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10 CFR 50.54(q)

United States Nuclear Regulatory Commission (NRC)  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Brunswick Steam Electric Plant, Unit Nos. 1 and 2  
Docket Nos. 50-325, 50-324 / Renewed License Nos. DPR-71 and DPR-62

Catawba Nuclear Station, Unit Nos. 1 and 2  
Docket Nos. 50-413, 50-414 / Renewed License Nos. NPF-35 and NPF-52

**SUBJECT: Procedures CSD-EP-BNP-0101-01, “EAL TECHNICAL BASIS DOCUMENT”,  
Revision 006 and CSD-EP-CNS-0101-01, “EAL TECHNICAL BASIS  
DOCUMENT”, Revision 005, Summary of Changes**

Ladies and Gentlemen:

In accordance with 10 CFR 50.54(q), Duke Energy Carolinas, LLC, and Duke Energy Progress, LLC (collectively referred to as Duke Energy), are submitting revision summaries for Procedures CSD-EP-BNP-0101-01, “EAL TECHNICAL BASIS DOCUMENT”, Revision 006 and CSD-EP-CNS-0101-01, “EAL TECHNICAL BASIS DOCUMENT”, Revision 005.

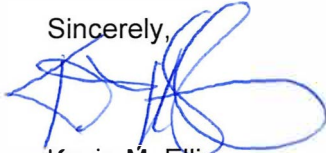
The Emergency Action Level (EAL) Technical Basis Document Procedures provide an explanation and rationale for each EAL and provides historical documentation for future reference. Decision-makers responsible for Classification of Emergency may use this document as a technical reference in support of EAL interpretation. This revision updates EAL SU5.1 basis definitions of Reactor Coolant System (RCS) leakage as a result of revised Technical Specifications (TSs) related to reactor coolant system operational leakage and the definition of the term “LEAKAGE” based on Technical Specifications Task Force (TSTF) Traveler TSTF-554, Revision 1, “Revise Reactor Coolant Leakage Requirements.”.

The changes described above have been evaluated in accordance with 10 CFR 50.54(q) and have been determined to not result in a reduction in the effectiveness of the Emergency Plan. The Duke Energy Common Emergency Plan continues to meet the standards of 10 CFR 50.47(b) and the requirements of 10 CFR 50, Appendix E. In accordance with 10 CFR 50.54(q)(5), Attachment 1 includes a summary of analyses associated with Procedure CSD-EP-BNP-0101-01, “EAL TECHNICAL BASIS DOCUMENT”, Revision 006 and Attachment 2 includes a summary of analyses for Procedure CSD-EP-CNS-0101-01, “EAL TECHNICAL BASIS DOCUMENT”, Revision 005.

This document contains no new regulatory commitments.

Should you have any questions concerning this letter, or require additional information, please contact Ryan Treadway, Fleet Licensing Director, at (980) 373-5873.

Sincerely,



Kevin M. Ellis

General Manager – Nuclear Regulatory Affairs, Policy & Emergency Preparedness

Attachment 1: Procedure CSD-EP-BNP-0101-01, "EAL TECHNICAL BASIS DOCUMENT",  
Revision 006, 10 CFR 50.54(q)

Attachment 2: Procedure CSD-EP-CNS-0101-01, "EAL TECHNICAL BASIS DOCUMENT",  
Revision 005, 10 CFR 50.54(q)

cc: L. Dudes, Regional Administrator USNRC Region II  
G. Smith, USNRC Senior Resident Inspector – BNP  
D. Rivard, USNRC Senior Resident Inspector – CNS  
L. Haeg, NRR Project Manager – BNP  
S. A. Williams, NRR Project Manager – CNS

**Attachment 1: Procedure CSD-EP-BNP-0101-01, "EAL TECHNICAL BASIS DOCUMENT",  
Revision 006, 10 CFR 50.54(q)**

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### 10 CFR 50.54(q) Review Form

Section I: 10 CFR 50.54(q) Review Number: (EREG #):		02490814	
Applicable Sites and Applicability Determination # (5AD)			
<input checked="" type="checkbox"/> BNP	02490757	<input type="checkbox"/> CNS	<input type="checkbox"/> HNP
<input type="checkbox"/> MNS		<input type="checkbox"/> ONS	<input type="checkbox"/> RNP
<b>Document #, EC #, or N/A</b>	<b>Revision # or N/A</b>	<b>Document or Activity Title</b>	
CSD-EP-BNP-0101-01	006	EAL TECHNICAL BASIS DOCUMENT	

### Section II: Identify/Describe All Proposed Activities/Changes being Reviewed

Event or action, or series of actions that may result in a change to the emergency plan or affect the implementation of the emergency plan (Use attachments, or continue additional pages as necessary): Continue to **Section III**.

Activity/Changes:

CSD-EP-BNP-0101-01 is the Emergency Action Level (EAL) technical basis document for Brunswick Nuclear Plant (BNP).

Changes include:

- Updated revision summary and revision number.
- Updated EAL SU5.1 basis definitions of Reactor Coolant System (RCS) leakage as a result of revised Technical Specifications (TSs) related to reactor coolant system operational leakage and the definition of the term "LEAKAGE" based on Technical Specifications Task Force (TSTF) Traveler TSTF-554, Revision 1, "Revise Reactor Coolant Leakage Requirements."

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Change #	Section or Step #	Change From	Change to
1	Throughout	Old revision summary.	Updated revision summary identifying the changes made from the document revision request.
2	Throughout	CSD-EP-BNP-0101-01 – Old revision number (005)	CSD-EP-BNP-0101-01 – New revision number (006)
3	Att. 1, SU5.1 Basis	<p>Identified leakage is leakage into the drywell, such as that from pump seals or valve packing, that is captured and conducted to a sump or collecting tank; or leakage into the drywell atmosphere from sources that are both specifically located and known either not to interfere with the operation of leakage detection systems or not to be pressure boundary leakage. (ref. 1, 2)</p> <p>Unidentified leakage is all leakage into the drywell that is not identified leakage. (ref. 1, 2)</p> <p>Pressure boundary leakage is leakage through a nonisolable fault in a Reactor Coolant System (RCS) component body, pipe wall, or vessel wall. (ref. 1, 2)</p>	<p>Identified leakage is leakage into the drywell, such as that from pump seals or valve packing, that is captured and conducted to a sump or collecting tank; or leakage into the drywell atmosphere from sources that are both specifically located and known to not interfere with the operation of leakage detection systems. (ref. 1, 2)</p> <p>Unidentified leakage is all leakage into the drywell that is not identified leakage. (ref. 1, 2)</p> <p>Pressure boundary leakage is leakage through a fault in a Reactor Coolant System (RCS) component body, pipe wall, or vessel wall. Leakage past seals, packing, and gaskets is not pressure boundary leakage. (ref. 1, 2)</p>

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**Section III: Description and Review of Licensing Basis Affected by the Proposed activity or Change:**

List all emergency plan sections that were reviewed for this activity by number and title.  
IF THE ACTIVITY IN ITS ENTIRETY IS AN EMERGENCY PLAN CHANGE, EAL CHANGE OR EAL BASIS CHANGE, Enter Licensing Basis affected by the change and continue to **Section VI**.

Licensing Basis:

**Licensing Basis for NEI 99-01 Rev 6 EALS**

BNP: ML15344A153 Letter Dated January 8, 2016. Subject: Brunswick Steam Electric Plant, Units 1 and 2 - Issuance of Amendments regarding Emergency Action Level scheme upgrade (CAC NOS. MF5766 and MF5767)

Amendment Nos. 268 and 296 to Renewed Facility Operating License Nos. DPR-71 and DPR-62, respectively, for the Brunswick Steam Electric Plant, Units 1 and 2 (BSEP).

**Additional Licensing basis to implement FAQs**

ML19058A632 Letter dated July 1, 2019. Subject: Catawba Nuclear Station, Units 1 And 2; McGuire Nuclear Station, Units 1 And 2; Oconee Nuclear Station, Units 1, 2, And 3; Brunswick Steam Electric Plant, Units 1 And 2; Shearon Harris Nuclear Power Plant, Unit 1; And H. B. Robinson Steam Electric Plant, Unit No. 2 – Issuance of Amendments To Revise Emergency Action Level Schemes To Incorporate Clarifications Provided By Emergency Preparedness Frequently Asked Questions 2015-013, 2015-014, And 2016-002 (EPID L-2018-LLA-0174)

Amendment Nos. 303 and 299 to Renewed Facility Operating License Nos. NPF-35 and NPF-52 for the Catawba Nuclear Station, Units 1 and 2 (Catawba), respectively; Amendment Nos. 315 and 294 to Renewed Facility Operating License Nos. NPF-9 and NPF-17 for the McGuire Nuclear Station, Units 1 and 2 (McGuire), respectively; Amendment Nos. 412, 414, and 413 to Renewed Facility Operating License Nos. DPR-38, DPR-47, and DPR-55 for the Oconee Nuclear Station, Units 1, 2, and 3 (Oconee), respectively; Amendment Nos. 291 and 319 to Renewed Facility Operating License Nos. DPR-71 and DPR-62 for Brunswick Steam Electric Plant, Units 1 and 2 (Brunswick), respectively; Amendment No. 172 to Renewed Facility Operating License No. NPF-63 for the Shearon Harris Nuclear Power Plant, Unit 1 (Harris); and Amendment No. 264 to Renewed Facility Operating License No. DPR-23 for the H. B. Robinson Steam Electric Plant, Unit No. 2 (Robinson).

**Current EALS**

Brunswick Nuclear Plant Emergency Action Levels, CSD-EP-BNP-0101-01 Revision 005.

The differences in approved revisions and the current revisions of the Emergency Plans have been reviewed, and they have been determined to meet the regulatory requirements required during the course of revisions.

**Licensing Basis**

- EP-ALL-EPLAN, Duke Energy Common Emergency Plan Revision 0
- EP-BNP-EPLAN-ANNEX, Duke Energy Brunswick Emergency Plan Annex Revision 0

**Current Emergency Plan**

- EP-ALL-EPLAN, Duke Energy Common Emergency Plan Revision 5 Section D- Emergency Classification System
- EP-BNP-EPLAN-ANNEX, Duke Energy Brunswick Emergency Plan Annex Revision 2 Section D- Emergency Classification System

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**Section IV: Ability to Maintain the Emergency Plan.**  
**Answer the following questions related to impact on the ability to maintain the Emergency Plan. Continue to Section V.**

1. Do any of the elements of the proposed activity change information or intent contained in the Emergency Plan?	Yes <input type="checkbox"/> No <input type="checkbox"/>
2. Do any elements of the proposed activity change the process or capability for alerting or notifying the public as described in the FEMA-approved Alert and Notification System Design Report?	Yes <input type="checkbox"/> No <input type="checkbox"/>
3. Do any elements of the proposed activity change the Evacuation Time Estimate results?	Yes <input type="checkbox"/> No <input type="checkbox"/>
4. Do any elements of the proposed activity change the On-Shift Staffing Analysis results?	Yes <input type="checkbox"/> No <input type="checkbox"/>
5. Does the Proposed activity require a change to the Emergency Plan Programmatic Description?	Yes <input type="checkbox"/> No <input type="checkbox"/>

***If Question 5 was answered yes, and the document being reviewed is NOT the Emergency Plan, then exit this review until the Emergency Plan change is complete or the proposed change is modified to not change the Emergency Plan Programmatic Description.***

**Section IV** conclusion:

- If questions 1-5 in **Section IV** marked NO, then complete **Section V**.
- If any question 1-5 of **Section IV** marked yes, then continue at **Section VI**.

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**Section V: Maintaining the Emergency Plan Conclusion.**

The questions in **Section IV** do not represent the total of all conditions that may cause a change to or impact the ability to maintain the emergency plan. Originator and reviewer signatures in **Section XIV** document that a review of all elements of the proposed change have been considered for their impact on the ability to maintain the emergency plan and their potential to change the emergency plan.

1. Provide a brief conclusion below that describes how the conditions, as described in the emergency plan, are maintained with this activity.
  2. Select the box below when the review completes all actions for all elements of the activity and no 10CFR50.54 screening or evaluation is required for any element. Continue to **Section XIV**.
- I have completed a review of this activity in accordance with 10CFR50.54(q)(2) and determined that the effectiveness of the emergency plan is maintained. This activity does not make any changes to the emergency plan. No further actions are required to screen or evaluate this activity in accordance with 10CFR50.54(q)(3).

**Section VI: Activity Previously Reviewed?**  
**Is this activity fully bounded by an NRC approved 10CFR50.90 submittal or Alert and Notification System Design Report?**

<input type="checkbox"/>	Yes	10 CFR 50.54(q) Evaluation is not required. Identify bounding source document below and continue to <b>Section XIV</b> .
<input checked="" type="checkbox"/>	No	Continue to <b>Section VII</b> .
<input type="checkbox"/>	Partially	If <b>PARTIALLY</b> , identify bounding source document and list changes bounded by the approved 10 CFR 50.90 or Alert and Notification System Design Report below. Changes not bound by the approved 10 CFR 50.90 or Alert and Notification System Design Report (i.e., part requiring further review). Continue the review in <b>Section VII</b> .



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<b>Section VII: Editorial Changes</b>		
<input type="checkbox"/>	Yes	All Activities/Changes identified in <b>Section II</b> are editorial/typographical changes such as formatting, paragraph numbering, spelling, or punctuation that does not change intent.
<input type="checkbox"/>	No	None of the Activities/Changes listed in <b>Section II</b> are editorial/typographical changes. Continue to <b>Section VIII</b> .
<input checked="" type="checkbox"/>	Partially	Some Activities/Changes are editorial/typographical.
<p>If <b>Yes</b> is checked, Identify the activities/changes listed in <b>Section II</b> that are editorial/typographical changes and provide justification below. Continue to <b>Section XII</b>.</p> <p>If <b>Partially</b> is checked, Identify the activities/changes listed in <b>Section II</b> that are editorial/typographical changes and provide justification below. Continue to <b>Section VIII</b> for changes not identified as editorial.</p>		

Justification:

The proposed changes below are defined as editorial in accordance with AD-EP-ALL-0602, and do not change the intent of the steps as written.

Proposed change 1 updates revision summary. Updating revision summary based on revision is editorial because it makes no changes to intent of the guidance.

Proposed change 2 updates revision number from 5 to 6 for EAL Technical Basis Document. Updating revision number is editorial because it makes no changes to intent of the guidance.

**10 CFR 50.54(q) Review Form****Section VIII: Emergency Planning Element and Function Screen***(Utilize Reg Guide 1.219 and Attachment 1, Additional Regulatory Guidance References for additional assistance)***Does any of Proposed Activities/Changes Identified in Section I impact any of the following, including program elements from NUREG-0654/FEMA REP-1 Section II? If yes check appropriate box.**

<b>1</b>	<b>10 CFR 50.47(b)(1) Assignment of Responsibility (Organization Control)</b>	
1a	Responsibility for emergency response is assigned.	<input type="checkbox"/>
1b	The response organization has the staff to respond and to augment staff on a continuing basis (24-7 staffing) in accordance with the emergency plan.	<input type="checkbox"/>
<b>2</b>	<b>10 CFR 50.47(b)(2) Onsite Emergency Organization</b>	
2a	Process ensures that on shift emergency response responsibilities are staffed and assigned	<input type="checkbox"/>
2b	The process for timely augmentation of onshift staff is established and maintained.	<input type="checkbox"/>
<b>3</b>	<b>10 CFR 50.47(b)(3) Emergency Response Support and Resources</b>	
3a	Arrangements for requesting and using off site assistance have been made.	<input type="checkbox"/>
3b	State and local staff can be accommodated at the EOF in accordance with the emergency plan.	<input type="checkbox"/>
<b>4</b>	<b>10 CFR 50.47(b)(4) Emergency Classification System</b>	<b>RS</b>
4a	A standard scheme of emergency classification and action levels is in use. <b>(Requires V/V (Attachment 3) and final approval of Screen and Evaluation by EP CFAM)</b>	<input checked="" type="checkbox"/>
<b>5</b>	<b>10 CFR 50.47(b)(5) Notification Methods and Procedures</b>	<b>RS</b>
5a	Procedures for notification of State and local governmental agencies are capable of alerting them of the declared emergency within 15 minutes (60 minutes for CR3) after declaration of an emergency and providing follow-up notification.	<input type="checkbox"/>
5b	Administrative and physical means have been established for alerting and providing prompt instructions to public within the plume exposure pathway.	<input type="checkbox"/>
5c	The public ANS meets the design requirements of FEMA-REP-10, Guide for Evaluation of Alert and Notification Systems for Nuclear Power Plants, or complies with the licensee's FEMA-approved ANS design report and supporting FEMA approval letter	<input type="checkbox"/>
<b>6</b>	<b>10 CFR 50.47(b)(6) Emergency Communications</b>	
6a	Systems are established for prompt communication among principal emergency response organizations.	<input type="checkbox"/>
6b	Systems are established for prompt communication to emergency response personnel.	<input type="checkbox"/>
<b>7</b>	<b>10 CFR 50.47(b)(7) Public Education and Information</b>	
7a	Emergency preparedness information is made available to the public on a periodic basis within the plume exposure pathway emergency planning zone (EPZ).	<input type="checkbox"/>
7b	Coordinated dissemination of public information during emergencies is established.	<input type="checkbox"/>
<b>8</b>	<b>10 CFR 50.47(b)(8) Emergency Facilities and Equipment</b>	
8a	Adequate facilities are maintained to support emergency response	<input type="checkbox"/>
8b	Adequate equipment is maintained to support emergency response.	<input type="checkbox"/>
<b>9</b>	<b>10 CFR 50.47(b)(9) Accident Assessment</b>	<b>RS</b>
9a	Methods, systems, and equipment for assessment of radioactive releases are in use.	<input type="checkbox"/>
<b>10</b>	<b>10 CFR 50.47(b) (10) Protective Response</b>	<b>RS</b>
10a	A range of public PARs is available for implementation during emergencies.	<input type="checkbox"/>

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10b	Evacuation time estimates for the population located in the plume exposure pathway EPZ are available to support the formulation of PARs and have been provided to State and local governmental authorities.	<input type="checkbox"/>
10c	A range of protective actions is available for plant emergency workers during emergencies, including those for hostile action events.	<input type="checkbox"/>
10d	KI is available for implementation as a protective action recommendation in those jurisdictions that chose to provide KI to the public.	<input type="checkbox"/>
<b>11</b>	<b>10 CFR 50.47(b) (11) Radiological Exposure Control</b>	
11a	The resources for controlling radiological exposures for emergency workers are established.	<input type="checkbox"/>
<b>12</b>	<b>10 CFR 50.47(b) (12) Medical and Public Health Support</b>	
12a	Arrangements are made for medical services for contaminated, injured individuals.	<input type="checkbox"/>
<b>13</b>	<b>10 CFR 50.47(b) (13) Recovery Planning and Post-Accident Operations</b>	
13a	Plans for recovery and reentry are developed.	<input type="checkbox"/>
<b>14</b>	<b>10 CFR 50.47(b) (14) Drills and Exercises</b>	
14a	A drill and exercise program (including radiological, medical, health physics and other program areas) is established.	<input type="checkbox"/>
14b	Drills, exercises, and training evolutions that provide performance opportunities to develop, maintain, and demonstrate key skills are assessed via a formal critique process in order to identify weaknesses.	<input type="checkbox"/>
14c	Identified weaknesses are corrected.	<input type="checkbox"/>
<b>15</b>	<b>10 CFR 50.47(b) (15) Emergency Response Training</b>	
15a	Training is provided to emergency responders.	<input type="checkbox"/>
<b>16</b>	<b>10 CFR 50.47(b) (16) Emergency Plan Maintenance</b>	
16a	Responsibility for emergency plan development and review is established.	<input type="checkbox"/>
16b	Planners responsible for emergency plan development and maintenance are properly trained.	<input type="checkbox"/>
<b>Section VIII: Conclusion</b>		
<p>■ If any <b>Section VIII</b> criteria are checked, document the basis for conclusion below for any changes that are more than editorial, however not impacted by any of the identified criteria in Section VIII and continue the 50.54(q) Review in <b>Section IX</b>.</p> <p><input type="checkbox"/> If no <b>Section VIII</b> criteria are checked, 10CFR50.54(q)(3) Evaluation is NOT required. Document justification below for any changes that are more than editorial and continue to <b>Section XIV</b>.</p>		

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**Section IX: Description of Emergency Plan Planning Standards, Functions and Program Elements Affected by the Proposed Change**

Copy each emergency planning standard, function and program element affected by the proposed change that was identified as applicable in **Section VIII**. Continue to **Section X**.

**Planning Standard**

A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures.

**Function**

(1) A standard scheme of emergency classification and action levels is in use.

**Supporting requirements from Appendix E to 10 CFR Part 50**

**B. Assessment Actions**

1. The means to be used for determining the magnitude of, and for continually assessing the impact of, the release of radioactive materials shall be described, including emergency action levels that are to be used as criteria for determining the need for notification and participation of local and State agencies, the Commission, and other Federal agencies, and the emergency action levels that are to be used for determining when and what type of protective measures should be considered within and outside the site boundary to protect health and safety. The emergency action levels shall be based on in-plant conditions and instrumentation in addition to onsite and offsite monitoring. By June 20, 2012, for nuclear power reactor licensees, these action levels must include hostile action that may adversely affect the nuclear power plant. The initial emergency action levels shall be discussed and agreed on by the applicant or licensee and state and local governmental authorities, and approved by the NRC. Thereafter, emergency action levels shall be reviewed with the State and local governmental authorities on an annual basis.

2. A licensee desiring to change its entire emergency action level scheme shall submit an application for an amendment to its license and receive NRC approval before implementing the change. Licensees shall follow the change process in § 50.54(q) for all other emergency action level changes.

**C. Activation of Emergency Organization**

1. The entire spectrum of emergency conditions that involve the alerting or activating of progressively larger segments of the total emergency organization shall be described. The communication steps to be taken to alert or activate emergency personnel under each class of emergency shall be described. Emergency action levels (based not only on onsite and offsite radiation monitoring information but also on readings from a number of sensors that indicate a potential emergency, such as the pressure in containment and the response of the Emergency Core Cooling System) for notification of offsite agencies shall be described. The existence, but not the details, of a message authentication scheme shall be noted for such agencies. The emergency classes defined shall include: (1) Notification of unusual events, (2) alert, (3) site area emergency, and (4) general emergency. These classes are further discussed in NUREG-0654/FEMA-REP-1.

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2. By June 20, 2012, nuclear power reactor licensees shall establish and maintain the capability to assess, classify, and declare an emergency condition within 15 minutes after the availability of indications to plant operators that an emergency action level has been exceeded and shall promptly declare the emergency condition as soon as possible following identification of the appropriate emergency classification level. Licensees shall not construe these criteria as a grace period to attempt to restore plant conditions to avoid declaring an emergency action due to an emergency action level that has been exceeded. Licensees shall not construe these criteria as preventing implementation of response actions deemed by the licensee to be necessary to protect public health and safety provided that any delay in declaration does not deny the State and local authorities the opportunity to implement measures necessary to protect the public health and safety.

**Informing criteria from Section II.D of NUREG-0654 Rev. 2**

D. A standard emergency classification and action level scheme is established and maintained. The scheme provides detailed EALs for each of the four ECLs in Section IV.C.1 of Appendix E to 10 CFR Part 50.

D.1.a The EALs are developed using guidance provided or endorsed by the NRC that is applicable to the reactor design.

D.1.b The initial emergency classification and action level scheme is discussed and agreed to by the licensee and OROs, and approved by the NRC. Thereafter, the scheme is reviewed with OROs on an annual basis.

D.2 The capability to assess, classify, and declare the emergency condition within 15 minutes after the availability of indications to NPP operators that an EAL has been met or exceeded is described.

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**Section X: Describe How the Proposed Change Complies with Relevant Emergency Preparedness Regulation(s) and Previous Commitment(s) Made to the NRC**

If the emergency plan, modified as proposed, no longer complies with planning standards in 10 CFR 50.47(b) and the requirements in Appendix E to 10 CFR Part 50, then ensure the change is rejected, modified, or processed as an exemption request under 10 CFR 50.12, Specific Exemptions, rather than under 10 CFR 50.54(q). Address each Planning Standard identified in **Section IX. Continue to Section XI.**

Proposed change 3:

Proposed change is being made to update EAL SU5.1 basis definitions for identified, unidentified, and pressure boundary leakage. The first three paragraphs were originally written based on BNP Technical Specifications (TSs) Definitions section 1.1 and BNP Technical Specifications Bases section 3.4.5 as referenced at the end of each paragraph (ref. 1, 2). This reference has been updated in Amendment Nos. 312 and 340 to Renewed Facility Operating License Nos. DPR-71 and DPR-62 for the Brunswick Steam Electric Plant, Unit Nos. 1 and 2, respectively. The amendments revise the TSs related to reactor coolant system operational leakage and the definition of the term "LEAKAGE" based on Technical Specifications Task Force (TSTF) Traveler TSTF-554, Revision 1, "Revise Reactor Coolant Leakage Requirements."

First paragraph changes:

From:

Identified leakage is leakage into the drywell, such as that from pump seals or valve packing, that is captured and conducted to a sump or collecting tank; or leakage into the drywell atmosphere from sources that are both specifically located and known either not to interfere with the operation of leakage detection systems or not to be pressure boundary leakage. (ref. 1, 2)

To:

Identified leakage is leakage into the drywell, such as that from pump seals or valve packing, that is captured and conducted to a sump or collecting tank; or leakage into the drywell atmosphere from sources that are both specifically located and known to not interfere with the operation of leakage detection systems. (ref. 1, 2)

Revises the Identified Leakage definition to not exclude Pressure Boundary Leakage.

The change to the definition of identified leakage applies to leakage from an RCS component that would be released directly into the containment atmosphere where the leakage would be detectable by the RCS leakage detection systems. The revised definition of identified leakage removes the existing exclusion of leakage known to be pressure boundary leakage. Therefore, all RCS leakage that is specifically located and known to not interfere with the operation of leakage detection systems would be considered identified leakage, regardless of the source of leakage. Not excluding Pressure Boundary Leakage provides a clearer definition of identified leakage.

No changes to second paragraph.

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Third paragraph changes:

From:

Pressure boundary leakage is leakage through a nonisolable fault in a Reactor Coolant System (RCS) component body, pipe wall, or vessel wall. (ref. 1, 2)

To:

Pressure boundary leakage is leakage through a fault in a Reactor Coolant System (RCS) component body, pipe wall, or vessel wall. Leakage past seals, packing, and gaskets is not pressure boundary leakage. (ref. 1, 2)

Revises the defined term "leakage" to remove the term "nonisolable" from the definition of Pressure Boundary Leakage and added "Leakage past seals, packing, and gaskets is not pressure boundary leakage".

From NRC Final Safety Evaluation of Technical Specifications Task Force Traveler TSTF-554, Revision 1, "Revise Reactor Coolant Leakage Requirements, the word "nonisolable" has been interpreted inconsistently in the definition of pressure boundary leakage. In some interpretations, it has been considered a means of emphasizing that the leakage fault is in the base material of the pressure boundary and, therefore, the leakage cannot be stopped by adjusting packing or seals. In such a case, the fault represents degradation of the pressure boundary material that could result in a loss of structural integrity. Another interpretation is that leakage through a fault in portions of the pressure boundary that can be separated from the RCS by an isolation device (typically an installed valve) need not be considered as pressure boundary leakage once the isolation device is performing its isolation function. This would allow certain small sections of the Reactor Coolant Pressure Boundary (RCPB) between the outermost two valves to be removed from consideration as RCPB leakage when the inner valve is closed. Regardless of the interpretation, deletion of the word "nonisolable" does not alter the fundamental meaning that pressure boundary leakage represents degradation that could ultimately result in a loss of structural integrity. Therefore, removing the term "nonisolable" provides a clearer definition of pressure boundary leakage.

The additional sentence "LEAKAGE past seals, packing, and gaskets is not pressure boundary LEAKAGE," is consistent with the definition and was added for emphasis. Definition is clear that pressure boundary leakage is leakage through a fault in an RCS component body, pipe wall, or vessel wall. The additional reminder to exclude leakage from seals, packing, and gaskets which are not RCS component bodies, pipe walls, or vessel walls is an enhancement with no change to intent of the definition.

The revised first paragraph supports the 2<sup>nd</sup> EAL condition "RCS identified leakage > 25 gpm for ≥ 15 min." and the revised third paragraph supports the 1<sup>st</sup> EAL condition "RCS unidentified or pressure boundary leakage > 10 gpm for ≥ 15 min.". These proposed changes remain consistent with the approved EAL scheme as described in the 8<sup>th</sup> paragraph of BNP EAL bases:

The first and second EAL conditions are focused on a loss of mass from the RCS due to "unidentified leakage", "pressure boundary leakage" or "identified leakage" (as these leakage types are defined in the plant Technical Specifications).

These proposed changes remain consistent with NEI 99-01 rev 6 EAL scheme for this EAL:

EAL #1 and EAL #2 are focused on a loss of mass from the RCS due to "unidentified leakage", "pressure boundary leakage" or "identified leakage" (as these leakage types are defined in the plant Technical Specifications).

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These proposed changes continue to support the first and second EAL conditions, because the definitions continue to be leakage types that are defined in the plant Technical Specification.

The leakage definitions updated for this EAL are consistent with the overall EAL scheme development guidance in NEI 99-01 revision 6. The proposed change maintains the licensee's capability to assess, classify, and declare an emergency condition within 15 minutes of the availability of indications. The classification of the event would NOT be different from that approved by the NRC in the site-specific application referenced in Part II. Implementation of the change will maintain the accuracy and timeliness of a classification following an RCS leak. The meaning or intent of the basis of the approved EAL is unchanged.

Proposed change 3 can be made because the change continues to be aligned with approved EAL basis and NEI 99-01 Rev. 6 EAL scheme.

Proposed change 3 continues to comply with 10 CFR 50.47(b)(4) because the change continues to ensure a standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by Brunswick Nuclear Plant (BNP).

Proposed change 3 continues to comply with 10 CFR Part 50 Appendix E, IV.C.2, because BNP has established and maintains the capability to assess, classify, and declare an emergency condition within 15 minutes after the availability of indications to plant operators that an emergency action level has been exceeded. This change continues to ensure BNP will promptly declare the emergency condition as soon as possible following identification of the appropriate emergency classification level.



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**Section XI: Description of Impact of the Proposed Change on the Effectiveness of Emergency Plan Functions**

Address each function identified in **Section IX. Continue to Section XII.**

Proposed change 3:

Proposed change is being made to update EAL SU5.1 basis definitions for identified, unidentified, and pressure boundary leakage. The first three paragraphs were originally written based on BNP Technical Specifications (TSs) Definitions section 1.1 and BNP Technical Specifications Bases section 3.4.5 as referenced at the end of each paragraph (ref.1, 2). This reference has been updated in Amendment Nos. 312 and 340 to Renewed Facility Operating License Nos. DPR-71 and DPR-62 for the Brunswick Steam Electric Plant, Unit Nos. 1 and 2, respectively. The amendments revise the TSs related to reactor coolant system operational leakage and the definition of the term "LEAKAGE" based on Technical Specifications Task Force (TSTF) Traveler TSTF-554, Revision 1, "Revise Reactor Coolant Leakage Requirements."

First paragraph changes:

From:

Identified leakage is leakage into the drywell, such as that from pump seals or valve packing, that is captured and conducted to a sump or collecting tank; or leakage into the drywell atmosphere from sources that are both specifically located and known either not to interfere with the operation of leakage detection systems or not to be pressure boundary leakage. (ref. 1, 2)

To:

Identified leakage is leakage into the drywell, such as that from pump seals or valve packing, that is captured and conducted to a sump or collecting tank; or leakage into the drywell atmosphere from sources that are both specifically located and known to not interfere with the operation of leakage detection systems. (ref. 1, 2)

Revises the Identified Leakage definition to not exclude Pressure Boundary Leakage.

The change to the definition of identified leakage applies to leakage from an RCS component that would be released directly into the containment atmosphere where the leakage would be detectable by the RCS leakage detection systems. The revised definition of identified leakage removes the existing exclusion of leakage known to be pressure boundary leakage. Therefore, all RCS leakage that is specifically located and known to not interfere with the operation of leakage detection systems would be considered identified leakage, regardless of the source of leakage. Not excluding Pressure Boundary Leakage provides a clearer definition of identified leakage.

No changes to second paragraph.

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Third paragraph changes:

From:

Pressure boundary leakage is leakage through a nonisolable fault in a Reactor Coolant System (RCS) component body, pipe wall, or vessel wall. (ref. 1, 2)

To:

Pressure boundary leakage is leakage through a fault in a Reactor Coolant System (RCS) component body, pipe wall, or vessel wall. Leakage past seals, packing, and gaskets is not pressure boundary leakage. (ref. 1, 2)

Revises the defined term "leakage" to remove the term "nonisolable" from the definition of Pressure Boundary Leakage and added "Leakage past seals, packing, and gaskets is not pressure boundary leakage".

From NRC Final Safety Evaluation of Technical Specifications Task Force Traveler TSTF-554, Revision 1, "Revise Reactor Coolant Leakage Requirements, the word "nonisolable" has been interpreted inconsistently in the definition of pressure boundary leakage. In some interpretations, it has been considered a means of emphasizing that the leakage fault is in the base material of the pressure boundary and, therefore, the leakage cannot be stopped by adjusting packing or seals. In such a case, the fault represents degradation of the pressure boundary material that could result in a loss of structural integrity. Another interpretation is that leakage through a fault in portions of the pressure boundary that can be separated from the RCS by an isolation device (typically an installed valve) need not be considered as pressure boundary leakage once the isolation device is performing its isolation function. This would allow certain small sections of the Reactor Coolant Pressure Boundary (RCPB) between the outermost two valves to be removed from consideration as RCPB leakage when the inner valve is closed. Regardless of the interpretation, deletion of the word "nonisolable" does not alter the fundamental meaning that pressure boundary leakage represents degradation that could ultimately result in a loss of structural integrity. Therefore, removing the term "nonisolable" provides a clearer definition of pressure boundary leakage.

The additional sentence "LEAKAGE past seals, packing, and gaskets is not pressure boundary LEAKAGE," is consistent with the definition and was added for emphasis. Definition is clear that pressure boundary leakage is leakage through a fault in an RCS component body, pipe wall, or vessel wall. The additional reminder to exclude leakage from seals, packing, and gaskets which are not RCS component bodies, pipe walls, or vessel walls is an enhancement with no change to intent of the definition.

The revised first paragraph supports the 2<sup>nd</sup> EAL condition "RCS identified leakage > 25 gpm for ≥ 15 min." and the revised third paragraph supports the 1<sup>st</sup> EAL condition "RCS unidentified or pressure boundary leakage > 10 gpm for ≥ 15 min.". These proposed changes remain consistent with the approved EAL scheme as described in the 8<sup>th</sup> paragraph of BNP EAL bases:

The first and second EAL conditions are focused on a loss of mass from the RCS due to "unidentified leakage", "pressure boundary leakage" or "identified leakage" (as these leakage types are defined in the plant Technical Specifications).

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These proposed changes remain consistent with NEI 99-01 rev 6 EAL scheme for this EAL:

EAL #1 and EAL #2 are focused on a loss of mass from the RCS due to "unidentified leakage", "pressure boundary leakage" or "identified leakage" (as these leakage types are defined in the plant Technical Specifications).

These proposed changes continue to support the first and second EAL conditions, because the definitions continue to be leakage types that are defined in the plant Technical Specification.

The leakage definitions updated for this EAL are consistent with the overall EAL scheme development guidance in NEI 99-01 revision 6. The proposed change maintains the licensee's capability to assess, classify, and declare an emergency condition within 15 minutes of the availability of indications. The classification of the event would NOT be different from that approved by the NRC in the site-specific application referenced in Part II. Implementation of the change will maintain the accuracy and timeliness of a classification following an RCS leak. The meaning or intent of the basis of the approved EAL is unchanged.

Proposed change 3 can be made because the change continues to be aligned with approved EAL basis and NEI 99-01 Rev. 6 EAL scheme.

The proposed change can be made because the change continues to ensure a standard scheme of emergency classification and action levels are in use and there is no negative impact to timeliness or accuracy.

The proposed change does not reduce the effectiveness of Brunswick Nuclear Plant Emergency Plan. The change continues to provide assurance that the Emergency Response Organization has the ability and capability to:

- respond to an emergency;
- perform functions in a timely manner;
- effectively identify and take measures to ensure protection of the public health and safety; and
- effectively use response equipment and emergency response procedures.

The change continues to meet NRC requirements, as described in 10 CFR 50.47(b)(4) and 10 CFR 50, Appendix E as well as the requirements of the Brunswick Nuclear Plant Emergency Plan as written and approved.

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<b>Section XII: Evaluation Conclusion</b>	
Answer the following questions about the proposed change:	
1. Does the proposed change comply with 10 CFR 50.47(b) and 10 CFR 50 Appendix E?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. Does the proposed change maintain the effectiveness of the emergency plan (i.e., no reduction in effectiveness)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
3. Does the proposed change maintain the current Emergency Action Level (EAL) scheme?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<b>Section XII: Conclusion</b>	
Questions 1, 2 and 3 are answered YES, complete step below to create a General CAS assignment, and then continue on to <b>Section XIV</b> and implement change(s).	<input checked="" type="checkbox"/>
General CAS assignment created - Licensing submit changes in accordance with 10 CFR 50.4(b)(5)(ii) within 30 days of change implementation	<input checked="" type="checkbox"/>
Questions 1 or 2 or 3 are answered NO, complete <b>Sections XIII</b> and <b>Section XIV</b> .	<input type="checkbox"/>
<b>Section XIII: Disposition of Proposed Change Requiring Prior NRC Approval</b>	
Will the proposed change be submitted to the NRC for prior approval?	Yes <input type="checkbox"/> No <input type="checkbox"/>
If No, reject the proposed change, or modify the proposed change and perform a new evaluation. Continue to <b>Section XIV</b> for this evaluation.	
If YES, then initiate a License Amendment Request in accordance 10 CFR 50.90, AD-LS-ALL-0002, Regulatory Correspondence, and AD-LS-ALL-0015, License Amendment Request and Changes to SLC, TRM, and TS Bases, and include the tracking number: _____ . Complete <b>Section XIV</b> .	

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**Section XIV: Signatures:**  
EP CFAM Final Approval is required for changes affecting Program Element 4a of **Section VIII**. If CFAM approval is **NOT** required, then mark the EP CFAM signature block as not applicable (N/A) to indicate that signature is not required. **Section XIV** as applicable.

Preparer Name (Print): Mark Herms	Preparer Signature: See NAS	Date: See NAS
Reviewer Name (Print): Candace Sexton	Reviewer Signature: See NAS	Date: See NAS
Approver Name (Print): Mark DeWire	Approver Signature: See NAS	Date: See NAS
Approver (EP CFAM, as required) Name (Print): David Thompson	Approver Signature: See NAS	Date: See NAS

**QA RECORD**

**Attachment 2: Procedure CSD-EP-CNS-0101-01, "EAL TECHNICAL BASIS DOCUMENT",  
Revision 005, 10 CFR 50.54(q)**

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<b>Section I: 10 CFR 50.54(q) Review Number: (EREG #):</b>		02488674	
<b>Applicable Sites and Applicability Determination # (5AD)</b>			
<input type="checkbox"/> BNP		<input checked="" type="checkbox"/> CNS	02488293
		<input type="checkbox"/> HNP	
<input type="checkbox"/> MNS		<input type="checkbox"/> ONS	
		<input type="checkbox"/> RNP	
<b>Document #, EC #, or N/A</b>	<b>Revision # or N/A</b>	<b>Document or Activity Title</b>	
CSD-EP-CNS-0101-01	005	EAL Technical Basis Document	

<b>Section II: Identify/Describe All Proposed Activities/Changes being Reviewed</b>
Event or action, or series of actions that may result in a change to the emergency plan or affect the implementation of the emergency plan (Use attachments, or continue additional pages as necessary): Continue to <b>Section III</b> .

CSD-EP-CNS-0101-01 is the Emergency Action Level (EAL) technical basis document for Catawba Nuclear Station (CNS).

Changes include:

- Updated revision summary and revision number.
- Updated EAL SU5.1 basis definitions of Reactor Coolant System (RCS) leakage as a result of revised Technical Specifications (TSs) related to reactor coolant system operational leakage and the definition of the term "LEAKAGE" based on Technical Specifications Task Force (TSTF) Traveler TSTF-554, Revision 1, "Revise Reactor Coolant Leakage Requirements."

Change #	Section or Step #	Change From	Change to
1	Throughout	Old revision summary.	Updated revision summary identifying the changes made from the document revision request.
2	Throughout	CSD-EP-CNS-0101-01 - Old revision number (004)	CSD-EP-CNS-0101-01 - New revision number (005)
3	Att. 1, SU5.1 Basis	Identified leakage includes leakage such as that from pump seals or valve packing (except reactor coolant pump (RCP) seal water injection or leakoff), that is captured and conducted to collection systems or a sump or collecting tank, leakage into the containment atmosphere from sources that are both specifically located and known either not to interfere with the operation of leakage detection systems or not to be pressure boundary leakage; or NCS leakage through a steam generator to the secondary system (ref.	Identified leakage includes leakage such as that from pump seals or valve packing (except reactor coolant pump (RCP) seal water injection or leakoff), that is captured and conducted to collection systems or a sump or collecting tank, leakage into the containment atmosphere from sources that are both specifically located and known to not interfere with the operation of leakage detection systems; or NCS leakage through a steam generator to the secondary system (primary to secondary leakage) (ref. 1).

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		<p>1).</p> <p>Unidentified leakage is all leakage (except RCP seal water injection or leakoff) that is not identified leakage (ref. 1).</p> <p>Pressure Boundary leakage is leakage (except SG leakage) through an unisolable fault in an NCS component body, pipe wall, or vessel wall (ref. 1)</p>	<p>Unidentified leakage is all leakage (except RCP seal water injection or leakoff) that is not identified leakage (ref. 1).</p> <p>Pressure Boundary leakage is leakage (except primary to secondary leakage) through a fault in an NCS component body, pipe wall, or vessel wall. Leakage past seals, packing, and gaskets is not pressure boundary leakage (ref. 1).</p>
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**Section III: Description and Review of Licensing Basis Affected by the Proposed activity or Change:**

List all emergency plan sections that were reviewed for this activity by number and title.  
 IF THE ACTIVITY IN ITS ENTIRETY IS AN EMERGENCY PLAN CHANGE, EAL CHANGE OR EAL BASIS CHANGE, Enter Licensing Basis affected by the change and continue to **Section VI**.

**Licensing Basis for NEI 99-01 Rev 6 EALs**

CNS: ML116082A038 Letter Dated April 18, 2016. Subject: Catawba Nuclear Station, Units 1 and 2 - Issuance of Amendments regarding Emergency Action Level Scheme Change (CAC NOS. MF6166 and MF6167).

Amendment No. 279 to Renewed Facility Operating License (RFOL) No. NPF-35 and Amendment No. 275 to RFOL No. NPF-52 for the Catawba Nuclear Station, Units 1 and 2, respectively.

**Additional Licensing basis to implement FAQs**

ML19058A632 Letter dated July 1, 2019. Subject: Catawba Nuclear Station, Units 1 And 2; McGuire Nuclear Station, Units 1 And 2; Oconee Nuclear Station, Units 1, 2, And 3; Brunswick Steam Electric Plant, Units 1 And 2; Shearon Harris Nuclear Power Plant, Unit 1; And H. B. Robinson Steam Electric Plant, Unit No. 2 – Issuance of Amendments To Revise Emergency Action Level Schemes To Incorporate Clarifications Provided By Emergency Preparedness Frequently Asked Questions 2015-013, 2015-014, And 2016-002 (EPID L-2018-LLA-0174)

Amendment Nos. 303 and 299 to Renewed Facility Operating License Nos. NPF-35 and NPF-52 for the Catawba Nuclear Station, Units 1 and 2 (Catawba), respectively; Amendment Nos. 315 and 294 to Renewed Facility Operating License Nos. NPF-9 and NPF-17 for the McGuire Nuclear Station, Units 1 and 2 (McGuire), respectively; Amendment Nos. 412, 414, and 413 to Renewed Facility Operating License Nos. DPR-38, DPR-47, and DPR-55 for the Oconee Nuclear Station, Units 1, 2, and 3 (Oconee), respectively; Amendment Nos. 291 and 319 to Renewed Facility Operating License Nos. DPR-71 and DPR-62 for Brunswick Steam Electric Plant, Units 1 and 2 (Brunswick), respectively; Amendment No. 172 to Renewed Facility Operating License No. NPF-63 for the Shearon Harris Nuclear Power Plant, Unit 1 (Harris); and Amendment No. 264 to Renewed Facility Operating License No. DPR-23 for the H. B. Robinson Steam Electric Plant, Unit No. 2 (Robinson).

**Current EALs**

Catawba Nuclear Station EAL Technical Basis Document, CSD-EP-CNS-0101-01 Revision 004

The differences in approved revisions and the current revisions of the Emergency Plans have been reviewed, and they have been determined to meet the regulatory requirements required during the course of revisions.

**Licensing Basis**

- EP-ALL-EPLAN, Duke Energy Common Emergency Plan Revision 0
- EP-CNS-EPLAN-ANNEX, Duke Energy Catawba Emergency Plan Annex Revision 0

**Current Emergency Plan**

- EP-ALL-EPLAN, Duke Energy Common Emergency Plan Revision 5 Section D- Emergency Classification System
- EP-CNS-EPLAN-ANNEX, Duke Energy Catawba Emergency Plan Annex Revision 2 Section D- Emergency Classification System

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**Section IV: Ability to Maintain the Emergency Plan.**  
**Answer the following questions related to impact on the ability to maintain the Emergency Plan. Continue to Section V.**

1. Do any of the elements of the proposed activity change information or intent contained in the Emergency Plan?	Yes <input type="checkbox"/> No <input type="checkbox"/>
2. Do any elements of the proposed activity change the process or capability for alerting or notifying the public as described in the FEMA-approved Alert and Notification System Design Report?	Yes <input type="checkbox"/> No <input type="checkbox"/>
3. Do any elements of the proposed activity change the Evacuation Time Estimate results?	Yes <input type="checkbox"/> No <input type="checkbox"/>
4. Do any elements of the proposed activity change the On-Shift Staffing Analysis results?	Yes <input type="checkbox"/> No <input type="checkbox"/>
5. Does the Proposed activity require a change to the Emergency Plan Programmatic Description?	Yes <input type="checkbox"/> No <input type="checkbox"/>

***If Question 5 was answered yes, and the document being reviewed is NOT the Emergency Plan, then exit this review until the Emergency Plan change is complete or the proposed change is modified to not change the Emergency Plan Programmatic Description.***

**Section IV** conclusion:

- If questions 1-5 in **Section IV** marked NO, then complete **Section V**.
- If any question 1-5 of **Section IV** marked yes, then continue at **Section VI**.

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**Section V: Maintaining the Emergency Plan Conclusion.**

The questions in **Section IV** do not represent the total of all conditions that may cause a change to or impact the ability to maintain the emergency plan. Originator and reviewer signatures in **Section XIV** document that a review of all elements of the proposed change have been considered for their impact on the ability to maintain the emergency plan and their potential to change the emergency plan.

1. Provide a brief conclusion below that describes how the conditions, as described in the emergency plan, are maintained with this activity.
2. Select the box below when the review completes all actions for all elements of the activity and no 10CFR50.54 screening or evaluation is required for any element. Continue to **Section XIV**.

I have completed a review of this activity in accordance with 10CFR50.54(q)(2) and determined that the effectiveness of the emergency plan is maintained. This activity does not make any changes to the emergency plan. No further actions are required to screen or evaluate this activity in accordance with 10CFR50.54(q)(3).

**Section VI: Activity Previously Reviewed?**  
**Is this activity fully bounded by an NRC approved 10CFR50.90 submittal or Alert and Notification System Design Report?**

<input type="checkbox"/>	Yes	10 CFR 50.54(q) Evaluation is not required. Identify bounding source document below and continue to <b>Section XIV</b> .
<input checked="" type="checkbox"/>	No	Continue to <b>Section VII</b> .
<input type="checkbox"/>	Partially	If <b>PARTIALLY</b> , identify bounding source document and list changes bounded by the approved 10 CFR 50.90 or Alert and Notification System Design Report below. Changes not bound by the approved 10 CFR 50.90 or Alert and Notification System Design Report (i.e., part requiring further review). Continue the review in <b>Section VII</b> .

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<b>Section VII: Editorial Changes</b>		
<input type="checkbox"/>	Yes	All Activities/Changes identified in <b>Section II</b> are editorial/typographical changes such as formatting, paragraph numbering, spelling, or punctuation that does not change intent.
<input type="checkbox"/>	No	None of the Activities/Changes listed in <b>Section II</b> are editorial/typographical changes. Continue to <b>Section VIII</b> .
<input checked="" type="checkbox"/>	Partially	Some Activities/Changes are editorial/typographical.
<p>If <b>Yes</b> is checked, Identify the activities/changes listed in <b>Section II</b> that are editorial/typographical changes and provide justification below. Continue to <b>Section XII</b>.</p> <p>If <b>Partially</b> is checked, Identify the activities/changes listed in <b>Section II</b> that are editorial/typographical changes and provide justification below. Continue to <b>Section VIII</b> for changes not identified as editorial.</p>		

Justification:

The proposed changes below are defined as editorial in accordance with AD-EP-ALL-0602, and do not change the intent of the steps as written.

Proposed change 1 updates revision summary. Updating revision summary based on revision is editorial because it makes no changes to intent of the guidance.

Proposed change 2 updates revision number from 4 to 5 for EAL Technical Basis Document. Updating revision number is editorial because it makes no changes to intent of the guidance.

**10 CFR 50.54(q) Review Form****Section VIII: Emergency Planning Element and Function Screen***(Utilize Reg Guide 1.219 and Attachment 1, Additional Regulatory Guidance References for additional assistance)***Does any of Proposed Activities/Changes Identified in Section I impact any of the following, including program elements from NUREG-0654/FEMA REP-1 Section II? If yes check appropriate box.**

<b>1</b>	<b>10 CFR 50.47(b)(1) Assignment of Responsibility (Organization Control)</b>	
1a	Responsibility for emergency response is assigned.	<input type="checkbox"/>
1b	The response organization has the staff to respond and to augment staff on a continuing basis (24-7 staffing) in accordance with the emergency plan.	<input type="checkbox"/>
<b>2</b>	<b>10 CFR 50.47(b)(2) Onsite Emergency Organization</b>	
2a	Process ensures that on shift emergency response responsibilities are staffed and assigned	<input type="checkbox"/>
2b	The process for timely augmentation of onshift staff is established and maintained.	<input type="checkbox"/>
<b>3</b>	<b>10 CFR 50.47(b)(3) Emergency Response Support and Resources</b>	
3a	Arrangements for requesting and using off site assistance have been made.	<input type="checkbox"/>
3b	State and local staff can be accommodated at the EOF in accordance with the emergency plan.	<input type="checkbox"/>
<b>4</b>	<b>10 CFR 50.47(b)(4) Emergency Classification System</b>	<b>RS</b>
4a	A standard scheme of emergency classification and action levels is in use. <b>(Requires V/V (Attachment 3) and final approval of Screen and Evaluation by EP CFAM)</b>	<input checked="" type="checkbox"/>
<b>5</b>	<b>10 CFR 50.47(b)(5) Notification Methods and Procedures</b>	<b>RS</b>
5a	Procedures for notification of State and local governmental agencies are capable of alerting them of the declared emergency within 15 minutes (60 minutes for CR3) after declaration of an emergency and providing follow-up notification.	<input type="checkbox"/>
5b	Administrative and physical means have been established for alerting and providing prompt instructions to public within the plume exposure pathway.	<input type="checkbox"/>
5c	The public ANS meets the design requirements of FEMA-REP-10, Guide for Evaluation of Alert and Notification Systems for Nuclear Power Plants, or complies with the licensee's FEMA-approved ANS design report and supporting FEMA approval letter	<input type="checkbox"/>
<b>6</b>	<b>10 CFR 50.47(b)(6) Emergency Communications</b>	
6a	Systems are established for prompt communication among principal emergency response organizations.	<input type="checkbox"/>
6b	Systems are established for prompt communication to emergency response personnel.	<input type="checkbox"/>
<b>7</b>	<b>10 CFR 50.47(b)(7) Public Education and Information</b>	
7a	Emergency preparedness information is made available to the public on a periodic basis within the plume exposure pathway emergency planning zone (EPZ).	<input type="checkbox"/>
7b	Coordinated dissemination of public information during emergencies is established.	<input type="checkbox"/>
<b>8</b>	<b>10 CFR 50.47(b)(8) Emergency Facilities and Equipment</b>	
8a	Adequate facilities are maintained to support emergency response	<input type="checkbox"/>
8b	Adequate equipment is maintained to support emergency response.	<input type="checkbox"/>
<b>9</b>	<b>10 CFR 50.47(b)(9) Accident Assessment</b>	<b>RS</b>
9a	Methods, systems, and equipment for assessment of radioactive releases are in use.	<input type="checkbox"/>
<b>10</b>	<b>10 CFR 50.47(b) (10) Protective Response</b>	<b>RS</b>

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10a	A range of public PARs is available for implementation during emergencies.	<input type="checkbox"/>
10b	Evacuation time estimates for the population located in the plume exposure pathway EPZ are available to support the formulation of PARs and have been provided to State and local governmental authorities.	<input type="checkbox"/>
10c	A range of protective actions is available for plant emergency workers during emergencies, including those for hostile action events.	<input type="checkbox"/>
10d	KI is available for implementation as a protective action recommendation in those jurisdictions that chose to provide KI to the public.	<input type="checkbox"/>
<b>11</b>	<b>10 CFR 50.47(b) (11) Radiological Exposure Control</b>	
11a	The resources for controlling radiological exposures for emergency workers are established.	<input type="checkbox"/>
<b>12</b>	<b>10 CFR 50.47(b) (12) Medical and Public Health Support</b>	
12a	Arrangements are made for medical services for contaminated, injured individuals.	<input type="checkbox"/>
<b>13</b>	<b>10 CFR 50.47(b) (13) Recovery Planning and Post-Accident Operations</b>	
13a	Plans for recovery and reentry are developed.	<input type="checkbox"/>
<b>14</b>	<b>10 CFR 50.47(b) (14) Drills and Exercises</b>	
14a	A drill and exercise program (including radiological, medical, health physics and other program areas) is established.	<input type="checkbox"/>
14b	Drills, exercises, and training evolutions that provide performance opportunities to develop, maintain, and demonstrate key skills are assessed via a formal critique process in order to identify weaknesses.	<input type="checkbox"/>
14c	Identified weaknesses are corrected.	<input type="checkbox"/>
<b>15</b>	<b>10 CFR 50.47(b) (15) Emergency Response Training</b>	
15a	Training is provided to emergency responders.	<input type="checkbox"/>
<b>16</b>	<b>10 CFR 50.47(b) (16) Emergency Plan Maintenance</b>	
16a	Responsibility for emergency plan development and review is established.	<input type="checkbox"/>
16b	Planners responsible for emergency plan development and maintenance are properly trained.	<input type="checkbox"/>

**Section VIII: Conclusion**

- If any **Section VIII** criteria are checked, document the basis for conclusion below for any changes that are more than editorial, however not impacted by any of the identified criteria in Section VIII and continue the 50.54(q) Review in **Section IX**.
- If no **Section VIII** criteria are checked, 10CFR50.54(q)(3) Evaluation is NOT required. Document justification below for any changes that are more than editorial and continue to **Section XIV**.

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**Section IX: Description of Emergency Plan Planning Standards, Functions and Program Elements Affected by the Proposed Change**

Copy each emergency planning standard, function and program element affected by the proposed change that was identified as applicable in **Section VIII**. Continue to **Section X**.

**Planning Standard**

A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures.

**Function**

(1) A standard scheme of emergency classification and action levels is in use.

**Supporting requirements from Appendix E to 10 CFR Part 50**

**B. Assessment Actions**

1. The means to be used for determining the magnitude of, and for continually assessing the impact of, the release of radioactive materials shall be described, including emergency action levels that are to be used as criteria for determining the need for notification and participation of local and State agencies, the Commission, and other Federal agencies, and the emergency action levels that are to be used for determining when and what type of protective measures should be considered within and outside the site boundary to protect health and safety. The emergency action levels shall be based on in-plant conditions and instrumentation in addition to onsite and offsite monitoring. By June 20, 2012, for nuclear power reactor licensees, these action levels must include hostile action that may adversely affect the nuclear power plant. The initial emergency action levels shall be discussed and agreed on by the applicant or licensee and state and local governmental authorities, and approved by the NRC. Thereafter, emergency action levels shall be reviewed with the State and local governmental authorities on an annual basis.

2. A licensee desiring to change its entire emergency action level scheme shall submit an application for an amendment to its license and receive NRC approval before implementing the change. Licensees shall follow the change process in § 50.54(q) for all other emergency action level changes.

**C. Activation of Emergency Organization**

1. The entire spectrum of emergency conditions that involve the alerting or activating of progressively larger segments of the total emergency organization shall be described. The communication steps to be taken to alert or activate emergency personnel under each class of emergency shall be described. Emergency action levels (based not only on onsite and offsite radiation monitoring information but also on readings from a number of sensors that indicate a potential emergency, such as the pressure in containment and the response of the Emergency Core Cooling System) for notification of offsite agencies shall be described. The existence, but not the details, of a message authentication scheme shall be noted for such agencies. The emergency classes defined shall include: (1) Notification of unusual events, (2) alert, (3) site area emergency, and (4) general emergency. These classes are further discussed in NUREG-0654/FEMA-REP-1.

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2. By June 20, 2012, nuclear power reactor licensees shall establish and maintain the capability to assess, classify, and declare an emergency condition within 15 minutes after the availability of indications to plant operators that an emergency action level has been exceeded and shall promptly declare the emergency condition as soon as possible following identification of the appropriate emergency classification level. Licensees shall not construe these criteria as a grace period to attempt to restore plant conditions to avoid declaring an emergency action due to an emergency action level that has been exceeded. Licensees shall not construe these criteria as preventing implementation of response actions deemed by the licensee to be necessary to protect public health and safety provided that any delay in declaration does not deny the State and local authorities the opportunity to implement measures necessary to protect the public health and safety.

**Informing criteria from Section II.D of NUREG-0654 Rev. 2**

D. A standard emergency classification and action level scheme is established and maintained. The scheme provides detailed EALs for each of the four ECLs in Section IV.C.1 of Appendix E to 10 CFR Part 50.

D.1.a The EALs are developed using guidance provided or endorsed by the NRC that is applicable to the reactor design.

D.1.b The initial emergency classification and action level scheme is discussed and agreed to by the licensee and OROs, and approved by the NRC. Thereafter, the scheme is reviewed with OROs on an annual basis.

D.2 The capability to assess, classify, and declare the emergency condition within 15 minutes after the availability of indications to NPP operators that an EAL has been met or exceeded is described.



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**Section X: Describe How the Proposed Change Complies with Relevant Emergency Preparedness Regulation(s) and Previous Commitment(s) Made to the NRC**

If the emergency plan, modified as proposed, no longer complies with planning standards in 10 CFR 50.47(b) and the requirements in Appendix E to 10 CFR Part 50, then ensure the change is rejected, modified, or processed as an exemption request under 10 CFR 50.12, Specific Exemptions, rather than under 10 CFR 50.54(q). Address each Planning Standard identified in **Section IX. Continue to Section XI.**

Proposed change 3:

Proposed change is being made to update EAL SU5.1 basis definitions for identified, unidentified, and pressure boundary leakage. The first three paragraphs were originally written based on CNS Technical Specifications (TSs) Definitions section 1.1 as referenced at the end of each paragraph (ref.1). This reference has been updated in Amendment Nos. 317 and 313 to Renewed Facility Operating License Nos. NPF-35 and NPF-52 for the Catawba Nuclear Station, Unit Nos. 1 and 2, respectively. The amendments revise the TSs related to reactor coolant system operational leakage and the definition of the term "LEAKAGE" based on Technical Specifications Task Force (TSTF) Traveler TSTF-554, Revision 1, "Revise Reactor Coolant Leakage Requirements."

NOTE: NCS is the acronym used at CNS that is the same as Reactor Coolant System. EAL basis uses NCS since is the more commonly used acronym. Evaluation discussion using RCS since more commonly used by industry.

First paragraph changes:

From:

Identified leakage includes leakage such as that from pump seals or valve packing (except reactor coolant pump (RCP) seal water injection or leakoff), that is captured and conducted to collection systems or a sump or collecting tank, leakage into the containment atmosphere from sources that are both specifically located and known either not to interfere with the operation of leakage detection systems or not to be pressure boundary leakage; or NCS leakage through a steam generator to the secondary system (ref. 1).

To:

Identified leakage includes leakage such as that from pump seals or valve packing (except reactor coolant pump (RCP) seal water injection or leakoff), that is captured and conducted to collection systems or a sump or collecting tank, leakage into the containment atmosphere from sources that are both specifically located and known to not interfere with the operation of leakage detection systems; or NCS leakage through a steam generator to the secondary system (primary to secondary leakage) (ref. 1).

Revises the Identified Leakage definition to not exclude Pressure Boundary Leakage and added (primary to secondary leakage) as additional clarification. RCS leakage through a steam generator to the secondary system is also known as primary to secondary leakage so this addition is an enhancement with no change to intent.

The change to the definition of identified leakage applies to leakage from an RCS component that would be released directly into the containment atmosphere where the leakage would be detectable by the RCS leakage detection systems. The revised definition of identified leakage removes the existing exclusion of leakage known to be pressure boundary leakage. Therefore, all RCS leakage that is specifically located and known to not interfere with the operation of leakage detection systems would be considered identified leakage, regardless of the source of leakage. Not excluding Pressure Boundary Leakage provides a clearer definition of identified leakage.

No changes to second paragraph.

**10 CFR 50.54(q) Review Form**Third paragraph changes:From:

Pressure Boundary leakage is leakage (except SG leakage) through an unisolable fault in an NCS component body, pipe wall, or vessel wall (ref. 1)

To:

Pressure Boundary leakage is leakage (except primary to secondary leakage) through a fault in an NCS component body, pipe wall, or vessel wall. Leakage past seals, packing, and gaskets is not pressure boundary leakage (ref. 1).

Revises the defined term “leakage” to remove the term “unisolable” from the definition of Pressure Boundary Leakage, changed (except SG leakage) to (except primary to secondary leakage) for clarification, and added “Leakage past seals, packing, and gaskets is not pressure boundary leakage”.

From NRC Final Safety Evaluation of Technical Specifications Task Force Traveler TSTF-554, Revision 1, “Revise Reactor Coolant Leakage Requirements, the word “unisolable” has been interpreted inconsistently in the definition of pressure boundary leakage. In some interpretations, it has been considered a means of emphasizing that the leakage fault is in the base material of the pressure boundary and, therefore, the leakage cannot be stopped by adjusting packing or seals. In such a case, the fault represents degradation of the pressure boundary material that could result in a loss of structural integrity. Another interpretation is that leakage through a fault in portions of the pressure boundary that can be separated from the RCS by an isolation device (typically an installed valve) need not be considered as pressure boundary leakage once the isolation device is performing its isolation function. This would allow certain small sections of the Reactor Coolant Pressure Boundary (RCPB) between the outermost two valves to be removed from consideration as RCPB leakage when the inner valve is closed. Regardless of the interpretation, deletion of the word “unisolable” does not alter the fundamental meaning that pressure boundary leakage represents degradation that could ultimately result in a loss of structural integrity. Therefore, removing the term “unisolable” provides a clearer definition of pressure boundary leakage.

Changing (except SG leakage) to (except primary to secondary leakage) is an enhancement with no change to intent. The words (except SG leakage) could be interpreted as a steam leak from the secondary side of the steam generator. The intent of this EAL is related to RCS leakage into the secondary side of the steam generator and using the words (except primary to secondary leakage) better defines the intent of the EAL.

The additional sentence “LEAKAGE past seals, packing, and gaskets is not pressure boundary LEAKAGE,” is consistent with the definition and was added for emphasis. Definition is clear that pressure boundary leakage is leakage through a fault in an RCS component body, pipe wall, or vessel wall. The additional reminder to exclude leakage from seals, packing, and gaskets which are not RCS component bodies, pipe walls, or vessel walls is an enhancement with no change to intent of the definition.

The revised first paragraph supports the 2<sup>nd</sup> EAL condition “NCS identified leakage > 25 gpm for ≥ 15 min.” and the revised third paragraph supports the 1<sup>st</sup> EAL condition “NCS unidentified or pressure boundary leakage > 10 gpm for ≥ 15 min.”. These proposed changes remain consistent with the approved EAL scheme as described in the 7<sup>th</sup> paragraph of CNS EAL bases:

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The first and second EAL conditions are focused on a loss of mass from the NCS due to "unidentified leakage", "pressure boundary leakage" or "identified leakage" (as these leakage types are defined in the plant Technical Specifications).

These proposed changes remain consistent with NEI 99-01 rev 6 EAL scheme for this EAL:

EAL #1 and EAL #2 are focused on a loss of mass from the RCS due to "unidentified leakage", "pressure boundary leakage" or "identified leakage" (as these leakage types are defined in the plant Technical Specifications).

These proposed changes continue to support the first and second EAL conditions, because the definitions continue to be leakage types that are defined in the plant Technical Specification.

The leakage definitions updated for this EAL are consistent with the overall EAL scheme development guidance in NEI 99-01 revision 6. The proposed change maintains the licensee's capability to assess, classify, and declare an emergency condition within 15 minutes of the availability of indications. The classification of the event would NOT be different from that approved by the NRC in the site-specific application referenced in Part II. Implementation of the change will maintain the accuracy and timeliness of a classification following an RCS leak. The meaning or intent of the basis of the approved EAL is unchanged.

Proposed change 3 can be made because the change continues to be aligned with approved EAL basis and NEI 99-01 Rev. 6 EAL scheme.

Proposed change 3 continues to comply with 10 CFR 50.47(b)(4) because the change continues to ensure a standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by Catawba Nuclear Station (CNS).

Proposed change 3 continues to comply with 10 CFR Part 50 Appendix E, IV.C.2, because CNS has established and maintains the capability to assess, classify, and declare an emergency condition within 15 minutes after the availability of indications to plant operators that an emergency action level has been exceeded. This change continues to ensure CNS will promptly declare the emergency condition as soon as possible following identification of the appropriate emergency classification level.

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**Section XI: Description of Impact of the Proposed Change on the Effectiveness of Emergency Plan Functions**

Address each function identified in **Section IX. Continue to Section XII.**

Proposed change 3:

Proposed change is being made to update EAL SU5.1 basis definitions for identified, unidentified, and pressure boundary leakage. The first three paragraphs were originally written based on CNS Technical Specifications (TSs) Definitions section 1.1 as referenced at the end of each paragraph (ref.1). This reference has been updated in Amendment Nos. 317 and 313 to Renewed Facility Operating License Nos. NPF-35 and NPF-52 for the Catawba Nuclear Station, Unit Nos. 1 and 2, respectively. The amendments revise the TSs related to reactor coolant system operational leakage and the definition of the term "LEAKAGE" based on Technical Specifications Task Force (TSTF) Traveler TSTF-554, Revision 1, "Revise Reactor Coolant Leakage Requirements."

NOTE: NCS is the acronym used at CNS that is the same as Reactor Coolant System. EAL basis uses NCS since is the more commonly used acronym. Evaluation discussion using RCS since more commonly used by industry.

First paragraph changes:

From:

Identified leakage includes leakage such as that from pump seals or valve packing (except reactor coolant pump (RCP) seal water injection or leakoff), that is captured and conducted to collection systems or a sump or collecting tank, leakage into the containment atmosphere from sources that are both specifically located and known either not to interfere with the operation of leakage detection systems or not to be pressure boundary leakage; or NCS leakage through a steam generator to the secondary system (ref. 1).

To:

Identified leakage includes leakage such as that from pump seals or valve packing (except reactor coolant pump (RCP) seal water injection or leakoff), that is captured and conducted to collection systems or a sump or collecting tank, leakage into the containment atmosphere from sources that are both specifically located and known to not interfere with the operation of leakage detection systems; or NCS leakage through a steam generator to the secondary system (primary to secondary leakage) (ref. 1).

Revises the Identified Leakage definition to not exclude Pressure Boundary Leakage and added (primary to secondary leakage) as additional clarification. RCS leakage through a steam generator to the secondary system is also known as primary to secondary leakage so this addition is an enhancement with no change to intent.

The change to the definition of identified leakage applies to leakage from an RCS component that would be released directly into the containment atmosphere where the leakage would be detectable by the RCS leakage detection systems. The revised definition of identified leakage removes the existing exclusion of leakage known to be pressure boundary leakage. Therefore, all RCS leakage that is specifically located and known to not interfere with the operation of leakage detection systems would be considered identified leakage, regardless of the source of leakage. Not excluding Pressure Boundary Leakage provides a clearer definition of identified leakage.

No changes to second paragraph.

**10 CFR 50.54(q) Review Form**Third paragraph changes:From:

Pressure Boundary leakage is leakage (except SG leakage) through an unisolable fault in an NCS component body, pipe wall, or vessel wall. (ref. 1)

To:

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Revises the defined term "leakage" to remove the term "unisolable" from the definition of Pressure Boundary Leakage, changed (except SG leakage) to (except primary to secondary leakage) for clarification, and added "Leakage past seals, packing, and gaskets is not pressure boundary leakage".

From NRC Final Safety Evaluation of Technical Specifications Task Force Traveler TSTF-554, Revision 1, "Revise Reactor Coolant Leakage Requirements, the word "unisolable" has been interpreted inconsistently in the definition of pressure boundary leakage. In some interpretations, it has been considered a means of emphasizing that the leakage fault is in the base material of the pressure boundary and, therefore, the leakage cannot be stopped by adjusting packing or seals. In such a case, the fault represents degradation of the pressure boundary material that could result in a loss of structural integrity. Another interpretation is that leakage through a fault in portions of the pressure boundary that can be separated from the RCS by an isolation device (typically an installed valve) need not be considered as pressure boundary leakage once the isolation device is performing its isolation function. This would allow certain small sections of the Reactor Coolant Pressure Boundary (RCPB) between the outermost two valves to be removed from consideration as RCPB leakage when the inner valve is closed. Regardless of the interpretation, deletion of the word "unisolable" does not alter the fundamental meaning that pressure boundary leakage represents degradation that could ultimately result in a loss of structural integrity. Therefore, removing the term "unisolable" provides a clearer definition of pressure boundary leakage.

Changing (except SG leakage) to (except primary to secondary leakage) is an enhancement with no change to intent. The words (except SG leakage) could be interpreted as a steam leak from the secondary side of the steam generator. The intent of this EAL is related to RCS leakage into the secondary side of the steam generator and using the words (except primary to secondary leakage) better defines the intent of the EAL.

The additional sentence "LEAKAGE past seals, packing, and gaskets is not pressure boundary LEAKAGE," is consistent with the definition and was added for emphasis. Definition is clear that pressure boundary leakage is leakage through a fault in an RCS component body, pipe wall, or vessel wall. The additional reminder to exclude leakage from seals, packing, and gaskets which are not RCS component bodies, pipe walls, or vessel walls is an enhancement with no change to intent of the definition.

The revised first paragraph supports the 2<sup>nd</sup> EAL condition "NCS identified leakage > 25 gpm for ≥ 15 min." and the revised third paragraph supports the 1<sup>st</sup> EAL condition "NCS unidentified or pressure boundary leakage > 10 gpm for ≥ 15 min.". These proposed changes remain consistent with the approved EAL scheme as described in the 7<sup>th</sup> paragraph of CNS EAL bases:

The first and second EAL conditions are focused on a loss of mass from the NCS due to unidentified leakage", "pressure boundary leakage" or "identified leakage" (as these leakage types are defined in the plant Technical Specifications).

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These proposed changes remain consistent with NEI 99-01 rev 6 EAL scheme for this EAL:

EAL #1 and EAL #2 are focused on a loss of mass from the RCS due to "unidentified leakage", "pressure boundary leakage" or "identified leakage" (as these leakage types are defined in the plant Technical Specifications).

These proposed changes continue to support the first and second EAL conditions, because the definitions continue to be leakage types that are defined in the plant Technical Specification.

The leakage definitions updated for this EAL are consistent with the overall EAL scheme development guidance in NEI 99-01 revision 6. The proposed change maintains the licensee's capability to assess, classify, and declare an emergency condition within 15 minutes of the availability of indications. The classification of the event would NOT be different from that approved by the NRC in the site-specific application referenced in Part II. Implementation of the change will maintain the accuracy and timeliness of a classification following an RCS leak. The meaning or intent of the basis of the approved EAL is unchanged.

Proposed change 3 can be made because the change continues to be aligned with approved EAL basis and NEI 99-01 Rev. 6 EAL scheme

The proposed change can be made because the change continues to ensure a standard scheme of emergency classification and action levels are in use and there is no negative impact to timeliness or accuracy.

The proposed change does not reduce the effectiveness of Catawba Nuclear Station Emergency Plan. The change continues to provide assurance that the Emergency Response Organization has the ability and capability to:

- respond to an emergency;
- perform functions in a timely manner;
- effectively identify and take measures to ensure protection of the public health and safety; and
- effectively use response equipment and emergency response procedures.

The change continues to meet NRC requirements, as described in 10 CFR 50.47(b)(4) and 10 CFR 50, Appendix E as well as the requirements of the Catawba Nuclear Station Emergency Plan as written and approved.

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<b>Section XII: Evaluation Conclusion</b>	
Answer the following questions about the proposed change:	
1. Does the proposed change comply with 10 CFR 50.47(b) and 10 CFR 50 Appendix E?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. Does the proposed change maintain the effectiveness of the emergency plan (i.e., no reduction in effectiveness)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
3. Does the proposed change maintain the current Emergency Action Level (EAL) scheme?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<b>Section XII: Conclusion</b>	
Questions 1, 2 and 3 are answered YES, complete step below to create a General CAS assignment, and then continue on to <b>Section XIV</b> and implement change(s).	<input checked="" type="checkbox"/>
General CAS assignment created - Licensing submit changes in accordance with 10 CFR 50.4(b)(5)(ii) within 30 days of change implementation	<input checked="" type="checkbox"/>
Questions 1 or 2 or 3 are answered NO, complete <b>Sections XIII</b> and <b>Section XIV</b> .	<input type="checkbox"/>

<b>Section XIII: Disposition of Proposed Change Requiring Prior NRC Approval</b>	
Will the proposed change be submitted to the NRC for prior approval?	Yes <input type="checkbox"/> No <input type="checkbox"/>
If No, reject the proposed change, or modify the proposed change and perform a new evaluation. Continue to <b>Section XIV</b> for this evaluation.	
If YES, then initiate a License Amendment Request in accordance 10 CFR 50.90, AD-LS-ALL-0002, Regulatory Correspondence, and AD-LS-ALL-0015, License Amendment Request and Changes to SLC, TRM, and TS Bases, and include the tracking number: _____ . Complete <b>Section XIV</b> .	

<b>Section XIV: Signatures:</b>		
EP CFAM Final Approval is required for changes affecting Program Element 4a of <b>Section VIII</b> . If CFAM approval is <b>NOT</b> required, then mark the EP CFAM signature block as not applicable (N/A) to indicate that signature is not required. <b>Section XIV</b> as applicable.		
Preparer Name (Print): Matthew Nelson	Preparer Signature: See CAS	Date: See CAS
Reviewer Name (Print): Ryder Coyle	Reviewer Signature: See CAS	Date: See CAS
Approver Name (Print): Sherry Andrews	Approver Signature: See CAS	Date: See CAS
Approver (EP CFAM, as required) Name (Print): David Thompson	Approver Signature: See CAS	Date: See CAS

**QA RECORD**