explosions in cafeterias or hot water heater explosions in administrative buildings. It is clear that none of these example events would affect plant safety but having the EAL be all-inclusive could result in possible over classifications of events, which would not meet the definition of an Unusual Event.

Additional pages attached? ☐ Yes ☐ No

Instructions: Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Revised threshold as follows: EXPLOSION within PROTECTED AREA resulting in damage to permanent structure or equipment associated with plant operations.

Added the following statement to the Basis:

Permanent structures and equipment are those where an explosion could indicate a potential degradation of the level of safety of the plant and is not meant to include warehouses or administrative buildings.

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 24

Requestor to Complete This Section

Licensee: Kewaunee Power Station		Date Submitted: 12/8/08
Licensee Contact: John Egdorf	Phone: 920-388-8733	E-Mail: john.r.egdorf@dom.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☒ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved: HU3 & HA3	Which EAL is involved:
Which Basis Paragraph(s) is involved:	Other:

Description of Question

OE25324, Alert Declared Due to CO2 Fire Extinguisher Discharge

On August 8, 2007, the Peach Bottom Main Control Room was notified that a wall mounted 20 pound portable CO2 fire extinguisher in the E-3 Emergency Diesel Generator (EDG) room had rapidly discharged its contents into the room by a failed seal. The Shift Manager declared an Alert for an Immediately Dangerous to Life and Health (IDLH) atmosphere in a Vital Area. After facility activations and confirmation of no existing hazard, the event was terminated. Subsequent reviews determined that an IDLH condition was not created by this event.

Should this OE be incorporated into NEI 99-01 HU3 and HA3 basis section?

Proposed Solution

HU3, HA3

Add in Bases section:

A 20 lb CO2 extinguisher discharge will not create an IDLH atmosphere unless the room volume is less than 2500 cubic feet. (Reference: OE25324, Alert Declared Due to CO2 Fire Extinguisher Discharge)

Justification

Information added as guidance to prevent an un-necessary emergency classification.

Additional pages attached? ☐ Yes ☒ No

Instructions: Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Revised wording to state the following in Bases sections:

"This would preclude small or incidental releases, e.g. handheld fire extinguishers, or releases that do not impact structures needed for plant operation."

Added the following to the basis of HU3 and HA3:

"This EAL does not apply to fire fighting activities that automatically or manually activate a fire suppression system in an area."

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 25

Requestor to Complete This Section

Licensee: NEI EAL Task Force		Date Submitted: 03/25/09
Licensee Contact: W. Lee	Phone: 205-992-5627	E-Mail: whlee@southernco.com
NRC Contact: Don Johnson	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☐ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved: HU4, HA4, HS4, HG1	Which EAL is involved: 1
Which Basis Paragraph(s) is involved:	Other:

Description of Question

NEI 99-01 Rev 5 and NEI 07-01 referenced Security EALs have been written assuming that NEI 03-12, Rev6 has been revised and approved addressing the new wording in the EALs.

Proposed Solution

Complete revision of NEI 03-12, Rev 6 so that the security events match and are binned to allow usage of the EALs as written

Justification

Consistency between the industry Security and Emergency Plans. See letter from NEI to NRC dated 07/24/09 and response letter from NRC to NEI dated 07/31/09 indicating that changes for all schemes would be addressed by the NRC submittal of a FAQ.

Additional pages attached? ☐ Yes ☒ No

Instructions: Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

NRC to provide FAQ.

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 26

Requestor to Complete This Section

Licensee: U.S. EPR		Date Submitted: 02/05/09
Licensee Contact: Scott McCain	Phone: 630.452.1704	E-Mail: MDSCScott@aol.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☐ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved:	Which EAL is involved: HA4.2
Which Basis Paragraph(s) is involved: HU4	Other:

Description of Question

An airliner is defined as a large aircraft in the NEI 99-01 Rev 5 bases section of HU4 and HA4. Are the two terms synonymous with regards to the EALs?

Proposed Solution

Yes, the two terms are synonymous. The following definition should be added to the definitions section: AIRLINER/LARGE AIRCRAFT: Any size or type of aircraft with the potential for causing significant damage to the plant (refer to the Security Plan for a more detailed definition).

Justification

Airliner is a common (non-nuclear) term defined as; a passenger-carrying aircraft, especially one of a fleet operated by an airline. Size is not a characteristic of the common use of the term airliner, but size determination is necessary to an operator for the Alert EAL. NEI 99-01 Rev 5 defines an airliner a large aircraft in the basis sections of the security EALs as follows; airliner is meant to be a large aircraft. The term 'Large Aircraft' is more identifiable than the term 'Airliner', particularly when distinguishing between the Unusual Event and Alert level EALs – the UE explicitly applies to any aircraft and the Alert implicitly applies to large aircraft.

The use of the term large aircraft within the alert EAL and the definition above is consistent with the NEI 99-01 Rev 5 term "airliner" provided in the EAL basis section and should be considered an allowable difference.

Additional pages attached? ☐ Yes ☒ No

Instructions:
Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

AIRLINER/LARGE AIRCRAFT definition was added to section 5.4.

Replaced Airliner and large aircraft with AIRLINER/LARGE AIRCRAFT where appropirate with the intent that these names may be used interchangably.

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 27

Requestor to Complete This Section

Licensee: U.S. EPR		Date Submitted: 12/03/08
Licensee Contact: Scott McCain	Phone: 630.452.1704	E-Mail: MDSCScott@aol.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☐ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved: HA3	Which EAL is involved: HA3.1
Which Basis Paragraph(s) is involved:	Other:

Description of Question

The NEI 99-01 Rev 5 IC and EAL wording is overly confusing by its multiple use of versions of the word ‘operate’ within the same sentence. The EAL note provides ample clarity of the IC and EAL making the confusing language unnecessary.

Proposed Solution

Revise the HA3 IC to match the HA3-1 threshold wording.

Justification

Removes inconsistent language between the IC and EAL. This change does not alter the meaning or the intent of the EAL it applies to.

Additional pages attached? ☒ Yes ☒ No

Instructions:
Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Revised the HA3 IC to match the HA3-1 threshold wording.

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 28

Requestor to Complete This Section

Licensee: U.S. EPR		Date Submitted: 12/03/08
Licensee Contact: Scott McCain	Phone: 630.452.1704	E-Mail: MDSCScott@aol.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☐ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved: HA5	Which EAL is involved: HA5.1
Which Basis Paragraph(s) is involved:	Other:

Description of Question

Operations procedures for control room evacuation typically require several activities prior to the actual evacuation initiation. This creates a discrepancy between the IC and the EAL language. The initiation of evacuation (IC criteria) is not always the same as when the procedure requires evacuation (EAL criteria).

Proposed Solution

Revise HA5.1 wording as follows:

Control Room evacuation has been initiated.

Justification

Removes conflicting language between the IC and EAL. This change does not alter the meaning or the intent of the EAL it applies to.

Additional pages attached? ☐ Yes ☒ No

Instructions:
Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

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EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Revised EAL HA5-1 as follows: "The Shift Manager or Control Room Supervisor orders Control Room evacuation."

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 29

Requestor to Complete This Section

Licensee: U.S. EPR		Date Submitted: 12/03/08
Licensee Contact: Scott McCain	Phone: 630.452.1704	E-Mail: MDSCScott@aol.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☐ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved:	Which EAL is involved: HG1.2
Which Basis Paragraph(s) is involved:	Other:

Description of Question

Use of the term 'freshly offloaded reactor core' is confusing and not consistently defined throughout the industry. It is unclear why a GE would not apply when a hostile action has caused a condition for imminent damage of any spent fuel assemblies.

Proposed Solution

Revise HG2.1 wording as follows:

A HOSTILE ACTION has caused failure of spent fuel cooling systems and IMMINENT fuel damage is likely.

Justification

Removes ambiguity within the EAL and improves recognition timeliness. This change does not alter the meaning or the intent of the EAL it applies to.

Additional pages attached? ☐ Yes ☒ No

Instructions:
Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Deleted the following reference to a freshly off loaded reactor core in pool from the EAL and the basis.

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 30

Requestor to Complete This Section

Licensee: U.S. EPR		Date Submitted: 12/03/08
Licensee Contact: Scott McCain	Phone: 630.452.1704	E-Mail: MDSCScott@aol.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☐ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved: SU2	Which EAL is involved:
Which Basis Paragraph(s) is involved:	Other:

Description of Question

IC inappropriately specifies the inability to reach required shutdown within TS limits while the EAL specifies the inability to reach the required operating mode within TS limits.

Proposed Solution

Revise SU2 wording as follows:

Inability to reach required operating mode within Technical Specification limits

Justification

Corrects an inappropriate term used in the IC. This change does not alter the meaning or the basis intent of the EAL it applies to.

Additional pages attached? ☐ Yes ☒ No

Instructions:
Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Revised SU2 wording as follows:
"Inability to reach required operating mode within Technical Specification limits."

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 31

Requestor to Complete This Section

Licensee: U.S. EPR		Date Submitted: 12/03/08
Licensee Contact: Scott McCain	Phone: 630.452.1704	E-Mail: MDSCScott@aol.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☐ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved: SA2, SS2, and SG2 (ATWS)	Which EAL is involved: SA2, SS2, SG2
Which Basis Paragraph(s) is involved:	Other:

Description of Question

The sentences and language terms used are not consistent throughout the escalation pathway, making evaluation more difficult that it needs to be.

The EAL wording for the challenge to core cooling in the GE is inappropriately limiting. If the site specific condition for degraded or loss of core cooling or heat removal exists it doesn't matter whether it was caused by continued heat generation or not.

The Alert IC and EAL wording contain extraneous wording that is unnecessary for classification.

Proposed Solution

See attached

Justification

Removes ambiguity within the ICs and EALs and improves recognition timeliness. This change does not alter the meaning or the intent of the EALs it applies to.

Additional pages attached? ☒ Yes ☐ No

Instructions:
Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Revised IC and EAL threshold wording as indicated in the attached table.

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

Current NEI 99-01 Rev. 5 Wording	Proposed Wording
SG2 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. **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.)	**SG2** 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. **Example Emergency Action Level:** 1. a. An automatic scram (trip) failed to shutdown the reactor as indicated by (site specific indications of reactor not shutdown). **AND** b. All manual actions fail to shutdown the reactor as indicated by (site specific indications of reactor not shutdown). **AND** c. **EITHER** of the following exist or have occurred: • (Site specific indication that core cooling is extremely challenged.) • (Site specific indication that heat removal is extremely challenged.)
SS2 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. **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).	**SS2** Automatic scram (trip) and manual actions taken from the reactor control console failed to shutdown the reactor. **Example Emergency Action Level:** 1. a. An automatic scram (trip) failed to shutdown the reactor as indicated by (site specific indications of reactor not shutdown). **AND** b. Manual actions taken at the reactor control console failed to shutdown the reactor as indicated by (site specific indications of reactor not shutdown).
SA2 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. **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).	**SA2** Automatic Scram (Trip) failed to shutdown the reactor and the manual actions taken from the reactor control console are successful in shutting down the reactor. **Example Emergency Action Level:** 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).

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 32

Requestor to Complete This Section

Licensee: FPLE Seabrook Station		Date Submitted: 10/31/08
Licensee Contact: David Young	Phone: 603-773-7287	E-Mail: david_young@fpl.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☒ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved: SU3/SA4/SS6	Which EAL is involved: See below
Which Basis Paragraph(s) is involved: See below	Other:

Description of Question

Each Initiating Condition Basis contains this developer guidance, "[Site-specific annunciators or indicators for this EAL must include those identified in the Abnormal Operating Procedures, in the Emergency Operating Procedures, and in other EALs (e.g., area, process, and/or effluent rad monitors, etc.).]" Industry benchmarking has revealed that there are differing interpretations regarding this guidance as it pertains to the radiation monitor indications. The existing guidance needs further clarification to ensure consistent application. Question - Are radiation monitor indications available in the control room, and identified in AOPs, EOPs and other EALs, considered to be part of the "control room safety system indication" EAL or should another (a third) EAL be added to specifically address the loss of radiation monitor indications? If they are included in the "control room safety system indication", how should a total/partial loss of radiation monitoring indications be considered (counted) when assessing the "greater than approximately 75%" (most or all) criteria?

Proposed Solution

Revise each Basis section to clarify that radiation monitor indications are considered to be part of the "control room safety system indication" EAL; a separate EAL for radiation monitor indications is not necessary or intended. The "loss of indication" EAL should be developed with consideration of the totality of 1) the main control board indications (position lights, meters, recorders, etc.) and 2) the radiation monitoring indications (area, process and airborne) that are available in the Control Room and identified in the Abnormal Operating Procedures, Emergency Operating Procedures, and in other EALs. In other words, the 'denominator' to be used when assessing the loss of "control room safety system indication" EAL is the sum of indications from 1) the main control boards and 2) the radiation monitor system.

Justification

This clarification will promote consistent EAL development and interpretation across the industry.

Additional pages attached? ☐ Yes ☒ No

Instructions: Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Revised the basis for each IC to include the following revised developer note:

"The "loss of indication" EAL should be developed with consideration of the totality of 1) the main control board indications (position lights, meters, recorders, etc.) and 2) the radiation monitoring indications (area, process and airborne) that are available in the Control Room and identified in the Abnormal Operating Procedures, Emergency Operating Procedures, and in other EALs. In other words, the 'denominator' to be used when assessing the loss of "control room safety system indication" EAL is the sum of indications from 1) the main control boards and 2) the radiation monitor system."

Also deleted reference to computer system availability on SU3.

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

Issue with NEI 99-01
Loss of Annunciation or Indication EALs

The development guidance in NEI 99-01 is inconsistent with respect to the following three Initiating Conditions.

- SU3 - UNPLANNED loss of safety system annunciation or indication in the control room for 15 minutes or longer.
- SA4 - 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.
- SS6 - Inability to monitor a SIGNIFICANT TRANSIENT in progress.

This issue, as presented below, applies to both Rev. 4 and Rev. 5 on NEI 99-01.

Issue Statement:

The Example Emergency Action Levels (EALs) for the above three Initiating Conditions do not address loss of radiation monitoring indications; however, a statement in each basis section implies that these indications must be included. In addition, this statement's direction to include radiation monitoring indications is inconsistent with another aspect of the basis in that some of the specified indications may not be safety-related.

Issue Description:

The following statement is contained in the basis sections of Initiating Conditions SU3 and SA4.

> "[Site specific annunciators or indicators for this EAL must include those identified in the Abnormal Operating Procedures, in the Emergency Operating Procedures, and in other EALs (e.g., area, process, and/or effluent rad monitors, etc.).]"

Under SS6, the statement is changed slightly to read,

> "[Site specific annunciators for this EAL should be limited to include those identified in the Abnormal Operating Procedures, in the Emergency Operating Procedures, and in other EALs (.g., area, process, and/or effluent rad monitors, etc.)]"

The Example EALs relevant to these basis statements are presented in Table 1.

Table 1

SU3	SA4	SS6
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)	1. a. UNPLANNED 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)	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)

Issue with NEI 99-01
Loss of Annunciation or Indication EALs

As can be seen in Table 1, the example EALs do not include a reference to radiation monitoring indications. This leads to the following questions.

1. Are radiation monitoring indications "identified in the Abnormal Operating Procedures, in the Emergency Operating Procedures, and in other EALs" included in the population of "Site specific control room safety system indication"?

   For example, a licensee has 6 main control boards with safety-system indications and a separate display of radiation monitoring indications. Assume that the radiation monitoring indication panel is lost. How should this condition be evaluated?
   - Lost approximately 14% (1 out of 7) of total indications – no classification warranted
   - Lost 100% of radiation monitoring indications – a classification is required

2. How should radiation monitoring indications "identified in the Abnormal Operating Procedures, in the Emergency Operating Procedures, and in other EALs" AND that are <u>not</u> safety-related be addressed?

3. Should a separate example EAL statement be added to specifically address loss of radiation monitoring indications "identified in the Abnormal Operating Procedures, in the Emergency Operating Procedures, and in other EALs"?

In addition, the basis statements concerning radiation monitoring indications should be made consistent – "Site specific annunciators or indicators" vs. Site specific annunciators."

Benchmarking has revealed a lack of consistency in licensee implementation of SU3, SA4 and SS6. See information collected from seven plants in Attachment 1. These differences in application indicate that additional EAL development guidance and clarification is necessary.

I submitted an EAL Frequently Asked Question (FAQ) concerning the above issues to the NEI EAL FAQ working group approximately six months ago. The working group rejected the EAL FAQ (i.e., would not process it). The majority of the group members apparently felt that the existing guidance was adequate and/or that the issues raised were not of sufficient magnitude to warrant a material revision.

Issue with NEI 99-01
Loss of Annunciation or Indication EALs
Attachment 1 – Benchmarking Results

Plant #1

SU3	SA4	SS6
Unplanned loss of most (~75%) or all of EITHER: • Annunciators (Panels "A" thru "K") • Indicators associated with safety-related structures, systems and components on Unit ( ) MCR Bench Boards 1 and 2 and Vertical Boards 1 and 2 for > 15 min.	Unplanned loss of most (~75%) or all of EITHER: • Annunciators (Panels "A" thru "K") • Indicators associated with safety-related structures, systems and components on Unit ( ) MCR Bench Boards 1 and 2 and Vertical Boards 1 and 2 for > 15 min.	Loss of most (~75%) or all annunciators (Panels "A" thru "K") associated with safety-related structures, systems and components on Unit ( ) MCR Bench Boards 1 and 2 and Vertical Boards 1 and 2

Plant #2

SU3	SA4	SS6
UNPLANNED loss of most OR all (greater than 75% of the MCB annunciators) OR indicators associated with safety systems for greater than 15 minutes.	UNPLANNED loss of most OR all (greater than 75% of the MCB) annunciators OR indicators associated with safety systems for greater than 15 minutes	a. Loss of most OR all (greater than 75% of the MCB) annunciators OR indicators associated with safety systems

Plant #3

SU3	SA4	SS6
1. UNPLANNED loss of greater than approximately 75% of the following for 15 minutes or longer per 1[2]-ONP-100.03: a. Control Room Safety System annunciation. OR b. Control Room Safety System indication associated with the above annunciators.	1. UNPLANNED loss of greater than approximately 75% of the following for 15 minutes or longer per 1[2]-ONP-100.03: a. Control Room Safety System annunciation. OR b. Control Room Safety System indication associated with the above annunciators.	1. UNPLANNED loss of greater than approximately 75% of the following for 15 minutes or longer per 1[2]-ONP-100.03: a. Control Room Safety System annunciation. OR b. Control Room Safety System indication associated with the above annunciators.

Issue with NEI 99-01
Loss of Annunciation or Indication EALs
Attachment 1 – Benchmarking Results

Plant #4

SU3	SA4	SS6
1. UNPLANNED loss of most (approximately 75%) safety system annunciators (Table M2) for > 15 minutes. OR 2. UNPLANNED loss of most (approximately 75%) indicators associated with safety functions (Table M3) for > 15 minutes.	1. UNPLANNED loss of most (approximately 75%) safety system annunciators (Table M2) for > 15 minutes. OR 2. UNPLANNED loss of most (approximately 75%) indications associated with safety functions (Table M3) for > 15 minutes.	1. Loss of most (approximately 75%) safety system annunciators (Table M2).

Table M2 - Control Room Panels

- 1/2 PM01J MCB Gen & Aux Power
- 1/2 PM05J MCB Reactor and Chem Volume Control
- 1/2 PM06J MCB Eng. Safety Features

Table M3 - Safety Functions and Related Systems

- Reactivity Control (ability to shut down the reactor and keep it shutdown)
- RCS Inventory (ability to cool the core)
- Secondary Heat Removal (ability to maintain heat sink)
- Fission Product Barriers

Plant #5

SU3	SA4	SS6
UNPLANNED loss of most or all annunciators or indications associated with the following safety systems for GREATER THAN 15 minutes • ECCS • CONTAINMENT isolation • Reactor Trip • Process or Effluent Radiation Monitors • Electrical Distribution/Diesel Generators	UNPLANNED loss of most or all annunciators or indications associated with the following safety systems for GREATER THAN 15 minutes • ECCS • CONTAINMENT isolation • Reactor Trip • Process or Effluent Radiation Monitors • Electrical Distribution/Diesel Generators	Loss of most or all annunciators associated with the following safety systems • ECCS • CONTAINMENT isolation • Reactor Trip • Process or Effluent Radiation Monitors • Electrical Distribution/Diesel Generators

Issue with NEI 99-01
Loss of Annunciation or Indication EALs
Attachment 1 – Benchmarking Results

Plant #6

SU3	SA4	SS6
1. UNPLANNED loss of approximately 75% or more of UA annunciators for > 15 minutes. **** OR **** 2. UNPLANNED loss of approximately 75% or more of Main Control Board indications for > 15 minutes. **** OR **** 3. UNPLANNED loss of approximately 75% or more of radiation monitor indications for > 15 minutes.	1. a. UNPLANNED loss of approximately 75% or more of UA annunciators for > 15 minutes. OR b. UNPLANNED loss of approximately 75% or more of Main Control Board indications for > 15 minutes. OR c. UNPLANNED loss of approximately 75% or more of radiation monitor indications for > 15 minutes.	2. a. Loss of approximately 75% or more of UA annunciators. OR b. Loss of approximately 75% or more of Main Control Board indications. OR c. Loss of approximately 75% or more of radiation monitor indications.

Plant #7

SU3	SA4	SS6
Unplanned loss of most or all 1C03, 1C04 and 1C05 annunciators or indicators associated with Safety Systems for greater than 15 minutes	Unplanned loss of most or all 1C03, 1C04 and 1C05 annunciators or indicators associated with Safety Systems for greater than 15 minutes	Loss of most or all annunciators on Panels 1C03, 1C04 and 1C05.

SYSTEM MALFUNCTIONS

SU3

Initiating Condition - NOTIFICATION OF UNUSUAL EVENT

Loss of Control Room safety parameter or radiation monitoring capability

Operating Mode Applicability: Power Operation, Startup, Hot Standby, Hot Shutdown

Example Emergency Action Level: (1 or 2)

1. ANY one of the following parameters cannot be determined using Control Room indications for 15 minutes or longer.

BWR	PWR
Reactor Power	Reactor Power
RPV Water Level	Reactor Vessel Level
RPV Pressure	RCS Pressure
Drywell Temperature	In-Core/Core Exit Temperature
Primary Containment Pressure	Containment Pressure
Suppression Pool Level	(Site specific) Steam Generator Level
Suppression Pool Temperature	Steam Generator Auxiliary or Emergency Feed Water Flow

2. Inability to comply with a Technical Specification action statement associated with radiation monitoring instrumentation.

Basis:

This IC and its associated EALs are intended to recognize the inability to monitor a parameter important to plant safety from within the Control Room. The inability to monitor any of these parameters could impact decision-making during a SIGNIFICANT TRANSIENT, or, depending upon the circumstances, be a precursor to a more severe condition. Fifteen minutes was selected as a threshold to exclude transient or momentary monitoring capability losses.

The parameters listed in EAL #1 were selected to both 1) focus classification on the loss of key indications of plant safety functions and 2) simplify the EAL assessment.

[For BWRs, RPV water level is the fundamental indication for determining adequate core cooling. Per the BWR Fission Product Barrier Table 5-F-2, the inability to determine RPV water level represents both a potential loss of the fuel clad and a loss of the RCS warranting a Site Area Emergency. However, that determination is made, per the BWROG Emergency Procedure Guidelines, based on assessment that encompasses more than just a loss of Control Room RPV water level indication, which beyond the scope of this threshold.]

[For PWRs, the site-specific number of steam generator levels should be minimum number necessary to assess the heat sink safety function. Level may be specified in narrow or wide

range, or both, depending upon the level indication required to evaluate the heat sink safety function. An example EAL statement: "Wide range level in at least 2 steam generators."]

EAL #2 is included to address a loss of radiation monitoring indication, as required by Technical Specifications, for which a mode change or plant shutdown is not specified. Action statements of this type may include submittal of a special report to the commission, initiation of an alternate method of monitoring or grab sampling, closing isolation valves, placing a system in an alternate lineup or using a different system, suspending operations involving fuel movement, etc. The inability to establish Technical Specification LCO required mode changes are addressed under IC SU2. It is recognized that there may be some overlap between this IC and SU2 if the applicable action statement requires a mode change or plant shutdown.

This NOUE will escalate to an Alert if monitoring capability for additional plant safety function indications is lost.

[Due to changes in plant configuration and related controls during outages, no IC is provided for the cold shutdown, refueling and defueled modes of operation.]

SYSTEM MALFUNCTIONS

SA4

Initiating Condition - ALERT

Loss of capability to monitor two or more safety parameters from within the Control Room

Operating Mode Applicability: Power Operation, Startup, Hot Standby, Hot Shutdown

Example Emergency Action Level:

1. Two or more of the following parameters cannot be determined using Control Room indications for 15 minutes or longer.

BWR	PWR
Reactor Power	Reactor Power
RPV Water Level	Reactor Vessel Level
RPV Pressure	RCS Pressure
Drywell Temperature	In-Core/Core Exit Temperature
Primary Containment Pressure	Containment Pressure
Suppression Pool Level	(Site specific) Steam Generator Level
Suppression Pool Temperature	Steam Generator Auxiliary or Emergency Feed Water Flow

Basis:

This IC and its associated EAL are intended to recognize the inability to monitor multiple parameters important to plant safety from the Control Room. The inability to monitor these parameters could impact decision-making during a SIGNIFICANT TRANSIENT, or, depending upon the circumstances, be a precursor to a more severe condition. Fifteen minutes was selected as a threshold to exclude transient or momentary monitoring capability losses.

The parameters listed in EAL #1 were selected to both 1) focus classification on the loss of key indications of plant safety functions and 2) simplify the EAL assessment.

[For BWRs, RPV water level is the fundamental indication for determining adequate core cooling. Per the BWR Fission Product Barrier Table 5-F-2, the inability to determine RPV water level represents both a potential loss of the fuel clad and a loss of the RCS warranting a Site Area Emergency. However, that determination is made, per the BWROG Emergency Procedure Guidelines, based on assessment that encompasses more than just a loss of Control Room RPV water level indication, which beyond the scope of this threshold.]

[For PWRs, the site-specific number of steam generator levels should be minimum number necessary to assess the heat sink safety function. Level may be specified in narrow or wide range, or both, depending upon the level indication required to evaluate the heat sink safety function. An example EAL statement: "Wide range level in at least 2 steam generators."]

This Alert will escalate to a Site Area Emergency if the condition exists during a SIGNIFICANT TRANSIENT.

[Due to changes in plant configuration and related controls during outages, no IC is provided for the cold shutdown, refueling and defueled modes of operation.]

SYSTEM MALFUNCTIONS

SS6

Initiating Condition – SITE AREA EMERGENCY

Loss of capability to monitor two or more safety parameters from within the Control Room during a SIGNIFICANT TRANSIENT

Operating Mode Applicability: Power Operation, Startup, Hot Standby, Hot Shutdown

Example Emergency Action Level: (1 and 2)

1. Two or more of the following parameters cannot be determined using Control Room indications for 15 minutes or longer.

BWR	PWR
Reactor Power	Reactor Power
RPV Water Level	Reactor Vessel Level
RPV Pressure	RCS Pressure
Drywell Temperature	In-Core/Core Exit Temperature
Primary Containment Pressure	Containment Pressure
Suppression Pool Level	(Site specific) Steam Generator Level
Suppression Pool Temperature	Steam Generator Auxiliary or Emergency Feed Water Flow

2. A SIGNIFICANT TRANSIENT is in progress.

Basis:

This IC and its associated EAL are intended to recognize the inability to monitor multiple parameters important to plant safety from the Control Room during a SIGNIFICANT TRANSIENT. Fifteen minutes was selected as a threshold to exclude transient or momentary monitoring capability losses.

The parameters listed in EAL #1 were selected to both 1) focus classification on the loss of key indications of plant safety functions and 2) simplify the EAL assessment.

[For BWRs, RPV water level is the fundamental indication for determining adequate core cooling. Per the BWR Fission Product Barrier Table 5-F-2, the inability to determine RPV water level represents both a potential loss of the fuel clad and a loss of the RCS warranting a Site Area Emergency. However, that determination is made, per the BWROG Emergency Procedure Guidelines, based on assessment that encompasses more than just a loss of Control Room RPV water level indication, which beyond the scope of this threshold.]

[For PWRs, the site-specific number of steam generator levels should be minimum number necessary to assess the heat sink safety function. Level may be specified in narrow or wide range, or both, depending upon the level indication required to evaluate the heat sink safety function. An example EAL statement: "Wide range level in at least 2 steam generators."]

[Due to changes in plant configuration and related controls during outages, no IC is provided for the cold shutdown, refueling and defueled modes of operation.]

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 33

Requestor to Complete This Section

Licensee: U.S. EPR		Date Submitted: 03/10/09
Licensee Contact: Scott McCain	Phone: 630.452.1704	E-Mail: MDSCScott@aol.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☐ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved: SS6, SA4, SU3: Loss of Monitoring	Which EAL is involved: All
Which Basis Paragraph(s) is involved: All	Other:

Description of Question

NEI 99-01 Rev 5 specifies plant annunciation and safety indication EALs to be set at a loss of all or most (approximately greater than 75%) monitoring or alarm capability.

U.S. EPR design includes a digital I&C system that provides annunciation and safety indication (PICS and SICS) similar to the digital I&C EALs developed for the passive reactor designs utilizing NEI 07-01.

This creates a design specific deviation with the generic EAL guidance document to be used by all new U.S. EPR reactors.

Can guidance be added to 99-01 Rev 5 to address the use of Digital I&C EALs for loss of monitoring capability to eliminate the design specific deviation from the generic EAL guidance document?

Proposed Solution

Revise NEI 99-05 to include a section to address the design specific deviations for the U.S. EPR plants per the attached bases pages.

Justification

Eliminates a design specific deviation for the U.S. EPR EALs and establishes a standard IC, EAL and bases language for all new U.S. EPR EAL submittals within the NEI EAL guidance document.

Additional pages attached? ☒ Yes ☐ No

Instructions:
Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Added new SA7 and SS7 IC/EALs for U.S. EPR design. For plants with digital I&C, SA7 and SS7 should be used in lieu of SS6, SA4, and SU3 as shown on the attachment. These EALs are consistent with the digital I&C ICs developed in NEI 07-01 for the AP-1000 and ESBWR ALWRs.

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	**NSIR/DPR**	**NSIR/DPR**	**TL:NSIR/DPR**	**BC:NSIR/DPR**	**D:NSIR/DPR/EPD**
NAME					
DATE					

EALFAQ closed and database updated – Date:

5.11 SYSTEM MALFUNCTION EALs

Table 5-S-1 for US EPR: Recognition Category "S" Initiating Condition Matrix

GENERAL EMERGENCY	SITE AREA EMERGENCY	ALERT	UNUSUAL EVENT
	SS7 Inability to monitor and control the plant for 15 minutes or longer. *Op. Modes: Power Operation, Startup, Hot Standby, Hot Shutdown*	**SA7** UNPLANNED partial loss of indicating, monitoring and control functions for 15 minutes or longer. *Op. Modes: Power Operation, Startup, Hot Standby, Hot Shutdown*	**SU3** N/A

SA7

Initiating Condition -- ALERT

UNPLANNED Partial Loss of Indicating, Monitoring and Control Functions for ≥ 15 Minutes.

Operating Mode Applicability: **Power Operation, Startup, Hot Standby, Hot Shutdown**

Example Emergency Action Level Threshold:

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 partial Loss of [Site specific] Indicating, Monitoring and Control Functions for 15 minutes or longer.

Basis:

This IC recognizes the difficulty associated with monitoring changing plant conditions without the use of a major portion of the control and indication systems.

This IC recognizes the challenge to the Control Room staff to monitor and control the plant due to partial loss of normal and safety indication and monitoring systems. An Alert is considered appropriate if the Control Room staff requires additional personnel to assist in monitoring alternative indications, manipulate equipment and restore the systems to full capability. The selection of 15 minutes was chosen to allow personnel sufficient time for restoration of required systems due to an inadvertent loss.

U.S. EPR - The Process Information and Control System (PICS) is a non-safety related, augmented quality digital I&C system. It provides a screen based interface for the operators in the control room and in the remote shutdown station to control and monitor all plant parameters by interfacing with the plant automation systems. The Safety Information and Control System (SICS) is a safety related I&C system which contains both safety and non-safety related equipment. It provides the Human-System Interface (HSI) to perform control and information functions needed to monitor the plant's safety status and bring the unit to and maintain it in a safe shutdown state in case of unavailability of the PICS.

The SICS provides controls for actuating manual reactor trips and manual system level functions performed by the Protection System (PS) and the Safety Automation System (SAS) via the Priority Actuation and Control System (PACS) in order to bring the plant to and maintain it in a cold shutdown state.

Either PICS or SICS is separately capable of bringing the reactor to a safe shutdown. Therefore, a partial loss of the indicating, monitoring, and control functions when the plant has experienced the complete loss of one of the two capable systems (PICS or SICS) and a total loss of the indicating, monitoring, and control functions (i.e. inability to monitor and control the plant from the MCR) is characterized by the complete loss of both capable systems (PICS and SICS). Loss of the PICS system is indicated by no PICS terminal in the control room being functional. Loss of the SICS system is indicated by no SICS terminal in the control room being functional. This Alert will be escalated to a Site Area Emergency if the operating crew cannot monitor and control the plant.

Developer Note:

U.S. EPR - Fill in PICS or SICS.

Initiating Condition -- SITE AREA EMERGENCY **SS7**

Inability to Monitor and Control the Plant for ≥ 15 Minutes.

Operating Mode Applicability: **Power Operation, Startup, Hot Standby, Hot Shutdown**

Example Emergency Action Level Threshold:

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 Loss of [Site specific] Digital Monitoring and Control Functions for 15 minutes or longer.

Basis:

This IC recognizes the inability of the Control Room staff to monitor and control the plant due to loss of normal and safety indication and monitoring systems, and diverse indication and control systems that allow the operators to monitor and safely shutdown the plant. A Site Area Emergency is considered to exist if the Control Room staff cannot monitor and control safety functions needed for protection of the public. The selection of 15 minutes was chosen to allow personnel sufficient time for restoration of required systems due to an inadvertent loss.

US EPR –

The Process Information and Control System (PICS) is a non-safety related, augmented quality digital I&C system. It provides a screen based interface for the operators in the control room and in the remote shutdown station to control and monitor all plant parameters by interfacing with the plant automation systems. The Safety Information and Control System (SICS) is a safety related I&C system which contains both safety and non-safety related equipment. It provides the Human-System Interface (HSI) to perform control and information functions needed to monitor the plant's safety status and bring the unit to and maintain it in a safe shutdown state in case of unavailability of the PICS.

The SICS provides controls for actuating manual reactor trips and manual system level functions performed by the Protection System (PS) and the Safety Automation System (SAS) via the Priority Actuation and Control System (PACS) in order to bring the plant to and maintain it in a cold shutdown state.

Either PICS or SICS is separately capable of bringing the reactor to a safe shutdown. Therefore, a partial loss of the indicating, monitoring, and control functions when the plant has experienced the complete loss of one of the two capable systems (PICS or SICS) and a total loss of the indicating, monitoring, and control functions (i.e. inability to monitor and control the plant from the MCR) is characterized by the complete loss of both capable systems (PICS and SICS).

Loss of the PICS system is indicated by no PICS terminal in the control room being functional. Loss of the SICS system is indicated by no SICS terminal in the control room being functional.

Developer Note:

U.S. EPR - Fill in PICS and SICS.

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 34

Requestor to Complete This Section

Licensee: Kewaunee Power Station		Date Submitted: 12/8/08
Licensee Contact: John Egdorf	Phone: 920-388-8733	E-Mail: john.r.egdorf@dom.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☒ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved: CU1 (99-01 rev 4) SU5 (99-01 rev 4 & 5)	Which EAL is involved: 99-01 Rev 4 - CU1.1, CU1.2 99-01 Rev 4 & 5 - SU5.1 & SU5.2
Which Basis Paragraph(s) is involved:	Other:

Description of Question

1) It has been identified through industry OE that the same leakage condition at different plants maybe classified differently. The difference is based upon the specific plants Technical Specification definition of Identified, Unidentified and Pressure Boundary Leakage. The intent of the listed EALs is a leak greater than Technical Specifications.

2) Additionally, the EALs have no threshold time to evaluate or mitigate a event that is not a "precursor of a more serious condition". There should be time for the Control Room Operators to use procedures to attempt identifcation and isolate of the leakage prior to classification. The EAL would then be based upon the inability to maintain RCS inventory.

Proposed Solution

1) Add the following to the associated EAL Bases section: "Refer to plants Technical Specifications for Identified, Unidentified and Pressure Boundary Leakage definition."

2) Add "15 minutes or longer" to the EAL's

Justification

1) EAL definition will be consistent with current plant RCS leakage definitions and the EALs would not be redefining the terms.

2) With the threshold time, conditions which are mitigated with established Operations Procedures and are not a precursor to a serious condition would not be un-necessary classified.

Additional pages attached? ☐ Yes ☒ No

Instructions: Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

CU1/SU5 – Added “15 minutes allows time to evaluate the source and take corrective actions to isolate the leak.” To the basis.

SU5 – Added "Refer to plants Technical Specifications for Identified, Unidentified and Pressure Boundary Leakage definition." To the basis

SU5 - Added "15 minutes or longer" to the EAL Thresholds

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 35

Requestor to Complete This Section

Licensee: FPLE Seabrook Station		Date Submitted: 10/31/08
Licensee Contact: David Young	Phone: 603-773-7287	E-Mail: david_young@fpl.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☐ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved: SA2	Which EAL is involved: a.
Which Basis Paragraph(s) is involved: 4th	Other:

Description of Question

This EAL FAQ concerns Initiating Condition SA2, “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.” Is an Alert declaration required if an automatic reactor trip signal, NOT due to a plant transient, is generated and the reactor does not trip? For example, an automatic reactor trip signal is generated due to an instrument failure, and the reactor does not trip. Is an Alert declaration required in this case? Some licensees have interpreted information in the basis section as requiring a transient initiating event before an Alert declaration is warranted. The IC and EAL make no mention of a transient initiating event.

Proposed Solution

Revise the 2nd and 3rd sentences in the 4th paragraph of the basis to read:

"This condition is more than a potential degradation of the a safety system in that a front line automatic protection syten di not function in reposnse to a scram (trip) signal. Thus the plant safety has been compromised becuas of the failure of the RPS to atomtically shutdown the plant.

Justification

Clarifies the intent of the EAL.

Additional pages attached? ☐ Yes ☒ No

Instructions: Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Revised the 2nd and 3rd sentences in the 4th paragraph of the basis to read:

"This condition is more than a potential degradation of the a safety system in that a front line automatic protection syten di not function in reposnse to a scram (trip) signal. Thus the plant safety has been compromised becuas of the failure of the RPS to atomtically shutdown the plant.

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 36

Requestor to Complete This Section

Licensee: U.S. EPR		Date Submitted: 12/03/08
Licensee Contact: Scott McCain	Phone: 630.452.1704	E-Mail: MDSCScott@aol.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☐ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved: SA5, CU3	Which EAL is involved: SA5.1.b, CU3.1.b
Which Basis Paragraph(s) is involved:	Other:

Description of Question

At many sites it is possible to backfeed non-emergency busses from offsite or other sources such that a complete loss of AC power to emergency busses will not result in a station blackout. The basis intent of the EAL is not consistent with the literal wording used.

Proposed Solution

Revise SA5 and CU3 wording as follows: "AC power capability to emergency busses reduced to a single source for 15 minutes or longer"

and

Revise SA5.1.b and CU3.1.b wording as follows: "Any additional single power source failure will result in a loss of all AC power to the emergency busses."

Justification

Eliminates an intentional loophole condition for loss of AC power to emergency busses. This change does not alter the meaning or the basis intent of the EALs it applies to.

Additional pages attached? ☐ Yes ☒ No

Instructions:
Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Revised SA5 and CU3 wording as follows: "AC power capability to emergency busses reduced to a single source for 15 minutes or longer"
and

Revised SA5.1.b and CU3.1.b wording as follows: "Any additional single power source failure will result in a loss of all AC power to the emergency busses."

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 37

Requestor to Complete This Section

Licensee: U.S. EPR		Date Submitted: 02/05/09
Licensee Contact: Scott McCain	Phone: 630.452.1704	E-Mail: MDSCScott@aol.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☐ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved:	Which EAL is involved: SG2.1.c
Which Basis Paragraph(s) is involved:	Other:

Description of Question

The indication that heat removal is extremely challenged is constrained by the requirement that it is due to continued power generation. Does it matter why heat removal is extremely challenged when in an ATWS condition?

Proposed Solution

The EAL threshold should be revised as follows:

1.c. EITHER of the following exist:or have occurred"

Justification

The extreme challenge to heat removal, equivalent to core cooling red, should not be constrained by requiring it to be caused by continued power generation.

Additional pages attached? ☐ Yes ☒ No

Instructions:
Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Revised the EAL threshold should be revised as follows: 1.c. EITHER of the following exist or have occurred. (Similar to FAQ31)

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 38

Requestor to Complete This Section

Licensee: NEI Task Force		Date Submitted: 5/31/08
Licensee Contact: Kelly Walker	Phone: 7042430501	E-Mail: ossikelly@aol.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☒ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved: PWR Containment Loss 4 (99-01 rev 4 & 5)	Which EAL is involved: Fission Product Barrier Matrix
Which Basis Paragraph(s) is involved:	Other:

Description of Question

PWR Containment Loss 4 specifies a threshold value for P-to-S leakage of 10 gpm. Per the current Rev. 5 bases, the value of 10 gpm was selected to a be consistent with the leakage value specified in IC SU5 "RCS Leakage". SU5 specifies RCS leakage thresholds for both unidentified/pressure boundary leakage (10 gpm) and identified leakage (25 gpm). However, for PWRs, SG tube leakage is considered identified leakage. Should the value specified in PWR Containment Loss 4.B be consistent with the SU5 identified leakage threshold of 25 gpm vs. 10 gpm?

Proposed Solution

Revise PWR Containment Loss 4 SG tube leakage value to specify 25 gpm vs. 10 gpm.

Justification

The bases for the PWR Containment Loss 4 SG tube leakage value states that the leak value was chosen to be consistent with the SU5 RCS leakage threshold. Since SG tube leakage is consisdered identified leakage the threshold value used should be consistent with the SU5 identified leakage threshold (25 gpm vs. 10 gpm).

Additional pages attached? ☐ Yes ☒ No

Instructions: Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Revised PWR Containment Loss 4 SG tube leakage threshold and basis values to specify 25 gpm vs. 10 gpm. Changed RUPTURED to leaking to be consistent with the specified threshold value of 25 gpm.

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 39

Requestor to Complete This Section

Licensee: NEI Task Force		Date Submitted: 5/31/08
Licensee Contact: Dave Stobaugh	Phone:	E-Mail:
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☒ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved:	Which EAL is involved: SA4, SS6
Which Basis Paragraph(s) is involved:	Other:

Description of Question

The use of the definition of Significant transient as a defined term results in most site having to take a deviation because of the difference in specific SIGNIFICANT TRANSIENTS for the different disigns.

Proposed Solution

Delete the definition of SIGNIFICANT TRANSIENT, replace the EAL with a site specific wording in those locations where applicable, and add a developer note to provide guidance for development of the site specific element of the EAL.

Justification

Intent is the same and only result in the modification of 2 ICs.

Additional pages attached? ☐ Yes ☒ No

Instructions: Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Deleted the definition of SIGNIFICANT TRANSIENT, replaced the EAL with a site specific wording in those locations where applicable, and added a developer note to provide guidance for development of the site specific element of the EAL.

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 40

Requestor to Complete This Section

Licensee: Kewaunee Power Station		Date Submitted: 12/8/08 rev 1 6/5/09 rev 2
Licensee Contact: John Egdorf	Phone: 920-388-8733	E-Mail: john.r.egdorf@dom.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☒ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved: AU1, AA1, AS1 and AG1	Which EAL is involved: AU1.1, AU1.2, AA1.1, AA1.2, AS1.1, AG1.1
Which Basis Paragraph(s) is involved: AU1 and AA1 after paragraph 2 AS1 and AG1 after pargragh 5	Other:

Description of Question

Should the following be add to clarify the EALs for AU1, AA1, AS1 and AG1 are based upon an active release?

AU1 Bases: A release path to the environment must exist for the entire period that the monitor exceeds EAL threshold. If the release path is isolated before 60 minutes has elapsed, an emergency declaration is not warranted.

AA1, AS1 & AG1 Bases: A release path to the environment must exist for the entire period that the monitor exceeds EAL threshold. If the release path is isolated before 15 minutes has elapsed, an emergency declaration is not warranted.

Proposed Solution

Add the above as clarification to the EAL Bases section for AU1, AA1, AS1 and AG1.

Justification

This Initiating Condition for the listed EALs addresses a potential or actual decrease in the level of safety of the plant as indicated by a radiological release for an extended period of time. The occurrence of extended, uncontrolled radioactive releases to the environment is indicative of degradation in safety features and/or controls. Therefore if the release path to the environment is isolated, then the effluent monitor is no longer a valid indication for the EAL based upon an active release.

Additional pages attached? ☐ Yes ☐ No

Instructions: Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☒ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

The notes already provided within the EAL Threshold and basis clearly provide direction for accurate implementation of the intent of this IC. This FAQ is therefore not accepted.

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 41

Requestor to Complete This Section

Licensee: OSSI (Energy Northwest/Progress)		Date Submitted: September 2, 2009
Licensee Contact: Kelly walker	Phone: 704-243-0501	E-Mail: ossikelly@aol.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☐ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved: CU1	Which EAL is involved:
Which Basis Paragraph(s) is involved:	Other:

Description of Question

Numerous recent NEI 99-01 Rev. 5 submittals have received NRC RAIs have stating that EALs derived from ICs that do not have the same noun name cannot be organized into the same numerical EAL grouping in a plant-specific EAL scheme. IC CU1 "RCS leakage" and CU2 "Unplanned loss of RCS/RPV inventory" both address the exact same concern, loss of RCS inventory but for different plant operating modes. It makes sense to implement these EALs in the same site specific numerical grouping.

Proposed Solution

Revise IC CU1 to read "Unplanned loss of RCS/RPV inventory" consistent with IC CU2

Justification

It would be illogical to not combine CU1 and CU2 plant specific implementation under the same numerical grouping as the ICs are only different due to mode applicability.

Additional pages attached? ☐ Yes ☒ No

Instructions: Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Tabled for further discussion

NRC to Complete This Section

Resolution of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 42

Requestor to Complete This Section

Licensee: FPL - St. Lucie		Date Submitted: May 20, 2009
Licensee Contact: Rick Walker	Phone: 772-467-7170	E-Mail: rick_walker@fpl.com
NRC Contact:	Phone:	E-Mail:

Is this a request for a Site-Specific or Generic EAL FAQ? ☐ Site ☒ Generic

This question involves the following EAL schemes: ☐ NUREG-0654 ☐ NESP-007 ☒ NEI 99-01 ☐ OTHER

Description of Question

This EAL FAQ concerns Initiating Condition HG1, HOSTILE ACTION Resulting in Loss of Physical Control of the Facility. Example EAL #1 states "A HOSTILE ACTION has occurred such that plant personnel are unable to operate equipment required to maintain safety functions". If safety functions, as defined in NEI 99-01 are being maintained, then this EAL is not met. Contra the EAL, the Basis states ". . . a loss of physical control of VITAL AREAS (containing vital equipment or controls of vital equipment) required to maintain safety functions and control of that equipment cannot be transferred to and operated from another location". The Basis focuses on "loss of physical control" of an area while the EAL considers the status of the safety functions. If equipment is not currently needed to maintain a safety function, or is presently operating to maintain a safety function, then declaration of GE should not be warranted. Example 1 - An attack results in a LOP; emergency generators start and supply AC power to plant loads. Intruders gain access to the emergency generator rooms; however, there is no immediate indication of any problem with the emergency generators. Is a GE warranted? Example 2 - An attack results in a LOOP; emergency generators start and supply AC power to plant loads. Intruders gain access to the emergency generator rooms and disable both emergency generators; however, plant cooldown continues using a turbine-driven auxiliary feedwater pump. Is a GE warranted?

Proposed Solution

The EAL FAQ task force is requested to review this question and revise the EAL and/or the Basis so that they are aligned on the same criteria. Should the IC/EAL/Basis be focused on loss of a Target Set instead of safety functions or plant areas?

Justification

Develop a justification based on the task force consensus answer.

Additional pages attached? ☐ Yes ☒ No

Instructions: Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Tabled for further discussion.

NRC to Complete This Section

Resolution of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 43

Requestor to Complete This Section

Licensee: NEI EAL Task Force		Date Submitted: 04/23/09
Licensee Contact: D. Stobaugh	Phone: 262-344-3832	E-Mail: epconsult@charter.net
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☐ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved: Most	Which EAL is involved: Most
Which Basis Paragraph(s) is involved: Most	Other:

Description of Question

The RAIs have a generic statement in the first block which states:
"While the NRC is not enforcing strict verbatim compliance with the endorsed guidance, where applicable, the NRC will be pointing out areas where we expect compliance with the endorsed guidance to ensure implementation of a standard scheme. This is primarily based upon industry and NRC experience with issues related to the particular EAL."

The requests have been forcing verbatim compliance even when the EALs do not apply to the station. Justification is given at the original submittals for each difference and deviation. It appears that the reviewers are not even looking at the justifications but are just comparing the words to 99-01, R5. For example, those plants that have designed out the risks associated with turbine blading failure and internal flooding are being forced to include these thresholds just so they can be considered a "…standard emergency classification and action level scheme…."

Each station is unique. The "one size fits all" approach only adds to the burden of actually classifying an approriate condition. The terms and phrases in use at the station must be incorporated into the EALs for ease of decision making when a need to classify in a timely manner occurs. For example, forcing the use of Critical Safety Function on a CE design plant only adds to the burden of the Operators to classify. The Westinghouse CSFSTs cannot be directly correlated to the Safety Function Status system used by CE plants. Why not force the Westinghouse plants to also consider the CE approach? or the GE approach?

99-01 Rev 5, Methodology for Development of Emergency Action Levels, is and can only be a guidance document. Section 5 is titled Generic EAL GUIDANCE.

Proposed Solution

Have the NRC develop the exact EALs for each station and provide them to the stations for implementation verbatim. This will ensure a "…standard emergency classification and action level scheme…". Current methodology certainly does not work well, costs a significant amolunt of money, and actually lowers the effectiveness of the emergency classification system when the final product looks just

EAL Frequently Asked Question (EALFAQ) Request Form

like 99-02 Rev 5..

Justification

ll

Additional pages attached? ☐ Yes ☒ No

Instructions: Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Tabled for further discussion

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 44

Requestor to Complete This Section

Licensee: NEI EAL Task Force		Date Submitted: 05/01/09
Licensee Contact: D. Stobaugh	Phone: 262-344-3832	E-Mail: epconsult@charter.net
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ? ☐ Site ☒ Generic		

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☐ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved: HU1, HU2, HA1, HA2	Which EAL is involved: Most
Which Basis Paragraph(s) is involved:	Other:

Description of Question

In the above EALs, 99-01 asks for lists of buildings and areas using slightly different criteria for each.

AREAS of concern to replace Power Block

HU1 TV 3 The site specific areas include those areas that contain systems required for safe shutdown of the plant, which are not designed to be partially or fully submerged. The plant's IPEEE may provide insight into areas to be considered when developing this EAL.

HU2 TV 1 The site specific list should be limited and applies to buildings and areas in actual contact with or immediately adjacent to VITAL AREAS or other significant buildings or areas.

HA1 TV 2 - 5 These EALs should specify site specific structures or areas that contain safety system, or component and functions required for safe shutdown of the plant. Site specific Safe Shutdown Analysis should be consulted for equipment and plant areas required to establish or maintain safe shutdown

HA1 TV 3 The site specific areas include those areas that contain systems required for safe shutdown of the plant, which are not designed to be partially or fully submerged. The plant's IPEEE may provide insight into areas to be considered when developing this EAL

HA1 TV 4 The site specific list of areas should include all areas containing safety structure, system, or component, their controls, and their power supplies.

HA1 TV 6 VISIBLE DAMAGE to VITAL AREAS or results in indication of damage to safety structures, systems, or components containing functions and systems required for safe shutdown of the plant

HA2 This EAL should specify site specific structures or areas that contain safety system, or component and functions required for safe shutdown of the plant. Site specific Safe Shutdown Analysis should be consulted for equipment and plant areas required to establish or maintain safe shutdown.

Proposed Solution

The task force needs to reconsider the requirements intended and determine if a common list can be implemented.

EAL Frequently Asked Question (EALFAQ) Request Form

Justification

Consistency across the industry

Additional pages attached? ☒ Yes ☐ No

Instructions: Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Tabled for future discussion

NRC to Complete This Section

Disposition of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 45

Licensee: OSSI (Energy Northwest/Progress)		Date Submitted: September 15, 2009
Licensee Contact: Kelly walker	Phone: 704-243-0501	E-Mail: ossikelly@aol.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☐ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved:	Which EAL is involved:
Which Basis Paragraph(s) is involved: Definitions	Other:

Description of Question

NEI 99-01 defines the term SIGNIFICANT TRANSIENT: An UNPLANNED event involving one or more of the following: (1) automatic turbine runback greater than 25% thermal reactor power, (2) electrical load rejection greater than 25% full electrical load, (3) Reactor Trip, (4) Safety Injection Activation, or (5) thermal power oscillations greater than 10%.

This definition does not adequately address BWR specific criteria. BWRs do not have automatic turbine runbacks. Also, many BWRs have bypass capability > 25% such that they can handle a 25% full electrical load rejection (i.e. results in no thermal power transient). Others can only handle a low as a 10% full electrical load rejection. There are other events that can cause a 25% power transient such as recirculation system runbacks. It appears that any 25% thermal power transient, regardless of cause would meet the intent of the significant transient condition. BWRs do not have 'Safety Injection' however, they have both high and low pressure ECCS, which depending on reactor pressure may or may not induce a plant transient upon activation.

Proposed Solution

Revise the SIGNIFICANT TRANSIENT definition to accommodate BWR specific criteria:

SIGNIFICANT TRANSIENT: An UNPLANNED event involving one or more of the following: (1) automatic [turbine runback - PWR][recirculation system flow runback - BWR] greater than 25% thermal reactor power, (2) electrical load rejection greater than [25% - PWR][site-specific MSL bypass capability - BWR] full electrical load, (3) Reactor Trip/Scram, (4) Safety Injection Activation [PWR] Inadvertent ECCS injection [BWR], or (5) thermal power oscillations greater than 10%.

Justification

Per RIS 2003-18 any change to a generic NEI 99-01 definition is considered a deviation. The current definition does not adequately support BWR specific implementation. The proposed revision supports BWR specific implementation.

Additional pages attached? ☐ Yes ☒ No

Instructions: Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☐ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

SIGNIFICANT TRANSIENT deleted – See FAQ# 39. Add discussion in proposed resolution to basis.

NRC to Complete This Section

Resolution of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 46

Requestor to Complete This Section

Licensee: OSSI (Energy Northwest/Progress)		Date Submitted: September 15, 2009
Licensee Contact: Kelly walker	Phone: 704-243-0501	E-Mail: ossikelly@aol.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☐ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved: CA1, CS1	Which EAL is involved:
Which Basis Paragraph(s) is involved:	Other:

Description of Question

CA1 specifies: "Loss of RCS/RPV inventory as indicated by level less than (site specific level). [Low-Low ECCS actuation setpoint / Level 2 (BWR)]". CS1 specifies a threshold of 6" below the Level 2 setpoint. The generic bases states "The BWR Low-Low ECCS Actuation Setpoint/Level 2 was chosen because it is a standard setpoint at which some available injection systems automatically start." For most BWRs, the "Low-Low/Level 2" ECCS actuation setpoint is associated with the high pressure steam driven ECCS injection systems. These systems would not be available in the cold shutdown mode. For most BWRs the Low-Low-Low (level 1) setpoint is associated with the low pressure motor driven ECCS. These are the systems that would be available to recover RPV inventory. The low pressure ECCS actuation level setpoint is the appropriate BWR classification threshold for CA1 (6" below for CS1) as that the the level below which ECCS will auto initiate to restore RPV water level.

Proposed Solution

Revise wording of CA1 example EAL to read:

"Loss of RCS/RPV inventory as indicated by level less than (site specific level). [low pressure motor driven ECCS initation setpoint (BWR)]"

Revise BWR specific wording of CS1 example EAL #1 to read:

"... level less than (site specific level). [6" below the low pressure motor driven ECCS initation setpoint (BWR)]"

Justification

Use of the high pressure steam driven ECCS injection system actuation setpoint as the classification threshold is inconsistent with expected automatic system response capability in that exceeding the specified setpoint would not initiate any level restoration action in the applicable operating modes.

Additional pages attached? ☐ Yes ☒ No

Instructions: Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☒ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Agree with proposed resolution. Wording changed as indicated.

Revised wording of CA1 example EAL to read:

"Loss of RCS/RPV inventory as indicated by level less than (site specific level). [low pressure motor driven ECCS initation setpoint (BWR)]"

Revised BWR specific wording of CS1 example EAL #1 to read:

"... level less than (site specific level). [6" below the low pressure motor driven ECCS initation setpoint (BWR)]"

NRC to Complete This Section

Resolution of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date:

EAL Frequently Asked Question (EALFAQ) Request Form

FAQ# 47

Requestor to Complete This Section

Licensee: Southern Nuclear		Date Submitted: September 15, 2009
Licensee Contact: Walter Lee	Phone: 205-992-5627	E-Mail: whlee@southernco.com
NRC Contact:	Phone:	E-Mail:
Is this a request for a Site-Specific or Generic EAL FAQ?	☐ Site	☒ Generic

Specific IC/EAL Required Information

Select EAL scheme(s) involved: ☐ NUREG-0654 ☐ NESP-007 ☒ NEI 99-01 R4 ☒ NEI 99-01 R5	
Which IC is involved:	Which EAL is involved:
Which Basis Paragraph(s) is involved: 5F2 EAL 5, 5F3 EAL 7	Other:

Description of Question

The EAL for other specific indications can inadvertently be written to result in the loss or potential loss of the RCS barrier being called prior to exceeding any of the other threshold criteria. Example: Listing leakage into a specific tank such as the RCDT or CTMT sump without listing a leakage value.

Proposed Solution

Add a statement to the basis for all the “Other Specific Indication” thresholds that point out that the intent for these indications is to provide an indication that exceeds the leakage thresholds which would exceed the loss or potential loss thresholds.

Justification

Prevent classification of emergencies that do not exceed the intent of the Initiating condition.

Additional pages attached? ☐ Yes ☒ No

Instructions: Requester completes this part of the EALFAQ form and transmits through approved electronic means via e-mail to mth@nei.org, mail to NEI Emergency Preparedness FAQ, 1776 I St NW, Suite 400, Washington DC 2006-3708, or hand deliver to the NEI EALFAQ Coordinator. The question will be discussed at the next regularly scheduled EALFAQ Panel meeting.

EAL Frequently Asked Question (EALFAQ) Request Form

NEI to Complete This Section

Date Proposed EALFAQ Reviewed by EAL Task Force:		Approved: ☒ Yes ☐ No
EALFAQ #:	Date Entered:	By:
EALFAQ presented to NEI/NRC EALFAQ Panel: Date		Approved: ☐ Yes ☐ No

EALFAQ TaskForce to Complete This Section

Resolution of EALFAQ

Added the following to the basis:

To ensure consistent classifications, any Thresholds provided must be equivalent in relative threat to the Thresholds provided in the same column. Use the basis information from equivalent Thresholds to determine the relative threat.

NRC to Complete This Section

Resolution of EALFAQ

OFFICE	NSIR/DPR	NSIR/DPR	TL:NSIR/DPR	BC:NSIR/DPR	D:NSIR/DPR/EPD
NAME					
DATE					

EALFAQ closed and database updated – Date: