



William Gunter
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10 CFR 50.4(b)(5)(ii)
10 CFR 50.54(q)(5)

March 4, 2024
Serial: RA-24-0062

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Shearon Harris Nuclear Power Plant, Unit 1
Docket No. 50-400/Renewed License No. NPF-63

Subject: 10 CFR 50.54(q) Evaluation

Ladies and Gentlemen:

In accordance with 10 CFR 50.4(b)(5)(ii) and 10 CFR 50.54(q)(5), Duke Energy Progress, LLC, is submitting the 10 CFR 50.54(q) Review Form for a revision to the Shearon Harris Nuclear Power Plant, Unit 1 (HNP), Emergency Action Level (EAL) Technical Basis Document. CSD-EP-HNP-0101-01, "EAL Technical Basis Document," Revision 5, was issued on February 22, 2024. A revision to a previous 10 CFR 50.54(q) Review Form completed for CSD-EP-HNP-0101-01, Revision 4, issued on December 12, 2023, which was submitted to the NRC on January 8, 2024 (reference Agencywide Documents Access and Management System (ADAMS) Accession number ML24009A106), and a revision to a previous 10 CFR 50.54(q) Review Form completed for EP-HNP-OSSA, "Harris On-Shift Staffing Analysis," Revision 1, issued on December 14, 2023, which was submitted to the NRC on January 4, 2024 (reference ADAMS Accession number ML24004A243), are included in this submittal.

This submittal contains no regulatory commitments. Please refer any questions regarding this submittal to Sarah McDaniel at (984) 229-2002.

Sincerely,

William Gunter

Enclosure: 10 CFR 50.54(q) Review Form for CSD-EP-HNP-0101-01, Revision 5
10 CFR 50.54(q) Review Form for CSD-EP-HNP-0101-01, Revision 4
10 CFR 50.54(q) Review Form for EP-HNP-OSSA, Revision 1

cc: P. Boguszewski, NRC Senior Resident Inspector, HNP
M. Mahoney, NRC Project Manager, HNP
NRC Regional Administrator, Region II

Document Control Desk
Serial: RA-24-0062
Enclosure

ENCLOSURE

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1

DOCKET NO. 50-400/RENEWED LICENSE NUMBER NPF-63

10 CFR 50.54(q) REVIEW FORM FOR CSD-EP-HNP-0101-01, REVISION 5

10 CFR 50.54(q) REVIEW FORM FOR CSD-EP-HNP-0101-01, REVISION 4

10 CFR 50.54(q) REVIEW FORM FOR EP-HNP-OSSA, REVISION 1

(75 PAGES PLUS COVER)

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

ATTACHMENT 2
Page 1 of 10

<< 10 CFR 50.54(q) Review Form >>

Section I: 10 CFR 50.54(q) Review Number: (EREG #):		02504297	
Applicable Sites and Applicability Determination # (5AD)			
<input type="checkbox"/> BNP		<input type="checkbox"/> CNS	<input checked="" type="checkbox"/> HNP 02504275
<input type="checkbox"/> MNS		<input type="checkbox"/> ONS	<input type="checkbox"/> RNP
Document #, EC #, or N/A	Revision # or N/A	Document or Activity Title	
CSD-EP-HNP-0101-01	005	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-HNP-0101-01, *EAL Technical Basis Document*, provides explanation and rationale for each Emergency Action Level (EAL) for the Harris Nuclear Plant (HNP).

Revision 005 corrects inadvertent changes to the document that were introduced during processing of Revision 004. These changes include:

- Updating the revision summary and revision number.
- Reinserting abbreviation definitions that were inadvertently deleted.
- Removing an abbreviation definition that was inadvertently added.
- Reinserting a HNP EAL to NEI 99-01, Rev 6, cross-reference that was inadvertently deleted.
- Correcting bold formatting that was inadvertently added.
- Correcting text box formatting that was partially obscuring the associated text.

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	Old revision number (004)	New revision number (005)
3	5.2	N/A	Inserted: 1st column: "CHRRM" 2nd column: "Containment High Range Radiation Monitors"
4	5.2	N/A	Inserted: 1st column: "HNP" 2nd column: "Harris Nuclear Plant"

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

ATTACHMENT 2

<< 10 CFR 50.54(q) Review Form >>

Change #	Section or Step #	Change From	Change to
5	5.2	N/A	Inserted: 1st column: "RAB" 2nd column: "Reactor Auxiliary Building"
6	5.2	"RNP Robinson Nuclear Plant"	Deleted
7	5.2	N/A	Inserted: 1st column: "TIC" 2nd column: "Thermally Induced Current"
8	6.0, HNP to NEI 99-01 Rev. 6 cross-reference table	N/A	Inserted: EAL column: "HU1.1" IC column: "HU1" Example EAL column: "1"
9	Att. 1, RA1.4 Basis, Reference 4	4. AD-EP-HNP-0106, HNP Site Specific OSC Support (The word "Support" is in Bold font.)	4. AD-EP-HNP-0106, HNP Site Specific OSC Support (The word "Support" is no longer bolded. No text change.)
10	Att. 1, RS1.3 Basis, Reference 4	4. AD-EP-HNP-0106, HNP Site Specific OSC Support (The word "Support" is in Bold font.)	4. AD-EP-HNP-0106, HNP Site Specific OSC Support (The word "Support" is no longer bolded. No text change.)
11	Att. 2, Fig. 1	In bottom right of figure, the text box containing the words "Closed Cooling Water System" was formatted so that the words "Water System" were only partially visible	The text box containing the words "Closed Cooling Water System" was reformatted so that all words are visible. No text change.

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

Letter from U.S. Nuclear Regulatory Commission to Duke Energy, "Shearon Harris Nuclear Power Plant Unit 1 - Issuance of Amendment [149] to Adopt Emergency Action Level Scheme Pursuant to NEI 99-01, Revision 6, 'Development of Emergency Action Levels for Non-Passive Reactors,'" dated April 13, 2016 (ADAMS Accession No. ML16057A838).

License Amendment 149 was implemented in EP-EAL, *Emergency Actions Levels*, Revision 17.

Letter from U.S. Nuclear Regulatory Commission to Duke Energy, "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,

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

<< 10 CFR 50.54(q) Review Form >>

Units 1 and 2; Shearon Harris Nuclear Power Plant, Unit 1; and H.B. Robinson Steam Electric Plant, Unit No. 2 – Issuance of Amendments [172 for HNP] 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)," dated July 1, 2019 (ADAMS Accession No. ML19058A632).

Letter from U.S. Nuclear Regulatory Commission to Duke Energy, "Shearon Harris Nuclear Power Plant Unit 1 - Issuance of Amendment No. 173 Regarding Emergency Plan Emergency Action Level Scheme Change (EPID L-2018-LLA-0216)," dated July 18, 2019 (ADAMS Accession No. ML19108A173).

License Amendments 172 and 173 were implemented in EP-EAL, *Emergency Actions Levels*, Revision 20.

Current EALs

CSD-EP-HNP-0101-01, *EAL Technical Basis Document*, Revision 004

Licensing Basis

- EP-ALL-EPLAN, *Duke Energy Common Emergency Plan*, Revision 0
- EP-HNP-EPLAN-ANNEX, *Duke Energy Harris Emergency Plan Annex*, Revision 0

Current Emergency Plan

- EP-ALL-EPLAN, *Duke Energy Common Emergency Plan*, Revision 5, Section D – Emergency Classification System
- EP-HNP-EPLAN-ANNEX, *Duke Energy Harris Emergency Plan Annex*, Revision 1, Section D - Emergency Classification System

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

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

ATTACHMENT 2

Page 4 of 10

<< 10 CFR 50.54(q) Review Form >>

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**.

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.

- Provide a brief conclusion below that describes how the conditions, as described in the emergency plan, are maintained with this activity.
- 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).

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

ATTACHMENT 2
Page 5 of 10

<< 10 CFR 50.54(q) Review Form >>

Section VI: Activity Previously Reviewed? <i>Is this activity fully bounded by an NRC approved 10CFR50.90 submittal or Alert and Notification System Design Report?</i>		
<input type="checkbox"/>	Yes	10 CFR 50.54(q) Evaluation is not required. Identify bounding source document below and continue to Section XIV .
<input checked="" type="checkbox"/>	No	Continue to Section VII .
<input type="checkbox"/>	Partially	If PARTIALLY , 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 Section VII .

Bounding source document and list of bounded changes:

Section VII: Editorial Changes		
<input type="checkbox"/>	Yes	All Activities/Changes identified in Section II 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 Section II are editorial/typographical changes. Continue to Section VIII .
<input checked="" type="checkbox"/>	Partially	Some Activities/Changes are editorial/typographical.
If Yes is checked, Identify the activities/changes listed in Section II that are editorial/typographical changes and provide justification below. Continue to Section XII .		
If Partially is checked, Identify the activities/changes listed in Section II that are editorial/typographical changes and provide justification below. Continue to Section VIII for changes not identified as editorial.		

Justification:

The proposed changes below are defined as editorial in accordance with AD-EP-ALL-0602, *Emergency Plan Change Screening and Effectiveness Evaluations 10 CFR 50.54(Q)*, and do not change the intent of the guidance as written.

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

Proposed change 2 updates the revision number from 004 to 005 for the EAL Technical Basis Document. Updating the revision number is editorial because it makes no changes to the intent of the guidance.

Proposed changes 9 and 10 remove bold formatting that was inadvertently added during processing of Revision 004 without making any changes to the text. Correcting formatting without changes to the text is editorial because it does not make any changes to the intent, purpose, or order of the guidance.

Proposed change 11 corrects the formatting of a text box in the lower right of the image that was partially obscuring the associated text. No changes were made to the text contained in the text box. Correcting formatting without changes to the text is editorial because it does not make any changes to the intent, purpose, or order of the guidance.

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

ATTACHMENT 2
Page 6 of 10

<< 10 CFR 50.54(q) Review Form >>

Section VIII: Emergency Planning Element and Function Screen		
<i>(Utilize Reg Guide 1.219 and Attachment 1, Additional Regulatory Guidance References for additional assistance)</i>		
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.		
1	10 CFR 50.47(b)(1) Assignment of Responsibility (Organization Control)	
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"/>
2	10 CFR 50.47(b)(2) Onsite Emergency Organization	
2a	Process ensures that on shift emergency response responsibilities are staffed and assigned	<input type="checkbox"/>
2b	The process for timely augmentation of on-shift staff is established and maintained.	<input type="checkbox"/>
3	10 CFR 50.47(b)(3) Emergency Response Support and Resources	
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"/>
4	10 CFR 50.47(b)(4) Emergency Classification System	RS
4a	A standard scheme of emergency classification and action levels is in use. (Requires V/V (Attachment 3) and final approval of Screen and Evaluation by EP CFAM)	<input type="checkbox"/>
5	10 CFR 50.47(b)(5) Notification Methods and Procedures	RS
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"/>
6	10 CFR 50.47(b)(6) Emergency Communications	
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"/>
7	10 CFR 50.47(b)(7) Public Education and Information	
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"/>
8	10 CFR 50.47(b)(8) Emergency Facilities and Equipment	
8a	Adequate facilities are maintained to support emergency response	<input type="checkbox"/>
8b	Adequate equipment is maintained to support emergency response.	<input type="checkbox"/>
9	10 CFR 50.47(b)(9) Accident Assessment	RS
9a	Methods, systems, and equipment for assessment of radioactive releases are in use.	<input type="checkbox"/>

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

ATTACHMENT 2
Page 7 of 10

<< 10 CFR 50.54(q) Review Form >>

10	10 CFR 50.47(b) (10) Protective Response	RS
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"/>
11	10 CFR 50.47(b) (11) Radiological Exposure Control	
11a	The resources for controlling radiological exposures for emergency workers are established.	<input type="checkbox"/>
12	10 CFR 50.47(b) (12) Medical and Public Health Support	
12a	Arrangements are made for medical services for contaminated, injured individuals.	<input type="checkbox"/>
13	10 CFR 50.47(b) (13) Recovery Planning and Post-Accident Operations	
13a	Plans for recovery and reentry are developed.	<input type="checkbox"/>
14	10 CFR 50.47(b) (14) Drills and Exercises	
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"/>
15	10 CFR 50.47(b) (15) Emergency Response Training	
15a	Training is provided to emergency responders.	<input type="checkbox"/>
16	10 CFR 50.47(b) (16) Emergency Plan Maintenance	
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**.

Justification for changes that are more than editorial, however, not impacted by any of the identified criteria in Section VIII:

Proposed changes 3, 4, 5, and 7 reinsert abbreviation definitions that were inadvertently deleted during processing of Revision 004. These changes are more than editorial; however, these changes can be made because they do not change the intent of the guidance as written.

Proposed change 6 deletes an abbreviation definition that was inadvertently added during processing of Revision 004. This change is more than editorial; however, this change can be made because it does not change the intent of the guidance as written.

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

<< 10 CFR 50.54(q) Review Form >>

Proposed change 8 reinserts the "HU1.1" HNP EAL to NEI 99-01, Rev 6, cross-reference into the cross-reference table. This cross-reference was inadvertently deleted during processing of Revision 004. This change is more than editorial; however, this change can be made because it does not change the intent of the guidance.

The proposed changes above can be made because these changes return the document to its state prior to the processing errors introduced when implementing Revision 004. These changes do not affect the EAL scheme or affect the timeliness or accuracy of emergency declarations.

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 .

List affected Emergency Planning Standards, Functions, and Program Elements:

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 .

Justification:

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 .

Justification:

Section XII: Evaluation Conclusion	
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 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 type="checkbox"/> No <input type="checkbox"/>
3. Does the proposed change maintain the current Emergency Action Level (EAL) scheme?	Yes <input type="checkbox"/> No <input type="checkbox"/>
Section XII: Conclusion	
Questions 1, 2 and 3 are answered YES, complete step below to create a General CAS assignment, and then continue on to Section XIV and implement change(s).	<input type="checkbox"/>

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

ATTACHMENT 2

Page 9 of 10

<< 10 CFR 50.54(q) Review Form >>

	General CAS assignment created- Licensing submit changes in accordance with 10 CFR 50.4(b)(5)(ii) within 30 days of change implementation	<input type="checkbox"/>
	Questions 1 or 2 or 3 are answered NO, complete Sections XIII and Section XIV .	<input type="checkbox"/>

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

ATTACHMENT 2
Page 10 of 10

<< 10 CFR 50.54(q) Review Form >>

Section XIII: Disposition of Proposed Change Requiring Prior NRC Approval	
<p>Will the proposed change be submitted to the NRC for prior approval?</p> <p>If No, reject the proposed change, or modify the proposed change and perform a new evaluation. Continue to Section XIV for this evaluation.</p> <p>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 Section XIV.</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>

Section XIV: Signatures:		
<p>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.</p>		
Preparer Name (Print): David Bell	Preparer Signature: See NAS	Date: See NAS
Reviewer Name (Print): Sarah McDaniel	Reviewer Signature: See NAS	Date: See NAS
Approver Name (Print): William Gunter	Approver Signature: See NAS	Date: See NAS
Approver (EP CFAM, as required) Name (Print): N/A	Approver Signature: N/A	Date: N/A

QA RECORD

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

ATTACHMENT 2
Page 1 of 42

<< 10 CFR 50.54(q) Review Form >>

Section I: 10 CFR 50.54(q) Review Number: (EREG #):		02490584
		02504846
Applicable Sites and Applicability Determination # (5AD)		
<input type="checkbox"/> BNP		<input type="checkbox"/> CNS
		<input checked="" type="checkbox"/> HNP
		02490554
<input type="checkbox"/> MNS		<input type="checkbox"/> ONS
		<input type="checkbox"/> RNP
Document #, EC #, or N/A	Revision # or N/A	Document or Activity Title
CSD-EP-HNP-0101-01	4	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 .

This is a revised 50.54(q) review. Changes to the original 50.54(q) review can be identified by:

- Additions to this revised 50.54(q) review will appear in Bold and Italicized format.***
- Deletions to this revised 50.54(q) review will appear in struck through format.***

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

Changes include:

- Updated revision summary and revision number.
- Various reference updates and formatting changes.
- 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-HNP-0101-01 - Old revision number (003)	CSD-EP-HNP-0101-01 - New revision number (004)
3	Throughout	Old page numbers and Table of Contents	Updated page numbers and Table of Contents
4	Throughout	PEP-110, Emergency Classification and Protective Action Recommendations	AD-EP-ALL-0101, Emergency Classification, and AD-EP-ALL-0109, Offsite Protective Action Recommendations

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

ATTACHMENT 2
Page 2 of 42

<< 10 CFR 50.54(q) Review Form >>

Change #	Section or Step #	Change From	Change to
5	Throughout	Shearon Harris Nuclear Power Plant Offsite Dose Calculation Manual (ODCM)	O/S Dose Calc Manual, Shearon Harris Nuclear Power Plant Off-site Dose Calculation Manual (ODCM)
6	Throughout	EP-EALCALC-HNP-1401, HNP Radiological Effluent EAL Values	CSD-EP-HNP-0101-04, EAL Calculation - Radiological Effluent EAL Values
7	Throughout	AOP-20, Loss of RCS Inventory or Residual Heat Removal While Shutdown	AOP-020, Loss of RCS Inventory or Residual Heat Removal While Shutdown
8	Throughout	AOP-20, Loss of RCS Inventory or Residual Heat Removal While Shutdown – Basis Document	AOP-020-BD, Loss of RCS Inventory or Residual Heat Removal While Shutdown
9	Throughout	AOP-21, Seismic Disturbances	AOP-021, Seismic Disturbances
10	Throughout	PEP-342, Core Damage Assessment	AD-EP-PWR-0206, Core Damage Assessment During An Emergency
11	Throughout	AOP-16, Excessive Primary Plant Leakage	AOP-016, Excessive Primary Plant Leakage
12	Throughout	judgement	judgment
13	Throughout	OP-125, Hydrogen Monitoring System (HSM)	OP-125, Hydrogen Monitoring System (HMS)
14	Throughout	Old formatting throughout document	<p>Updated formatting throughout document in accordance with AD-DC-ALL-0301, Development and Maintenance of Controlled Supporting Documents. Changes include:</p> <ul style="list-style-type: none"> • Changing outline and substep bullets from "A.", "B", "C", to "1.", "2.", "3." • Placing periods "." after step numbers • Bolding step numbers • Adding section continuation headers • Removing underline from substep numbers • Reformatting attachment titles so that they are below the attachment number • Reformatting fonts <p>(Formatting changes only. No change to text)</p>

<< 10 CFR 50.54(q) Review Form >>

Change #	Section or Step #	Change From	Change to														
15	2.6, Operating Mode definitions	<p>1 Power Operations $K_{eff} \geq 0.99$ and reactor thermal power > 5% and average coolant temperature $\geq 350^{\circ}\text{F}$</p> <p>2 Startup $K_{eff} \geq 0.99$ and reactor thermal power $\leq 5\%$ average coolant temperature $\geq 350^{\circ}\text{F}$</p> <p>3 Hot Standby $K_{eff} < 0.99$ and average coolant temperature $\geq 350^{\circ}\text{F}$</p> <p>4 Hot Shutdown $K_{eff} < 0.99$ and average coolant temperature $350^{\circ}\text{F} > T_{avg} > 200^{\circ}\text{F}$ (excluding decay heat)</p> <p>5 Cold Shutdown $K_{eff} < 0.99$ and average coolant temperature $T_{avg} \leq 200^{\circ}\text{F}$</p> <p>6 Refueling $K_{eff} < 0.95$ and average coolant temperature $T_{avg} \leq 140^{\circ}\text{F}$; fuel in the reactor vessel with the vessel head closure bolts less than fully tensioned or with the head removed</p> <p>D Defueled All reactor fuel removed from reactor pressure vessel (full core off load during refueling or extended outage)</p>	<p>(Reformatted into table format only. No change to text.)</p> <table border="1"> <tr> <td>1</td> <td><u>Power Operations</u> $K_{eff} \geq 0.99$ and reactor thermal power >5% and average coolant temperature $\geq 350^{\circ}\text{F}$</td> </tr> <tr> <td>2</td> <td><u>Startup</u> $K_{eff} \geq 0.99$ and reactor thermal power $\leq 5\%$ average coolant temperature $\geq 350^{\circ}\text{F}$</td> </tr> <tr> <td>3</td> <td><u>Hot Standby</u> $K_{eff} < 0.99$ and average coolant temperature $\geq 350^{\circ}\text{F}$</td> </tr> <tr> <td>4</td> <td><u>Hot Shutdown</u> $K_{eff} < 0.99$ and average coolant temperature $350^{\circ}\text{F} > T_{avg} > 200^{\circ}\text{F}$ (excluding decay heat)</td> </tr> <tr> <td>5</td> <td><u>Cold Shutdown</u> $K_{eff} < 0.99$ and average coolant temperature $T_{avg} \leq 200^{\circ}\text{F}$</td> </tr> <tr> <td>6</td> <td><u>Refueling</u> $K_{eff} < 0.95$ and average coolant temperature $T_{avg} \leq 140^{\circ}\text{F}$; fuel in the reactor vessel with the vessel head closure bolts less than fully tensioned or with the head removed</td> </tr> <tr> <td>D</td> <td><u>Defueled</u> All reactor fuel removed from reactor pressure vessel (full core off load during refueling or extended outage)</td> </tr> </table>	1	<u>Power Operations</u> $K_{eff} \geq 0.99$ and reactor thermal power >5% and average coolant temperature $\geq 350^{\circ}\text{F}$	2	<u>Startup</u> $K_{eff} \geq 0.99$ and reactor thermal power $\leq 5\%$ average coolant temperature $\geq 350^{\circ}\text{F}$	3	<u>Hot Standby</u> $K_{eff} < 0.99$ and average coolant temperature $\geq 350^{\circ}\text{F}$	4	<u>Hot Shutdown</u> $K_{eff} < 0.99$ and average coolant temperature $350^{\circ}\text{F} > T_{avg} > 200^{\circ}\text{F}$ (excluding decay heat)	5	<u>Cold Shutdown</u> $K_{eff} < 0.99$ and average coolant temperature $T_{avg} \leq 200^{\circ}\text{F}$	6	<u>Refueling</u> $K_{eff} < 0.95$ and average coolant temperature $T_{avg} \leq 140^{\circ}\text{F}$; fuel in the reactor vessel with the vessel head closure bolts less than fully tensioned or with the head removed	D	<u>Defueled</u> All reactor fuel removed from reactor pressure vessel (full core off load during refueling or extended outage)
1	<u>Power Operations</u> $K_{eff} \geq 0.99$ and reactor thermal power >5% and average coolant temperature $\geq 350^{\circ}\text{F}$																
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16	4.1.9	4.1.9 PRO-NGGC-0201, NGG Procedure Writer's Guide	4.1.9 AD-DC-ALL-0202, Writer's Manual for Procedures and Work Instructions														
17	4.2	<p>4.2.1 PEP-110, Emergency Classification and Protective Action Recommendations</p> <p>4.2.2 NEI 99-01 Rev. 6 to HNP EAL Comparison Matrix</p> <p>4.2.3 HNP EAL Matrix</p>	<p>4.2.1 AD-EP-ALL-0101, Emergency Classification</p> <p>4.2.2 AD-EP-ALL-0109, Offsite Protective Action Recommendations</p> <p>4.2.3 NEI 99-01 Rev. 6 to HNP EAL Comparison Matrix</p> <p>4.2.4 HNP EAL Matrix</p>														
18	5.1	See Enclosure 1	<p>(Numbered Definitions only. No change to text.)</p> <p>See Enclosure 2</p>														
19	5.2	See Enclosure 3	<p>(Reformatted Abbreviations/Acronyms to table format only. No change to text.)</p> <p>See Enclosure 4</p>														

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

<< 10 CFR 50.54(q) Review Form >>

Change #	Section or Step #	Change From	Change to
20	7.0	7.1 Attachment 1, Emergency Action Level Technical Bases 7.2 Attachment 2, Fission Product Barrier Matrix and Basis 7.3 Attachment 3, Safe Operation & Shutdown Areas Tables R-3/H-2 Bases	Attachment 1, EAL Bases Attachment 2, Fission Product Barrier Loss/Potential Loss Matrix and Bases Attachment 3, Safe Operation & Shutdown Room/Areas Tables R-3/H-2 Bases
21	Att. 1, RA1.4 Basis, Paragraph 1 Att. 1, RS1.3 Basis, Paragraph 1 Att. 1, RG1.3 Basis, Paragraph 1	PEP-270, Activation and Operation of the Emergency Operations Facility and PEP-330, Radiological Consequences provide guidance for emergency or post-accident radiological environmental monitoring (ref. 1, 2).	AD-EP-ALL-0103, Activation and Operation of the Emergency Operations Facility, AD-EP-ALL-0204, Distribution of Potassium Iodide Tablets in the Event of a Radioiodine Release, AD-EP-ALL-0205, Emergency Exposure Controls, AD-EP-HNP-0106, HNP Site-Specific OSC Support, AD-EP-HNP-0203, HNP Site-Specific Field Monitoring, AD-RP-ALL-2000, Preparation and Management of Radiation Work Permits (RWP), and AD-RP-ALL-4010, Internal Dose Assessment provides guidance for emergency or post-accident radiological environmental monitoring (ref. 1 - 7).
22	Att. 1, RA1.4 Basis Reference(s)	1. PEP-270, Activation and Operation of the Emergency Operations Facility 2. PEP-330, Radiological Consequences 3. NEI 99-01 AA1	1. AD-EP-ALL-0103, Activation and Operation of the Emergency Operations Facility 2. AD-EP-ALL-0204, Distribution of Potassium Iodide Tablets in the Event of a Radioiodine Release, 3. AD-EP-ALL-0205, Emergency Exposure Controls 4. AD-EP-HNP-0106, HNP Site-Specific OSC Support 5. AD-EP-HNP-0203, HNP Site-Specific Field Monitoring 6. AD-RP-ALL-2000, Preparation and Management of Radiation Work Permits (RWP) 7. AD-RP-ALL-4010, Internal Dose Assessment 8. NEI 99-01 AA1

<< 10 CFR 50.54(q) Review Form >>

Change #	Section or Step #	Change From	Change to
23	Att. 1, RS1.3 Basis Reference(s)	1. PEP-270, Activation and Operation of the Emergency Operations Facility 2. PEP-330, Radiological Consequences 3. NEI 99-01 AS1	1. AD-EP-ALL-0103, Activation and Operation of the Emergency Operations Facility 2. AD-EP-ALL-0204, Distribution of Potassium Iodide Tablets in the Event of a Radioiodine Release, 3. AD-EP-ALL-0205, Emergency Exposure Controls 4. AD-EP-HNP-0106, HNP Site-Specific OSC Support 5. AD-EP-HNP-0203, HNP Site-Specific Field Monitoring 6. AD-RP-ALL-2000, Preparation and Management of Radiation Work Permits (RWP) 7. AD-RP-ALL-4010, Internal Dose Assessment 8. NEI 99-01 AS1
24	Att. 1, RG1.3 Basis Reference(s)	1. PEP-270, Activation and Operation of the Emergency Operations Facility 2. PEP-330, Radiological Consequences 3. NEI 99-01 AG1	1. AD-EP-ALL-0103, Activation and Operation of the Emergency Operations Facility 2. AD-EP-ALL-0204, Distribution of Potassium Iodide Tablets in the Event of a Radioiodine Release, 3. AD-EP-ALL-0205, Emergency Exposure Controls 4. AD-EP-HNP-0106, HNP Site-Specific OSC Support 5. AD-EP-HNP-0203, HNP Site-Specific Field Monitoring 6. AD-RP-ALL-2000, Preparation and Management of Radiation Work Permits (RWP) 7. AD-RP-ALL-4010, Internal Dose Assessment 8. NEI 99-01 AG1

<< 10 CFR 50.54(q) Review Form >>

Change #	Section or Step #	Change From	Change to
25	Att. 1, SU5.1 Basis, Paragraph 2	<p><u>Identified Leakage:</u> a. Leakage (except controlled leakage) into closed systems, such as pump seal or valve packing leaks that are captured and conducted to a sump or collecting tank , or b. Leakage into the containment atmosphere from sources that are both specifically located or known either not to interfere with the operation of leakage detection systems or not to be pressure boundary leakage, or c. RCS leakage through a steam generator to the Secondary Coolant System (primary-to-secondary leakage). <u>Unidentified Leakage:</u> All leakage which is not identified Leakage or controlled leakage. (Controlled leakage is that seal water flow supplied to the reactor coolant pump seals.) <u>Pressure Boundary Leakage:</u> Leakage (except primary-to-secondary leakage) through a non-isolable fault in a RCS component body, pipe wall, or vessel wall.</p>	<p><u>Identified Leakage:</u> a. Leakage, such as that from pump seals or valve packing (except controlled leakage), that is captured and conducted to a sump or collecting tank, or b. 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 c. RCS leakage through a steam generator to the Secondary Coolant System (primary-to-secondary leakage). <u>Unidentified Leakage:</u> All leakage which is not identified leakage or controlled leakage. (Controlled leakage is that seal water flow supplied to the reactor coolant pump seals.) <u>Pressure Boundary Leakage:</u> Leakage (except primary-to-secondary leakage) through a fault in a RCS component body, pipe wall, or vessel wall. Leakage past seals, packing, and gaskets is not pressure boundary leakage.</p>
26	Att. 1, SU5.1 Basis, Paragraph 6	<p>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). The third condition addresses an RCS mass loss caused by an UNISOLABLE leak through an interfacing system. These conditions thus apply to leakage into the containment, a secondary-side system (e.g., steam generator tube leakage) or a location outside of containment.</p>	<p>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). The third condition addresses an RCS mass loss caused by a leak through an interfacing system. These conditions thus apply to leakage into the containment, a secondary-side system (e.g., steam generator tube leakage) or a location outside of containment.</p>
27	5.2	<p>AP Abnormal Operating Procedure</p>	<p>1st column: "AOP" 2nd column: "Abnormal Operating Procedure"</p>
28	5.2	<p>CHRRM Containment High Range Radiation Monitors</p>	<p>Deleted</p>

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

<< 10 CFR 50.54(q) Review Form >>

Change #	Section or Step #	Change From	Change to
29	5.2	<i>HNP</i> <i>Harris Nuclear Plant</i>	<i>Deleted</i>
30	5.2	<i>RAB</i> <i>Reactor Auxiliary Building</i>	<i>Deleted</i>
31	5.2	<i>N/A</i>	<i>Added:</i> <i>1st column: "RNP"</i> <i>2nd column: "Robinson Nuclear Plant"</i>
32	5.2	<i>N/A</i>	<i>Added:</i> <i>1st column: "RPV"</i> <i>2nd column: "Reactor Pressure Vessel"</i>
33	5.2	<i>TIC</i> <i>Thermally Induced Current</i>	<i>Deleted</i>
34	6.0	<i>EAL column: "HU1.1"</i> <i>IC column: "HU1"</i> <i>Example EAL column: "1"</i>	<i>Deleted</i>

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

<< 10 CFR 50.54(q) Review Form >>

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

Letter from U.S. Nuclear Regulatory Commission to Duke Energy, "Shearon Harris Nuclear Power Plant Unit 1 - Issuance of Amendment [149] to Adopt Emergency Action Level Scheme Pursuant to NEI 99-01, Revision 6, 'Development of Emergency Action Levels for Non-Passive Reactors,'" dated April 13, 2016 (ADAMS Accession No. ML16057A838).

License Amendment 149 was implemented in EP-EAL, Emergency Actions Levels, Revision 17.

Letter from U.S. Nuclear Regulatory Commission to Duke Energy, "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 [172 for HNP] 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)," dated July 1, 2019 (ADAMS Accession No. ML19058A632).

Letter from U.S. Nuclear Regulatory Commission to Duke Energy, "Shearon Harris Nuclear Power Plant Unit 1 - Issuance of Amendment No. 173 Regarding Emergency Plan Emergency Action Level Scheme Change (EPID L-2018-LLA-0216)," dated July 18, 2019 (ADAMS Accession No. ML19108A173).

License Amendments 172 and 173 were implemented in EP-EAL, Emergency Actions Levels, Revision 20.

Current EALs

Harris Nuclear Plant EAL Technical Basis Document, CSD-EP-HNP-0101-01, Revision 003

Licensing Basis

- EP-ALL-EPLAN, Duke Energy Common Emergency Plan, Revision 0
- EP-HNP-EPLAN-ANNEX, Duke Energy Harris Emergency Plan Annex, Revision 0

Current Emergency Plan

- EP-ALL-EPLAN, Duke Energy Common Emergency Plan, Revision 5, Section D - Emergency Classification System
- EP-HNP-EPLAN-ANNEX, Duke Energy Harris Emergency Plan Annex, Revision 1, Section D - Emergency Classification System

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

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

ATTACHMENT 2
Page 9 of 42

<< 10 CFR 50.54(q) Review Form >>

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**.

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

<< 10 CFR 50.54(q) Review Form >>

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).

Conclusion:

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 Section XIV .
<input checked="" type="checkbox"/>	No	Continue to Section VII .
<input type="checkbox"/>	Partially	If PARTIALLY , 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 Section VII .

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

<< 10 CFR 50.54(q) Review Form >>

Section VII: Editorial Changes		
<input type="checkbox"/>	Yes	All Activities/Changes identified in Section II 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 Section II are editorial/typographical changes. Continue to Section VIII .
<input checked="" type="checkbox"/>	Partially	Some Activities/Changes are editorial/typographical.
<p>If Yes is checked, Identify the activities/changes listed in Section II that are editorial/typographical changes and provide justification below. Continue to Section XII.</p> <p>If Partially is checked, Identify the activities/changes listed in Section II that are editorial/typographical changes and provide justification below. Continue to Section VIII for changes not identified as editorial.</p>		

Justification:

The proposed changes below are defined as editorial in accordance with AD-EP-ALL-0602, *Emergency Plan Change Screening and Effectiveness Evaluations 10 CFR 50.54(Q)*, 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 3 to 4 for EAL Technical Basis Document. Updating revision number is editorial because it makes no changes to intent of the guidance.

Proposed change 3 updates page numbers and the Table of Contents. Updating page numbers and the Table of Contents is editorial because it makes no changes to intent of the guidance.

Proposed changes 4 - 11, 16, 17, and 21 - 24 update references to procedures and correct references that are no longer applicable. Updating references to procedures and correcting references that are no longer applicable is editorial because it makes no changes to intent of the guidance.

Proposed change 12 corrects a misspelled word. Correcting misspelled words is editorial because it makes no changes to intent of the guidance.

Proposed change 13 corrects a typographical error in the system abbreviation. Correcting typographical errors is editorial because it makes no changes to intent of the guidance.

Proposed changes 14, 15, 18, and 19 are formatting changes only to comply with the guidance of AD-DC-ALL-0301, Development and Maintenance of Controlled Supporting Documents. These changes include:

- Changing outline and substep bullets from "A.", "B", "C", to "1.", "2.", "3."
- Adding numbering to Definitions
- Reformatting items into table-style format
- Placing periods "." after step numbers
- Bolding step numbers
- Adding section continuation headers
- Removing underline from substep numbers
- Reformatting attachment titles so that they are below the attachment number
- Reformatting fonts

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

<< 10 CFR 50.54(q) Review Form >>

These changes make no change to intent, purpose, or order of the document steps. These formatting changes are editorial because there is no change to intent, purpose, or order of the document steps.

Proposed change 20 corrects the titles of Attachments 1, 2, and 3 to correspond to the titles used for these items in CSD-EP-ALL-0101-02, *EAL Wallchart (Both Hot and Cold)*. Correcting references to steps, pages, attachments, forms, documents, tables, exhibits, and procedures is editorial because it makes no changes to intent of the guidance.

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

<< 10 CFR 50.54(q) Review Form >>

Section VIII: Emergency Planning Element and Function Screen		
<i>(Utilize Reg Guide 1.219 and Attachment 1, Additional Regulatory Guidance References for additional assistance)</i>		
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.		
1	10 CFR 50.47(b)(1) Assignment of Responsibility (Organization Control)	
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"/>
2	10 CFR 50.47(b)(2) Onsite Emergency Organization	
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"/>
3	10 CFR 50.47(b)(3) Emergency Response Support and Resources	
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"/>
4	10 CFR 50.47(b)(4) Emergency Classification System	RS
4a	A standard scheme of emergency classification and action levels is in use. (Requires V/V (Attachment 3) and final approval of Screen and Evaluation by EP CFAM)	<input checked="" type="checkbox"/>
5	10 CFR 50.47(b)(5) Notification Methods and Procedures	RS
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"/>
6	10 CFR 50.47(b)(6) Emergency Communications	
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"/>
7	10 CFR 50.47(b)(7) Public Education and Information	
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"/>
8	10 CFR 50.47(b)(8) Emergency Facilities and Equipment	
8a	Adequate facilities are maintained to support emergency response	<input type="checkbox"/>
8b	Adequate equipment is maintained to support emergency response.	<input type="checkbox"/>
9	10 CFR 50.47(b)(9) Accident Assessment	RS
9a	Methods, systems, and equipment for assessment of radioactive releases are in use.	<input type="checkbox"/>

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

ATTACHMENT 2
Page 14 of 42

<< 10 CFR 50.54(q) Review Form >>

10	10 CFR 50.47(b) (10) Protective Response	RS
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"/>
11	10 CFR 50.47(b) (11) Radiological Exposure Control	
11a	The resources for controlling radiological exposures for emergency workers are established.	<input type="checkbox"/>
12	10 CFR 50.47(b) (12) Medical and Public Health Support	
12a	Arrangements are made for medical services for contaminated, injured individuals.	<input type="checkbox"/>
13	10 CFR 50.47(b) (13) Recovery Planning and Post-Accident Operations	
13a	Plans for recovery and reentry are developed.	<input type="checkbox"/>
14	10 CFR 50.47(b) (14) Drills and Exercises	
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"/>
15	10 CFR 50.47(b) (15) Emergency Response Training	
15a	Training is provided to emergency responders.	<input type="checkbox"/>
16	10 CFR 50.47(b) (16) Emergency Plan Maintenance	
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**.

Proposed change 27 corrects the abbreviation for "Abnormal Operating Procedure" from "AP" to "AOP". This change is more than editorial; however, this change can be made because it does not change the intent of the guidance as written.

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

<< 10 CFR 50.54(q) Review Form >>

Proposed changes 28, 29, 30, and 33 delete abbreviation definitions from Section 5.2. This section serves as a reference to the reader for various abbreviations and acronyms used throughout the document and does not provide EAL basis guidance. These changes were inadvertently introduced during processing of Revision 004 by the Procedure Automation System (PAS) software and were noted after approval of the previous 10 CFR 50.54(q) evaluation and issuance of the new revision. These changes are more than editorial; however, these changes can be made because they do not change the intent of the guidance as written.

Proposed changes 31 and 32 add abbreviation definitions to Section 5.2. This section serves as a reference to the reader for various abbreviations and acronyms used throughout the document and does not provide EAL basis guidance. These changes were inadvertently introduced during processing of Revision 004 by the Procedure Automation System (PAS) software and were noted after approval of the previous 10 CFR 50.54(q) evaluation and issuance of the new revision. These changes are more than editorial; however, these changes can be made because they do not change the intent of the guidance as written.

Proposed change 34 deletes the HNP EAL-to-NEI 99-01 Rev. 6 EAL cross-reference for HU1.1 in Section 6.0. This section serves as a cross-reference to facilitate association and location of a HNP EAL within the NEI 99-01 IC/EAL identification scheme and does not provide EAL basis guidance. This change was inadvertently introduced during processing of Revision 004 by the Procedure Automation System (PAS) software and was noted after approval of the previous 10 CFR 50.54(q) evaluation and issuance of the new revision. This change is more than editorial; however, this change can be made because it does not change the intent of the guidance as written.

The proposed changes above can be made because these changes do not affect the EAL scheme or affect the timeliness or accuracy of emergency declarations.

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

<< 10 CFR 50.54(q) Review Form >>

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, IV 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.

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

<< 10 CFR 50.54(q) Review Form >>

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.

<< 10 CFR 50.54(q) Review Form >>

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 25:

Proposed change is being made to update EAL SU5.1 basis definitions for identified, unidentified, and pressure boundary leakage. Paragraph 2 was originally written based on Harris Nuclear Plant Technical Specifications (TSs) Definitions section 1.1, as referenced at the end of the EAL basis (ref.1). This reference has been updated in Amendment No. 198 to Renewed Facility Operating License No. DPR-63 for the Harris Nuclear Plant, Unit No. 1. The amendment revises 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."

Paragraph 2, part 1, changes:From:Identified Leakage:

- a. Leakage (except controlled leakage) into closed systems, such as pump seal or valve packing leaks that are captured and conducted to a sump or collecting tank , or
- b. Leakage into the containment atmosphere from sources that are both specifically located or known either not to interfere with the operation of leakage detection systems or not to be pressure boundary leakage, or
- c. RCS leakage through a steam generator to the Secondary Coolant System (primary-to-secondary leakage).

To:Identified Leakage:

- a. Leakage, such as that from pump seals or valve packing (except controlled leakage), that is captured and conducted to a sump or collecting tank, or
- b. 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
- c. RCS leakage through a steam generator to the Secondary Coolant System (primary-to-secondary leakage).

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.

<< 10 CFR 50.54(q) Review Form >>

Paragraph 2, part 2: No changes.

Paragraph 2, part 3, changes:

From:

Pressure Boundary Leakage:

Leakage (except primary-to-secondary leakage) through a non-isolable fault in a RCS component body, pipe wall, or vessel wall.

To:

Pressure Boundary Leakage:

Leakage (except primary-to-secondary leakage) through a fault in a RCS component body, pipe wall, or vessel wall. Leakage past seals, packing, and gaskets is not pressure boundary leakage.

Revises the defined term "leakage" to remove the term "non-isolable" 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 "unisolable" [the terms "unisolable" and "non-isolable" are used interchangeably herein] 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.

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 the intent of the definition.

The revised second paragraph, part 1, supports the 2nd EAL condition, "RCS identified leakage > 25 gpm for ≥ 15 min." and the revised second paragraph, part 3, supports the 1st 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 6th paragraph of HNP 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:

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

<< 10 CFR 50.54(q) Review Form >>

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 Specifications.

The leakage definitions updated for this EAL are consistent with the overall EAL scheme development guidance in NEI 99-01, Rev. 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 25 can be made because the change continues to be aligned with approved EAL basis and NEI 99-01, Rev. 6, EAL scheme.

Proposed change 25 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 basis of which include facility system and effluent parameters, is in use by Harris Nuclear Plant (HNP).

Proposed change 25 continues to comply with 10 CFR Part 50, Appendix E, IV.C.2, because HNP 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 HNP will promptly declare the emergency condition as soon as possible following identification of the appropriate emergency classification level.

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

<< 10 CFR 50.54(q) Review Form >>

Proposed change 26:

Proposed change is being made to update EAL SU5.1 basis discussion for identified, unidentified, and pressure boundary leakage. Paragraph 6 was originally written based on Harris Nuclear Plant Technical Specifications (TSs) Definitions section 1.1, as referenced at the end of the EAL basis (ref.1). This reference has been updated in Amendment No. 198 to Renewed Facility Operating License No. DPR-63 for the Harris Nuclear Plant, Unit No. 1. The amendment revises 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."

Paragraph 6 changes:

From:

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). The third condition addresses an RCS mass loss caused by an UNISOLABLE leak through an interfacing system. These conditions thus apply to leakage into the containment, a secondary side system (e.g., steam generator tube leakage) or a location outside of containment.

To:

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). The third condition addresses an RCS mass loss caused by a leak through an interfacing system. These conditions thus apply to leakage into the containment, a secondary side system (e.g., steam generator tube leakage) or a location outside of containment.

Revises the paragraph to remove the term "unisolable" from the discussion of the basis for the third EAL condition.

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" brings the discussion into alignment with the revised definition of "pressure boundary leakage" as noted in Proposed Change 3 above.

Proposed change 26 can be made because the change continues to be aligned with approved EAL basis and NEI 99-01, Rev. 6, EAL scheme.

Proposed change 26 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 basis of which include facility system and effluent parameters, is in use by Harris Nuclear Plant (HNP).

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

<< 10 CFR 50.54(q) Review Form >>

Proposed change 26 continues to comply with 10 CFR Part 50, Appendix E, IV.C.2, because HNP 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 HNP will promptly declare the emergency condition as soon as possible following identification of the appropriate emergency classification level.

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 25:

Proposed change is being made to update EAL SU5.1 basis definitions for identified, unidentified, and pressure boundary leakage. Paragraph 2 was originally written based on Harris Nuclear Plant Technical Specifications (TSs) Definitions section 1.1, as referenced at the end of the EAL basis (ref.1). This reference has been updated in Amendment No. 198 to Renewed Facility Operating License No. DPR-63 for the Harris Nuclear Plant, Unit No. 1. The amendment revises 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."

Paragraph 2, part 1, changes:

From:

Identified Leakage:

- a. Leakage (except controlled leakage) into closed systems, such as pump seal or valve packing leaks that are captured and conducted to a sump or collecting tank , or
- b. Leakage into the containment atmosphere from sources that are both specifically located or known either not to interfere with the operation of leakage detection systems or not to be pressure boundary leakage, or
- c. RCS leakage through a steam generator to the Secondary Coolant System (primary-to-secondary leakage).

To:

Identified Leakage:

- a. Leakage, such as that from pump seals or valve packing (except controlled leakage), that is captured and conducted to a sump or collecting tank, or
- b. 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
- c. RCS leakage through a steam generator to the Secondary Coolant System (primary-to-secondary leakage).

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.

<< 10 CFR 50.54(q) Review Form >>

Paragraph 2, part 2: No changes.

Paragraph 2, part 3, changes:

From:

Pressure Boundary Leakage:

Leakage (except primary-to-secondary leakage) through a non-isolable fault in a RCS component body, pipe wall, or vessel wall.

To:

Pressure Boundary Leakage:

Leakage (except primary-to-secondary leakage) through a fault in a RCS component body, pipe wall, or vessel wall. Leakage past seals, packing, and gaskets is not pressure boundary leakage.

Revises the defined term "leakage" to remove the term "non-isolable" 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 "unisolable" [the terms "unisolable" and "non-isolable" are used interchangeably herein] 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.

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 the intent of the definition.

The revised second paragraph, part 1, supports the 2nd EAL condition, "RCS identified leakage > 25 gpm for ≥ 15 min." and the revised second paragraph, part 3, supports the 1st 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 6th paragraph of HNP 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:

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

<< 10 CFR 50.54(q) Review Form >>

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 Specifications.

The leakage definitions updated for this EAL are consistent with the overall EAL scheme development guidance in NEI 99-01, Rev. 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 25 can be made because the change continues to be aligned with approved EAL basis and NEI 99-01, Rev. 6, EAL scheme.

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

<< 10 CFR 50.54(q) Review Form >>

Proposed change 26:

Proposed change is being made to update EAL SU5.1 basis discussion for identified, unidentified, and pressure boundary leakage. Paragraph 6 was originally written based on Harris Nuclear Plant Technical Specifications (TSs) Definitions section 1.1, as referenced at the end of the EAL basis (ref.1). This reference has been updated in Amendment No. 198 to Renewed Facility Operating License No. DPR-63 for the Harris Nuclear Plant, Unit No. 1. The amendment revises 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."

Paragraph 6 changes:

From:

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). The third condition addresses an RCS mass loss caused by an UNISOLABLE leak through an interfacing system. These conditions thus apply to leakage into the containment, a secondary side system (e.g., steam generator tube leakage) or a location outside of containment.

To:

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). The third condition addresses an RCS mass loss caused by a leak through an interfacing system. These conditions thus apply to leakage into the containment, a secondary side system (e.g., steam generator tube leakage) or a location outside of containment.

Revises the paragraph to remove the term "unisolable" from the discussion of the basis for the third EAL condition.

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" brings the discussion into alignment with the revised definition of "pressure boundary leakage" as noted in Proposed Change 3 above.

Proposed change 26 can be made because the change continues to be aligned with approved EAL basis and NEI 99-01, Rev. 6, EAL scheme.

The proposed changes can be made because the changes continue 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 changes do not reduce the effectiveness of the Harris Nuclear Plant Emergency Plan. The change continues to provide assurance that the Emergency Response Organization has the ability and capability to:

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

<< 10 CFR 50.54(q) Review Form >>

- 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 Harris Nuclear Plant Emergency Plan as written and approved.

Section XII: Evaluation Conclusion	
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"/>
Section XII: Conclusion	
Questions 1, 2 and 3 are answered YES, complete step below to create a General CAS assignment, and then continue on to Section XIV 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 Sections XIII and Section XIV .	<input type="checkbox"/>

Section XIII: Disposition of Proposed Change Requiring Prior NRC Approval	
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 Section XIV 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 Section XIV .	

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

ATTACHMENT 2
Page 27 of 42

<< 10 CFR 50.54(q) Review Form >>

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): David Bell	Preparer Signature: See NAS	Date: See NAS
Reviewer Name (Print): Sarah McDaniel	Reviewer Signature: See NAS	Date: See NAS
Approver Name (Print): William Gunter	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

Enclosure 1 - Old Section 5.1

5.0 DEFINITIONS, ACRONYMS & ABBREVIATIONS

5.1 Definitions (ref. 4.1.1 except as noted)

Selected terms used in Initiating Condition and Emergency Action Level statements are set in all capital letters (e.g., ALL CAPS). These words are defined terms that have specific meanings as used in this document. The definitions of these terms are provided below.

Alert

Events are in progress, or have occurred, which involve an actual or potential substantial degradation of the level of safety of the plant or a security event that involves probable life threatening risk to site personnel or damage to site equipment because of hostile action. Any releases are expected to be small fractions of the EPA Protective Action Guideline exposure levels.

Containment Closure

The procedurally defined actions taken to secure containment and its associated structures, systems, and components as a functional barrier to fission product release under shutdown conditions.

As applied to HNP, Containment Closure is established when containment penetration closure is established in accordance with Technical Specifications 3/4.9.4 (ref. 4.1.8).

Emergency Action Level (EAL)

A pre-determined, site-specific, observable threshold for an Initiating Condition that, when met or exceeded, places the plant in a given emergency classification level.

Emergency Classification Level (ECL)

One of a set of names or titles established by the US Nuclear Regulatory Commission (NRC) for grouping off-normal events or conditions according to (1) potential or actual effects or consequences, and (2) resulting onsite and offsite response actions. The emergency classification levels, in ascending order of severity, are:

- Unusual Event (UE)
- Alert
- Site Area Emergency (SAE)
- General Emergency (GE)

EPA PAGs

Environment Protection Agency Protective Action Guidelines. The EPA PAGs are expressed in terms of dose commitment: 1 Rem TEDE or 5 Rem CDE Thyroid. Actual or projected offsite exposures in excess of the EPA PAGs requires HNP to recommend protective actions for the general public to offsite planning agencies.

Explosion

A rapid, violent and catastrophic failure of a piece of equipment due to combustion, chemical reaction or overpressurization. A release of steam (from high energy lines or components) or an electrical component failure (caused by short circuits, grounding, arcing, etc.) should not automatically be considered an explosion. Such events require a post-event inspection to determine if the attributes of an explosion are present.

Enclosure 1 - Old Section 5.1

Faulted

The term applied to a steam generator that has a steam leak on the secondary side of sufficient size to cause an uncontrolled drop in steam generator pressure or the steam generator to become completely depressurized.

Fire

Combustion characterized by heat and light. Sources of smoke such as slipping drive belts or overheated electrical equipment do not constitute fires. Observation of flame is preferred but is NOT required if large quantities of smoke and heat are observed.

Fission Product Barrier Threshold

A pre-determined, site-specific, observable threshold indicating the loss or potential loss of a fission product barrier.

Flooding

A condition where water is entering a room or area faster than installed equipment is capable of removal, resulting in a rise of water level within the room or area.

General Emergency

Events are in progress or have occurred which involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity or hostile actions that result in an actual loss of physical control of the facility. Releases can be reasonably expected to exceed EPA Protective Action Guideline exposure levels offsite for more than the immediate site area.

Hostage

A person(s) held as leverage against the station to ensure that demands will be met by the station.

Hostile Action

An act toward HNP or its personnel that includes the use of violent force to destroy equipment, take hostages, and/or intimidate the licensee to achieve an end. This includes attack by air, land, or water using guns, explosives, projectiles, vehicles, or other devices used to deliver destructive force. Other acts that satisfy the overall intent may be included. Hostile action should not be construed to include acts of civil disobedience or felonious acts that are not part of a concerted attack on HNP. Non-terrorism-based EALs should be used to address such activities (i.e., this may include violent acts between individuals in the owner controlled area).

Hostile Force

One or more individuals who are engaged in a determined assault, overtly or by stealth and deception, equipped with suitable weapons capable of killing, maiming, or causing destruction.

Imminent

The trajectory of events or conditions is such that an EAL will be met within a relatively short period of time regardless of mitigation or corrective actions.

Enclosure 1 - Old Section 5.1

Impede(d)

Personnel access to a room or area is hindered to an extent that extraordinary measures are necessary to facilitate entry of personnel into the affected room/area (e.g., requiring use of protective equipment, such as SCBAs, that is not routinely employed).

Initiating Condition (IC)

An event or condition that aligns with the definition of one of the four emergency classification levels by virtue of the potential or actual effects or consequences.

Maintain

Take appropriate action to hold the value of an identified parameter within specified limits.

Normal Levels

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

Owner Controlled Area

That area surrounding the Protected Area beyond which HNP exercises access control.

Projectile

An object directed toward a Nuclear Power Plant that could cause concern for its continued operability, reliability, or personnel safety.

Protected Area

An area which normally encompasses all controlled areas within the security protected area fence as depicted in 5-G-0003, Site Plan (ref. 4.1.6).

RCS Intact

The RCS should be considered intact when the RCS pressure boundary is in its normal condition for the cold shutdown mode of operation (e.g., no freeze seals or nozzle dams).

Refueling Pathway

The reactor refueling cavity, spent fuel pool and fuel transfer canal comprise the refueling pathway.

Reduced Inventory

RCS water level greater than 36 inches below the Reactor Vessel Flange (ref. 4.1.12).

Ruptured

The condition of a steam generator in which primary-to-secondary leakage is of sufficient magnitude to require a safety injection.

Restore

Take the appropriate action required to return the value of an identified parameter to the applicable limits

CSD-EP-HNP-0101-01	Rev. 003	Page 21 of 238
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Enclosure 1 - Old Section 5.1

Safety System

A system required for safe plant operation, cooling down the plant and/or placing it in the cold shutdown condition, including the ECCS. These are typically systems classified as safety-related (as defined in 10CFR50.2):

Those structures, systems and components that are relied upon to remain functional during and following design basis events to assure:

- (1) The integrity of the reactor coolant pressure boundary;
- (2) The capability to shut down the reactor and maintain it in a safe shutdown condition;
- (3) The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures.

Security Condition

Any security event as listed in the approved security contingency plan that constitutes a threat/compromise to site security, threat/risk to site personnel, or a potential degradation to the level of safety of the plant. A security condition does not involve a hostile action.

Site Area Emergency

Events are in progress or have occurred which involve actual or likely major failures of plant functions needed for protection of the public or HOSTILE ACTION that results in intentional damage or malicious acts; 1) toward site personnel or equipment that could lead to the likely failure of or; 2) that prevent effective access to, equipment needed for the protection of the public. Any releases are not expected to result in exposure levels which exceed EPA PAG exposure levels beyond the SITE BOUNDARY.

Site Boundary

A circle of approximately 2500 ft. radius from the center of the containment building (0.47 miles) (ref. 4.1.13).

Thermally Induced Current (TIC) related to Containment High Range Radiation Monitors (CHRRM) (Note 9)

A large, rapid temperature change in containment can create a brief, spurious electrical signal within CHRRM instrumentation cables, causing inaccurate radiation readings. A false-high reading can occur when containment temperature is rapidly increased, and a false low reading can occur during rapid temperature decreases. The effect subsides when temperatures stabilize. A false high signal can occur when there is a Loss of Coolant Accident or Main Steam Line Break with little actual dose consequence. As a result, accident conditions with low radiation consequences may result in high CHRRM readings. Note: CHRRM readings are expected to drop below 130 R/hr in approximately four minutes.

Negative Thermally Induced Current is a false low signal induced at the Containment High Range Radiation Monitors (CHRRMs) caused by rapidly decreasing containment temperatures. The signal can cause the CHRRMs to receive a 'no pulse' alarm due to readings falling below the detector's dose rate idling signal. This condition could occur in a period following a large energy release (i.e. LOCA or MSLB) with low radiation levels (i.e. little to no fuel damage). If fuel damage occurs, the CHRRMs will display the associated increase in radiation levels.

Enclosure 1 - Old Section 5.1

Unisolable

An open or breached system line that cannot be isolated, remotely or locally.

Unplanned

A parameter change or an event that is not 1) the result of an intended evolution or 2) an expected plant response to a transient. The cause of the parameter change or event may be known or unknown.

Unusual Event

Events are in progress or have occurred which indicate a potential degradation of the level of safety of the plant or indicate a security threat to facility protection has been initiated. No releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of SAFETY SYSTEMS occurs.

Valid

An indication, report, or condition, is considered to be valid when it is verified by (1) an instrument channel check, or (2) indications on related or redundant indicators, or (3) by direct observation by plant personnel, such that doubt related to the indicator's operability, the condition's existence, or the report's accuracy is removed. Implicit in this definition is the need for timely assessment.

Visible Damage

Damage to a SAFETY SYSTEM train that is readily observable without measurements, testing, or analysis. The visual impact of the damage is sufficient to cause concern regarding the operability or reliability of the affected SAFETY SYSTEM train.

Enclosure 2 - New Section 5.1

5.0 DEFINITIONS, ACRONYMS & ABBREVIATIONS

5.1. Definitions (ref. 4.1.1 except as noted)

Selected terms used in Initiating Condition and Emergency Action Level statements are set in all capital letters (e.g., ALL CAPS). These words are defined terms that have specific meanings as used in this document. The definitions of these terms are provided below.

1. **Alert** - Events are in progress, or have occurred, which involve an actual or potential substantial degradation of the level of safety of the plant or a security event that involves probable life threatening risk to site personnel or damage to site equipment because of hostile action. Any releases are expected to be small fractions of the EPA Protective Action Guideline exposure levels.
2. **Containment Closure** - The procedurally defined actions taken to secure containment and its associated structures, systems, and components as a functional barrier to fission product release under shutdown conditions.
As applied to HNP, Containment Closure is established when containment penetration closure is established in accordance with Technical Specifications 3/4.9.4 (ref. 4.1.8).
3. **Emergency Action Level (EAL)** - A pre-determined, site-specific, observable threshold for an Initiating Condition that, when met or exceeded, places the plant in a given emergency classification level.
4. **Emergency Classification Level (ECL)** - One of a set of names or titles established by the US Nuclear Regulatory Commission (NRC) for grouping off-normal events or conditions according to (1) potential or actual effects or consequences, and (2) resulting onsite and offsite response actions. The emergency classification levels, in ascending order of severity, are:
 - Unusual Event (UE)
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 - Site Area Emergency (SAE)
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5. **EPA PAGs** - Environment Protection Agency Protective Action Guidelines. The EPA PAGs are expressed in terms of dose commitment: 1 Rem TEDE or 5 Rem CDE Thyroid. Actual or projected offsite exposures in excess of the EPA PAGs requires HNP to recommend protective actions for the general public to offsite planning agencies.
6. **Explosion** - A rapid, violent and catastrophic failure of a piece of equipment due to combustion, chemical reaction or overpressurization. A release of steam (from high energy lines or components) or an electrical component failure (caused by short circuits, grounding, arcing, etc.) should not automatically be considered an explosion. Such events require a post-event inspection to determine if the attributes of an explosion are present.

Enclosure 2 - New Section 5.1

5.1 Definitions (continued)

7. **Faulted** - The term applied to a steam generator that has a steam leak on the secondary side of sufficient size to cause an uncontrolled drop in steam generator pressure or the steam generator to become completely depressurized.
8. **Fire** - Combustion characterized by heat and light. Sources of smoke such as slipping drive belts or overheated electrical equipment do not constitute fires. Observation of flame is preferred but is NOT required if large quantities of smoke and heat are observed.
9. **Fission Product Barrier Threshold** - A pre-determined, site-specific, observable threshold indicating the loss or potential loss of a fission product barrier.
10. **Flooding** - A condition where water is entering a room or area faster than installed equipment is capable of removal, resulting in a rise of water level within the room or area.
11. **General Emergency** - Events are in progress or have occurred which involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity or hostile actions that result in an actual loss of physical control of the facility. Releases can be reasonably expected to exceed EPA Protective Action Guideline exposure levels offsite for more than the immediate site area.
12. **Hostage** - A person(s) held as leverage against the station to ensure that demands will be met by the station.
13. **Hostile Action** - An act toward HNP or its personnel that includes the use of violent force to destroy equipment, take hostages, and/or intimidate the licensee to achieve an end. This includes attack by air, land, or water using guns, explosives, projectiles, vehicles, or other devices used to deliver destructive force. Other acts that satisfy the overall intent may be included. Hostile action should not be construed to include acts of civil disobedience or felonious acts that are not part of a concerted attack on HNP. Non-terrorism-based EALs should be used to address such activities (i.e., this may include violent acts between individuals in the owner controlled area).
14. **Hostile Force** - One or more individuals who are engaged in a determined assault, overtly or by stealth and deception, equipped with suitable weapons capable of killing, maiming, or causing destruction.
15. **Imminent** - The trajectory of events or conditions is such that an EAL will be met within a relatively short period of time regardless of mitigation or corrective actions.

Enclosure 2 - New Section 5.1

5.1 Definitions (continued)

16. **Impede(d)** - Personnel access to a room or area is hindered to an extent that extraordinary measures are necessary to facilitate entry of personnel into the affected room/area (e.g., requiring use of protective equipment, such as SCBAs, that is not routinely employed).
17. **Initiating Condition (IC)** - An event or condition that aligns with the definition of one of the four emergency classification levels by virtue of the potential or actual effects or consequences.
18. **Maintain** - Take appropriate action to hold the value of an identified parameter within specified limits.
19. **Normal Levels** - As applied to radiological IC/EALs, the highest reading in the past twenty-four hours excluding the current peak value.
20. **Owner Controlled Area** - That area surrounding the Protected Area beyond which HNP exercises access control.
21. **Projectile** - An object directed toward a Nuclear Power Plant that could cause concern for its continued operability, reliability, or personnel safety.
22. **Protected Area** - An area which normally encompasses all controlled areas within the security protected area fence as depicted in 5-G-0003, Site Plan (ref. 4.1.6).
23. **RCS Intact** - The RCS should be considered intact when the RCS pressure boundary is in its normal condition for the cold shutdown mode of operation (e.g., no freeze seals or nozzle dams).
24. **Refueling Pathway** - The reactor refueling cavity, spent fuel pool and fuel transfer canal comprise the refueling pathway.
25. **Reduced Inventory** - RCS water level greater than 36 inches below the Reactor Vessel Flange (ref. 4.1.12).
26. **Ruptured** - The condition of a steam generator in which primary-to-secondary leakage is of sufficient magnitude to require a safety injection.
27. **Restore** - Take the appropriate action required to return the value of an identified parameter to the applicable limits

Enclosure 2 - New Section 5.1

5.1 Definitions (continued)

28. **Safety System** - A system required for safe plant operation, cooling down the plant and/or placing it in the cold shutdown condition, including the ECCS. These are typically systems classified as safety-related (as defined in 10CFR50.2):

Those structures, systems and components that are relied upon to remain functional during and following design basis events to assure:

- (1) The integrity of the reactor coolant pressure boundary;
 - (2) The capability to shut down the reactor and maintain it in a safe shutdown condition;
 - (3) The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures.
29. **Security Condition** - Any security event as listed in the approved security contingency plan that constitutes a threat/compromise to site security, threat/risk to site personnel, or a potential degradation to the level of safety of the plant. A security condition does not involve a hostile action.
30. **Site Area Emergency** - Events are in progress or have occurred which involve actual or likely major failures of plant functions needed for protection of the public or HOSTILE ACTION that results in intentional damage or malicious acts; 1) toward site personnel or equipment that could lead to the likely failure of or, 2) that prevent effective access to, equipment needed for the protection of the public. Any releases are not expected to result in exposure levels which exceed EPA PAG exposure levels beyond the SITE BOUNDARY.
31. **Site Boundary** - A circle of approximately 2500 ft. radius from the center of the containment building (0.47 miles) (ref. 4.1.13).

Enclosure 2 - New Section 5.1

5.1 Definitions (continued)

32. **Thermally Induced Current (TIC) related to Containment High Range Radiation Monitors (CHRRM) (Note 9)** - A large, rapid temperature change in containment can create a brief, spurious electrical signal within CHRRM instrumentation cables, causing inaccurate radiation readings. A false-high reading can occur when containment temperature is rapidly increased, and a false low reading can occur during rapid temperature decreases. The effect subsides when temperatures stabilize. A false high signal can occur when there is a Loss of Coolant Accident or Main Steam Line Break with little actual dose consequence. As a result, accident conditions with low radiation consequences may result in high CHRRM readings. Note: CHRRM readings are expected to drop below 130 R/hr in approximately four minutes.

Negative Thermally Induced Current is a false low signal induced at the Containment High Range Radiation Monitors (CHRRMs) caused by rapidly decreasing containment temperatures. The signal can cause the CHRRMs to receive a 'no pulse' alarm due to readings falling below the detector's dose rate idling signal. This condition could occur in a period following a large energy release (i.e. LOCA or MSLB) with low radiation levels (i.e. little to no fuel damage). If fuel damage occurs, the CHRRMs will display the associated increase in radiation levels.

33. **Unisolable** - An open or breached system line that cannot be isolated, remotely or locally.
34. **Unplanned** - A parameter change or an event that is not 1) the result of an intended evolution or 2) an expected plant response to a transient. The cause of the parameter change or event may be known or unknown.
35. **Unusual Event** - Events are in progress or have occurred which indicate a potential degradation of the level of safety of the plant or indicate a security threat to facility protection has been initiated. No releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of SAFETY SYSTEMS occurs.
36. **Valid** - An indication, report, or condition, is considered to be valid when it is verified by (1) an instrument channel check, or (2) indications on related or redundant indicators, or (3) by direct observation by plant personnel, such that doubt related to the indicator's operability, the condition's existence, or the report's accuracy is removed. Implicit in this definition is the need for timely assessment.
37. **Visible Damage** - Damage to a SAFETY SYSTEM train that is readily observable without measurements, testing, or analysis. The visual impact of the damage is sufficient to cause concern regarding the operability or reliability of the affected SAFETY SYSTEM train.

Enclosure 3 - Old Section 5.2

5.2 Abbreviations/Acronyms

°F	.....	Degrees Fahrenheit
°	.....	Degrees
AC	.....	Alternating Current
AP	.....	Abnormal Operating Procedure
ATWS	.....	Anticipated Transient Without Scram
CDE	.....	Committed Dose Equivalent
CFR	.....	Code of Federal Regulations
CHRRM	.....	Containment High Range Radiation Monitors
CSFST	.....	Critical Safety Function Status Tree
DBA	.....	Design Basis Accident
DC	.....	Direct Current
EAL	.....	Emergency Action Level
EC	.....	Emergency Coordinator
ECCS	.....	Emergency Core Cooling System
ECL	.....	Emergency Classification Level
EOF	.....	Emergency Operations Facility
EOP	.....	Emergency Operating Procedure
EPA	.....	Environmental Protection Agency
ERG	.....	Emergency Response Guideline
EPIP	.....	Emergency Plan Implementing Procedure
ESF	.....	Engineered Safety Feature
FAA	.....	Federal Aviation Administration
FBI	.....	Federal Bureau of Investigation
FEMA	.....	Federal Emergency Management Agency
FSAR	.....	Final Safety Analysis Report
GE	.....	General Emergency
HNP	.....	Harris Nuclear Plant
IC	.....	Initiating Condition
IPEEE	.....	Individual Plant Examination of External Events (Generic Letter 88-20)
ISFSI	.....	Independent Spent Fuel Storage Installation
K_{eff}	.....	Effective Neutron Multiplication Factor
LCO	.....	Limiting Condition of Operation
LER	.....	Licensee Event Report
LOCA	.....	Loss of Coolant Accident
LWR	.....	Light Water Reactor
MPC	.....	Maximum Permissible Concentration/Multi-Purpose Canister
MSIV	.....	Main Steam Isolation Valve
MSL	.....	Main Steam Line
mR, mRem, mrem, mREM	.....	milli-Roentgen Equivalent Man

Enclosure 3 - Old Section 5.2

MW Megawatt
RCS Reactor Coolant System
NEI Nuclear Energy Institute
NESP National Environmental Studies Project
NPP Nuclear Power Plant
NRC Nuclear Regulatory Commission
NSSS Nuclear Steam Supply System
NORAD North American Aerospace Defense Command
(NO)UE Notification of Unusual Event
OBE Operating Basis Earthquake
OCA Owner Controlled Area
ODCM Off-site Dose Calculation Manual
ORO Offsite Response Organization
PA Protected Area
PAG Protective Action Guideline
PRA/PSA Probabilistic Risk Assessment / Probabilistic Safety Assessment
PWR Pressurized Water Reactor
PSIG Pounds per Square Inch Gauge
R Roentgen
RAB Reactor Auxiliary Building
Rem, rem, REM Roentgen Equivalent Man
RETS Radiological Effluent Technical Specifications
RPS Reactor Protection System
RV Reactor Vessel
RVLIS Reactor Vessel Level Indicating System
SAR Safety Analysis Report
SBGTS Stand-By Gas Treatment System
SBO Station Blackout
SCBA Self-Contained Breathing Apparatus
SG Steam Generator
SI Safety Injection
SLC Selected Licensee Commitment
SPDS Safety Parameter Display System
SRO Senior Reactor Operator
SSF Safe Shutdown Facility
TEDE Total Effective Dose Equivalent
TIC Thermally Induced Current
TOAF Top of Active Fuel
TSC Technical Support Center
WOG Westinghouse Owners Group

Enclosure 4 - New Section 5.2

5.2. Abbreviations/Acronyms

°F	Degrees Fahrenheit
°	Degrees
AC	ALTERNATING CURRENT
AOP	Abnormal Operating Procedure
ATWS	Anticipated Transient Without Scram
CDE	Committed Dose Equivalent
CFR	Code of Federal Regulations
CSFST	Critical Safety Function Status Tree
DBA	Design Basis Accident
DC	DIRECT CURRENT
EAL	Emergency Action Level
EC	EMERGENCY COORDINATOR
ECCS	Emergency Core Cooling System
ECL	Emergency Classification Level
EOF	Emergency Operations Facility
EOP	Emergency Operating Procedure
EPA	Environmental Protection Agency
ERG	Emergency Response Guideline
EPIP	Emergency Plan Implementing Procedure
ESF	Engineered Safety Feature
FAA	Federal Aviation Administration
FBI	Federal Bureau of Investigation
FEMA	Federal Emergency Management Agency
GE	GENERAL EMERGENCY
IC	INITIATING CONDITION
IPEEE	Individual Plant Examination of External Events (Generic Letter 88-20)
ISFSI	Independent Spent Fuel Storage Installation
K_{eff}	Effective Neutron Multiplication Factor
LCO	Limiting Condition of Operation
LER	Licensee Event Report
LOCA	Loss of Coolant Accident
LWR	Light Water Reactor
MPC	Maximum Permissible Concentration/Multi-Purpose Canister
MSIV	Main Steam Isolation Valve
MSL	Main Steam Line
mR, mRem, mrem, mREM	milli-Roentgen Equivalent Man

Enclosure 4 - New Section 5.2

5.2 Abbreviations/Acronyms (continued)

MW	MEGAWATT
RCS	Reactor Coolant System
NEI	Nuclear Energy Institute
NESP	National Environmental Studies Project
NPP	Nuclear Power Plant
NRC	Nuclear Regulatory Commission
NSSS	Nuclear Steam Supply System
NORAD	North American Aerospace Defense Command
(NO)UE	Notification of Unusual Event
OBE	Operating Basis Earthquake
OCA	Owner Controlled Area
ODCM	Off-site Dose Calculation Manual
ORO	Offsite Response Organization
PA	PROTECTED AREA
PAG	Protective Action Guideline
PRA/PSA	Probabilistic Risk Assessment / Probabilistic Safety Assessment
PWR	Pressurized Water Reactor
PSIG	Pounds per Square Inch Gauge
R	ROENTGEN
Rem, rem, REM	Roentgen Equivalent Man
RETS	Radiological Effluent Technical Specifications
RNP	Robinson Nuclear Plant
RPS	Reactor Protection System
RPV	Reactor Pressure Vessel
RV	REACTOR VESSEL
RVLIS	Reactor Vessel Level Indicating System
SAR	Safety Analysis Report
SBGTS	Stand-By Gas Treatment System
SBO	Station Blackout
SCBA	Self-Contained Breathing Apparatus
SG	STEAM GENERATOR
SI	SAFETY INJECTION
SLC	Selected Licensee Commitment
SPDS	Safety Parameter Display System
SRO	Senior Reactor Operator
SSF	Safe Shutdown Facility

Enclosure 4 - New Section 5.2

5.2 Abbreviations/Acronyms (continued)

TEDE	Total Effective Dose Equivalent
TOAF	Top of Active Fuel
TSC	Technical Support Center
UFSAR	Updated Final Safety Analysis Report
WOG	Westinghouse Owners Group

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

Attachment 2
Page 1 of 23

10 CFR 50.54(q) Review Form

Section I: 10 CFR 50.54(q) Review Number: (EREG #):		02503175 2478380	
Applicable Sites and Applicability Determination # (5AD)			
<input type="checkbox"/> BNP		<input type="checkbox"/> CNS	<input checked="" type="checkbox"/> HNP 02497822
<input type="checkbox"/> MNS		<input type="checkbox"/> ONS	<input type="checkbox"/> RNP
Document #, EC #, or N/A	Revision # or N/A	Document or Activity Title	
EP-HNP-OSSA	001	Harris On-Shift Staffing Analysis	

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 .

This is a revised 50.54(q) review. Changes to the original 50.54(q) review can be identified by:

- Additions to this revised 50.54(q) review will appear in Bold and Italicized format.***
- Deletions to this revised 50.54(q) review will appear in struck through format.***

EP-HNP-OSSA, Harris On-Shift Staffing Analysis, provides the on shift staffing analysis regulatory basis and guidance, the staffing compliment used in the analysis, the events and tasks used during the analysis, applicable time motion studies and the analysis results for Harris Nuclear Plant. Revision 1 of EP-HNP-OSSA incorporates various updates to on-shift personnel requirements and tasks performed by the Chemistry Technician, Mechanic, and I&C Technician. A description of each proposed change made in Revision 1 is shown in the table below.

Change #	Section or Step #	Changed From	Changed To
1	Revision Summary	Old revision summary	Updated revision summary identifying the changes made in Revision 1
2	Throughout	EP-HNP-OSSA: Old revision number (000)	EP-HNP-OSSA: New revision number (001)
3	Section 3.4	Chemistry Technician, Mechanic, and I&C	Removed Chemistry Technician, Mechanic,

10 CFR 50.54(q) Review Form

Change #	Section or Step #	Changed From	Changed To
		Technician were included in the bulleted list of on-shift personnel and their respective locations	and I&C Technician from the bulleted list of on-shift personnel and their respective locations
4	Attachment 2, Table 1 – On-Shift Positions, Analysis Event # 1 – Main Steam Line Break (MSLB)	Line 15 Chemistry Technician (CT), line 16 Mechanic (MT), and line 17 I&C Technician (ICT) were included in Table 1 with no tasks assigned	Removed line 15 Chemistry Technician (CT), line 16 Mechanic (MT), and line 17 I&C Technician (ICT) from Table 1 with no tasks assigned
5	Attachment 2, Table 2 – Plant Operations & Safe Shutdown Analysis Event # 1 – Main Steam Line Break (MSLB)	Table 2 included a section for ‘Other (non-Operations) Personnel’ that included the Mechanic (MT) under line 16 and I&C Technician (ICT) under line 17 with no tasks assigned	Removed ‘Other (non-Operations) Personnel’ section of Table 2 that removed the Mechanic (MT) and I&C Technician (ICT) with no tasks assigned
6	Attachment 2, Analysis Event #3- Reactor Coolant Pump Rotor Seizure Tasks and Timing	<p>Line 12 contained an action to ‘Dispatch CT to perform samples per step 1’</p> <p>Line 13 action to ‘Sample per AOP-32 step 1’ was assigned to the CT.</p> <p>Line 45 contained an action for the ICT to ‘Check pressure switches for MFP</p>	<p>Line 12 contains an action to ‘Dispatch CT or RPT2 to perform samples per step 1’</p> <p>Line 13 action to ‘Sample per AOP-32 step 1’ is assigned to the RPT2.</p> <p>Previous action for the ICT to ‘Check pressure switches for MFP reset/Drain Pumps’ is removed.</p>

10 CFR 50.54(q) Review Form

Change #	Section or Step #	Changed From	Changed To
		reset/Drain Pumps' Line 48 contained an action for the MT to 'Station at Turbine coastdown/ensure proper turning gear ops'	Previous action for the MT to 'Station at Turbine coastdown/ensure proper turning gear ops' is removed.
7	Attachment 2, Table 1- On-Shift Positions, Analysis Event #3- Reactor Coolant Pump Rotor Seizure	Attachment 2, Table 1 contained lines for the Chemistry Technician (CT) under line 15 with '4/8' role in Table # / Line # column, Mechanic (MT) under line 16 with '2/16' role in Table # / Line # column, and I&C Technician (ICT) under line 17 with '2/17' role in Table # / Line # column Attachment 2, Table 1, line 14 for RP Qualified Individual (RPT2) had '4/1' role in Table # / Line # column	Attachment 2, Table 1 does not include lines for the Chemistry Technician (CT), Mechanic (MT), and I&C Technician (ICT) Attachment 2, Table 1, line 14 for RP Qualified Individual (RPT2) has '4/1' and '4/8' roles in Table # / Line # column
8	Attachment 2, Table 2 – Plant Operations & Safe Shutdown Analysis Event # 3 – Reactor Coolant Pump Rotor Seizure	Table 2 included a section for 'Other (non-Operations) Personnel' that included the Mechanic (MT) that performed the 'Turbine Coastdown Monitoring' task under line 16 and I&C Technician (ICT) that performed the "Check Pressure	Removed 'Other (non-Operations) Personnel' section of Table 2 that removed the Mechanic (MT) that performed the 'Turbine Coastdown Monitoring' task and I&C Technician (ICT) that performed the "Check Pressure Switches' task

10 CFR 50.54(q) Review Form

Change #	Section or Step #	Changed From	Changed To
		Switches' task under line 17	
9	Attachment 2, Table 4 – Radiation Protection and Chemistry Analysis Event # 3 – Reactor Coolant Pump Rotor Seizure	Task 8 to 'Sample RCS' was performed by the CT	Task 8 to 'Sample RCS' was revised to be performed by the RPT2
10	Attachment 2, Analysis Event #6- Steam Generator Tube Rupture (SGTR) Tasks and Timing	Line 38 contained an action for the RPT1 to 'Notify CT for sampling CVPET' Line 42 contained an action for the CT to 'Sample CVPET'	The action for the RPT1 to 'Notify CT for sampling CVPET' is removed The action for the CT to 'Sample CVPET' is removed
11	Attachment 2, Table 1 – On-Shift Positions, Analysis Event #6- Steam Generator Tube Rupture (SGTR)	Attachment 2, Table 1 contained lines for the Chemistry Technician (CT) under line 15 with a role in Table # /Line # column as '4/8', Mechanic (MT) under line 16 with no tasks, and I&C Technician (ICT) under line 17 with no tasks	Attachment 2, Table 1 does not include lines for the Chemistry Technician (CT), Mechanic (MT), and I&C Technician (ICT). The CT task was removed with this change.
12	Attachment 2, Table 2 – Plant Operations & Safe Shutdown Analysis Event # 6 – Steam Generator Tube Rupture	Table 2 included a section for 'Other (non-Operations) Personnel' that included the Mechanic (MT) under line 16 and I&C	Removed 'Other (non-Operations) Personnel' section of Table 2 that removed the Mechanic (MT) and I&C Technician (ICT) with no tasks

10 CFR 50.54(q) Review Form

Change #	Section or Step #	Changed From	Changed To
	(SGTR)	Technician (ICT) under line 17 with no tasks assigned	assigned
13	Attachment 2, Table 4 – Radiation Protection and Chemistry Analysis Event # 6 – Steam Generator Tube Rupture (SGTR)	Task 8 to ‘Sample CVPET’ was performed by the CT	Task 8 to ‘Sample CVPET’ was removed
14	Attachment 2, Table 1 – On-Shift Positions, Analysis Event #7-Large Break Loss of Coolant Accident (LB-LOCA)	Attachment 2, Table 1 contained lines for the Chemistry Technician (CT) under line 15 with no tasks, Mechanic (MT) under line 16 with no tasks, and I&C Technician (ICT) under line 17 with no tasks	Attachment 2, Table 1 does not include lines for the Chemistry Technician (CT), Mechanic (MT), and I&C Technician (ICT). No tasks were impacted based upon this change.
15	Attachment 2, Table 2 – Plant Operations & Safe Shutdown Analysis Event # 7- Large Break Loss of Coolant Accident (LB-LOCA)	Table 2 included a section for ‘Other (non-Operations) Personnel’ that included the Mechanic (MT) under line 16 and I&C Technician (ICT) under line 17 with no tasks assigned	Removed ‘Other (non-Operations) Personnel’ section of Table 2 that removed the Mechanic (MT) and I&C Technician (ICT) with no tasks assigned
16	Attachment 2, Table 1 – On-Shift Positions, Analysis Event #9-Design	Attachment 2, Table 1 contained lines for the Chemistry Technician (CT) under line 15 with no tasks, Mechanic	Attachment 2, Table 1 does not include lines for the Chemistry Technician (CT), Mechanic (MT), and I&C Technician

10 CFR 50.54(q) Review Form

Change #	Section or Step #	Changed From	Changed To
	Basis Threat (DBT)	(MT) under line 16 with no tasks, and I&C Technician (ICT) under line 17 with no tasks	(ICT). No tasks were impacted based upon this change.
17	Attachment 2, Table 2 – Plant Operations & Safe Shutdown Analysis Event # 9- Design Basis Threat (DBT)	Table 2 included a section for ‘Other (non-Operations) Personnel’ that included the Mechanic (MT) under line 16 and I&C Technician (ICT) under line 17 with no tasks assigned	Removed ‘Other (non-Operations) Personnel’ section of Table 2 that removed the Mechanic (MT) and I&C Technician (ICT) with no tasks assigned
18	Attachment 2, Analysis Event #10- Probable Aircraft Threat Tasks and Timing	Line 31 contained an action for CT to ‘Perform surveillances’	Removed the action for CT to ‘Perform surveillances’
19	Attachment 2, Table 1 – On-Shift Positions, Analysis Event #10- Probable Aircraft Threat	Attachment 2, Table 1 contained lines for the Chemistry Technician (CT) under line 15 with a role in Table # /Line # column as ‘4/8’, Mechanic (MT) under line 16 with no tasks, and I&C Technician (ICT) under line 17 with no tasks	Attachment 2, Table 1 does not include lines for the Chemistry Technician (CT), Mechanic (MT), and I&C Technician (ICT). The CT task was removed with this change.
20	Attachment 2, Table 2 – Plant Operations & Safe Shutdown Analysis Event #10-	Table 2 included a section for ‘Other (non-Operations) Personnel’ that included the	Removed ‘Other (non-Operations) Personnel’ section of Table 2 that removed the Mechanic

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

Attachment 2
Page 7 of 23

10 CFR 50.54(q) Review Form

Change #	Section or Step #	Changed From	Changed To
	Probable Aircraft Threat	Mechanic (MT) under line 16 and I&C Technician (ICT) under line 17 with no tasks assigned	(MT) and I&C Technician (ICT) with no tasks assigned
21	Attachment 2, Table 4 – Radiation Protection and Chemistry Analysis Event # 10 – Probable Aircraft Threat	Task 8 to ‘Perform Surveillances’ was performed by the CT	Task 8 to ‘Perform Surveillances’ was removed
22	Attachment 2, Table 1 – On-Shift Positions, Analysis Event #11- Control Room Evacuation Due to Fire	Attachment 2, Table 1 contained lines for the Chemistry Technician (CT) under line 15 with no tasks, Mechanic (MT) under line 16 with no tasks, and I&C Technician (ICT) under line 17 with no tasks	Attachment 2, Table 1 does not include lines for the Chemistry Technician (CT), Mechanic (MT), and I&C Technician (ICT). No tasks were impacted based upon this change.
23	Attachment 2, Table 2 – Plant Operations & Safe Shutdown Analysis Event #11- Control Room Evacuation Due to Fire	Table 2 included a section for ‘Other (non-Operations) Personnel’ that included the Mechanic (MT) under line 16 and I&C Technician (ICT) under line 17 with no tasks assigned	Removed ‘Other (non-Operations) Personnel’ section of Table 2 that removed the Mechanic (MT) and I&C Technician (ICT) with no tasks assigned
24	Attachment 2, – Table 4- Radiation Protection and	Title of Table 4 was ‘Radiation Protection	Title of Table 4 is ‘Radiation Protection’

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

Attachment 2
Page 8 of 23

10 CFR 50.54(q) Review Form

Change #	Section or Step #	Changed From	Changed To
	Chemistry Analysis for Event #1 – MSLB, Event# 3- RCP Rotor Seizure, Event #6- SGTR, Event#7 – LB- LOCA, Event #9 – DBT, Event #10 – PAT, and Event #11 – Control Room Evacuation Due to Fire.	and Chemistry Analysis'	

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

- EP-ALL-EPLAN, Duke Energy Common Emergency Plan, Revision 0
- EP-HNP-EPLAN-ANNEX, Duke Energy Harris Emergency Plan Annex, Revision 0

Current Emergency Plans

- EP-ALL-EPLAN, Duke Energy Common Emergency Plan, Rev 5
- EP-HNP-EPLAN-ANNEX, Duke Energy Harris Emergency Plan Annex, Rev 1

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

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

Attachment 2
Page 9 of 23

10 CFR 50.54(q) Review Form

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 checked="" 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 checked="" type="checkbox"/>
3. Do any elements of the proposed activity change the Evacuation Time Estimate results?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
4. Do any elements of the proposed activity change the On-Shift Staffing Analysis results?	Yes <input checked="" 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 checked="" 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**.

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

Attachment 2
Page 10 of 23

10 CFR 50.54(q) Review Form

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).

Conclusion:

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 Section XIV .
<input checked="" type="checkbox"/>	No	Continue to Section VII .
<input type="checkbox"/>	Partially	If PARTIALLY , 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 Section VII .

Bounding source document and list of bounded changes:

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

Attachment 2
Page 11 of 23

10 CFR 50.54(q) Review Form

Section VII: Editorial Changes		
<input type="checkbox"/>	Yes	All Activities/Changes identified in Section II 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 Section II are editorial/typographical changes. Continue to Section VIII .
<input checked="" type="checkbox"/>	Partially	Some Activities/Changes are editorial/typographical.
<p>If Yes is checked, Identify the activities/changes listed in Section II that are editorial/typographical changes and provide justification below. Continue to Section XII.</p> <p>If Partially is checked, Identify the activities/changes listed in Section II that are editorial/typographical changes and provide justification below. Continue to Section VIII for changes not identified as editorial.</p>		

Justification:

Change 1 updated the revision summary for the EP-HNP-OSSA, Revision 1 scope of changes.
Change 2 updated the revision number of the EP-HNP-OSSA from Revision 0 to Revision 1.
Changes 1 and 2 are defined as editorial in accordance with AD-EP-ALL-0602.

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

Attachment 2
Page 12 of 23

10 CFR 50.54(q) Review Form

Section VIII: Emergency Planning Element and Function Screen		
<i>(Utilize Reg Guide 1.219 and Attachment 1, Additional Regulatory Guidance References for additional assistance)</i>		
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.		
1	10 CFR 50.47(b)(1) Assignment of Responsibility (Organization Control)	
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"/>
2	10 CFR 50.47(b)(2) Onsite Emergency Organization	
2a	Process ensures that on shift emergency response responsibilities are staffed and assigned	<input checked="" type="checkbox"/>
2b	The process for timely augmentation of onshift staff is established and maintained.	<input type="checkbox"/>
3	10 CFR 50.47(b)(3) Emergency Response Support and Resources	
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"/>
4	10 CFR 50.47(b)(4) Emergency Classification System	RS
4a	A standard scheme of emergency classification and action levels is in use. (Requires V/V (Attachment 3) and final approval of Screen and Evaluation by EP CFAM)	<input type="checkbox"/>
5	10 CFR 50.47(b)(5) Notification Methods and Procedures	RS
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"/>
6	10 CFR 50.47(b)(6) Emergency Communications	
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"/>

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

Attachment 2
Page 13 of 23

10 CFR 50.54(q) Review Form

7	10 CFR 50.47(b)(7) Public Education and Information	
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"/>
8	10 CFR 50.47(b)(8) Emergency Facilities and Equipment	
8a	Adequate facilities are maintained to support emergency response	<input type="checkbox"/>
8b	Adequate equipment is maintained to support emergency response.	<input type="checkbox"/>
9	10 CFR 50.47(b)(9) Accident Assessment	RS
9a	Methods, systems, and equipment for assessment of radioactive releases are in use.	<input type="checkbox"/>
10	10 CFR 50.47(b) (10) Protective Response	RS
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"/>
11	10 CFR 50.47(b) (11) Radiological Exposure Control	
11a	The resources for controlling radiological exposures for emergency workers are established.	<input type="checkbox"/>
12	10 CFR 50.47(b) (12) Medical and Public Health Support	
12a	Arrangements are made for medical services for contaminated, injured individuals.	<input type="checkbox"/>
13	10 CFR 50.47(b) (13) Recovery Planning and Post-Accident Operations	
13a	Plans for recovery and reentry are developed.	<input type="checkbox"/>
14	10 CFR 50.47(b) (14) Drills and Exercises	
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"/>
15	10 CFR 50.47(b) (15) Emergency Response Training	
15a	Training is provided to emergency responders.	<input type="checkbox"/>
16	10 CFR 50.47(b) (16) Emergency Plan Maintenance	
16a	Responsibility for emergency plan development and review is established.	<input type="checkbox"/>

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

10 CFR 50.54(q) Review Form

16b	Planners responsible for emergency plan development and maintenance are properly trained.	<input type="checkbox"/>
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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**.

Justification for changes that are more than editorial, however, not impacted by any of the identified criteria in Section VIII:

Changes 4, 5, 12, 14, 15, 16, 17, 20, 22, and 23 updated various tables to remove the Chemistry Technician (CT), Mechanic (MT), and I&C Technician (ICT) positions that were shown with no tasks assigned. These changes have no impact to the on-shift staffing analysis since the tasks for each event response were not impacted.

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**.

List affected Emergency Planning Standards, Functions, and Program Elements:

Planning Standard

The regulation at 10 CFR 50.47(b)(2) states the following:

On-shift facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentation of response capabilities is available and the interfaces among various onsite response activities and offsite support and response activities are specified.

Function

The applicable emergency planning function identified for this planning standard:

The process ensures that onshift emergency response responsibilities are staffed and assigned.

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

10 CFR 50.54(q) Review Form

Applicable sections of Appendix E to 10 CFR Part 50

IV.A of Appendix E to 10 CFR Part 50

The organization for coping with radiological emergencies shall be described, including definition of authorities, responsibilities, and duties of individuals assigned to the licensee's emergency organization and the means for notification of such individuals in the event of an emergency.

IV.A.9 of Appendix E to 10 CFR Part 50

By December 24, 2012, for nuclear power reactor licensees, a detailed analysis demonstrating that on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the emergency plan.

Informing Criteria from NUREG-0654

The applicable program elements describe in NUREG-0654, Section II.B state:

B.1.a - The site-specific emergency response organization (ERO) is developed. Note that while other site programs, such as operations, fire response, rescue and first aid, and security, may be controlled via other licensing documents, it is only when these personnel are assigned EP functions that they become part of this regulatory standard. Consideration is given to ensure that EP functions are not assigned to individuals who may have difficulties performing their EP function(s) simultaneously with their other assigned (non-EP) duties. Appendix E to 10 CFR Part 50 requires licensees to perform an on-shift staffing analysis to ensure on-shift staff can support the EP functions assigned, as well as other assigned duties.

B.3 - A table is developed depicting the site-specific on-shift staffing plan, as well as the ERO staffing augmentation plan. Table B-1, "Emergency Response Organization (ERO) Staffing and Augmentation Plan," provides a model for licensees to consider.

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.**

Justification:

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

10 CFR 50.54(q) Review Form

Change 6 includes updates to the Reactor Coolant Pump Rotor Seizure event tasks and timing. The first update adds the RP technician 2 as a position available to perform a sample per AOP-032, High RCS Activity. Plant procedural guidance allows for either a Chemistry technician or RP technician to perform sampling in accordance with AOP-032 and CRC-821, Post Accident Sampling. **The RP technicians are qualified to perform this sampling activity. There is no overlap between this sampling activity and other RP functions performed by the RP technician.** Therefore, this change aligns personnel responsibilities to responsibilities governed by AOP-032 and CRC-821. The second update removes an action for the I&C technician (ICT) to 'Check pressure switches for MFP reset/Drain Pumps'. The action for the ICT to check pressure switches for MFP reset/Drain Pumps was determined to be unnecessary for the Reactor Coolant Pump Rotor Seizure event immediate response. GP-006, Normal Plant Shutdown From Power Operation to Hot Standby (Mode 1 to Mode 3), contains instructions for the ICT to check pressure switches for MFP reset/Drain Pumps, however this action may be completed after personnel have been called out to support a response to this event. **The MFPs are not safety-related components and are not needed to mitigate a postulated accident. The safety-related Auxiliary Feedwater Pumps (AFWPs) would also be available for immediate use if needed in response to this event.** The third change removes an action for the mechanic (MT) to 'Station at Turbine coastdown/ensure proper turning gear ops'. The action for the MT to station at Turbine coastdown/ensure proper turning gear ops was determined to be unnecessary for the Reactor Coolant Pump Rotor Seizure event immediate response. This action may be completed after personnel have been called out to support a response to this event. **This action is intended to protect the turbine as an asset and does not provide any mitigating benefit to the postulated accident.**

Change 7 includes updates to the on-shift positions in Table 1 for the Reactor Coolant Pump Rotor Seizure event, based upon Change 6 described above.

Change 8 includes updates to the Plant Operations & Safe Shutdown Analysis in Table 2 for the Reactor Coolant Pump Rotor Seizure event, based upon Change 6 described above.

Change 9 includes updates to the Radiation Protection and Chemistry Analysis in Table 4 for the Reactor Coolant Pump Rotor Seizure event, based upon Change 6 described above.

Change 10 includes updates to the Steam Generator Tube Rupture (SGTR) event tasks and timing. The first update removes an action for the RP technician 1 to 'Notify CT for sampling CVPET [**Condensate Vacuum Pump Effluent Treatment System**]'. The action for the RP technician 1 to notify CT for sampling CVPET was determined to be unnecessary for the SGTR event immediate response. The second update removes an action for the CT to 'Sample CVPET'. The action for CT to sample the CVPET was determined to be unnecessary for the SGTR event immediate response. **This sampling provides indication of the overall primary to secondary leakage, but does not assist with determining which steam generators are intact for immediate event response, which is determined by other available indications as described in procedural guidance. EOP-E-0, Reactor Trip, steps 27 through 29 instruct**

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

10 CFR 50.54(q) Review Form

the operator to consider any abnormal secondary radiation monitor (main steamline radiation monitors, steam generator blowdown radiation monitor, condenser vacuum pump effluent radiation monitor, and the Turbine Building Vent Stack radiation monitor) indications/ trends, an uncontrolled steam generator level rise, and a steam generator activity sample for evaluating entry into EOP-E-3, Steam Generator Tube Rupture. EOP-E-3 contains instructions to consider any of the following conditions to identify a ruptured steam generator: main steamline radiation monitor high radiation alarms, steam generator level rising in an uncontrolled manner, and a sample from the steam generator blowdown lines with high radiation. AOP-046, Steam Generator Tube Leak, provides guidance for determining a leaking steam generator by: individual SGBD samples, main steamline radiation monitor levels, and local surveys of SGBD lines. There are various radiation monitor indications available for detecting primary to secondary leakage. Sampling activities for responding to a SGTR may be completed as necessary after personnel have been called out to support a response to this event without challenging any immediate emergency response activities. ~~The CVPET sampling activity may be completed if necessary after personnel have been called out to support a response to this event.~~

Change 11 includes updates to the on-shift positions in Table 1 for the SGTR event, based upon Change 10 described above.

Change 13 includes updates to the Radiation Protection and Chemistry Analysis in Table 4 for the SGTR event, based upon Change 10 described above.

Change 18 includes an update to the Probable Aircraft Threat event tasks and timing. The action for the CT to 'Perform surveillances' was removed. The action for the CT to perform surveillances was determined to be unnecessary for the Probable Aircraft Threat event immediate response. AOP-038, Rapid Downpower, contains guidance for an operator to direct Chemistry to initiate surveillances required by RST-204, Reactor Coolant System Chemistry and Radiochemistry Surveillance, and RST-211, Gaseous Effluent Radiochemistry Surveillance. However, these surveillances may be completed after personnel have been called out to support a response to this event. ***The Chemistry Technician is required to complete these surveillances within two to six hours following a thermal power change exceeding 15 percent of rated thermal power to meet TS 4/4.4.8, Reactor Coolant System Specific Activity.*** ~~The shortest timeframe for Chemistry completing these surveillances is six hours following the event (that would involve a thermal power change exceeding 15 percent).~~

Change 19 includes updates to the on-shift positions in Table 1 for the Probable Aircraft Threat event, based upon Change 18 described above.

Change 21 includes updates to the Radiation Protection and Chemistry Analysis in Table 4 for the Probable Aircraft Threat event, based upon Change 18 described above.

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

10 CFR 50.54(q) Review Form

Change 3 removed Chemistry Technician, Mechanic, and I&C Technician from the bulleted list of on-shift personnel and their respective locations in Section 3.4. Change 24 updated the title of Table 4 to remove Chemistry for various analysis events. These updates are based upon other changes to event tasks and responsibilities described under changes 6, 10, and 18 described above. The Chemistry Technician, Mechanic, and I&C Technician do not have tasks in the proposed Revision 1 of the EP-HNP-OSSA and are not required on-shift per the emergency plan, technical specifications, or the UFSAR.

The changes listed above do not change ERO staffing as required by the EP-ALL-EPLAN, Duke Energy Common Emergency Plan and the changes do not reduce on-shift staffing for ERO functions. On shift staffing responsibilities for emergency response remain unambiguously defined, and adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, therefore the changes continue to meet the requirements as identified in 10 CFR 50.47 (b)(2).

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.**

Justification:

Change 6 includes updates to the Reactor Coolant Pump Rotor Seizure event tasks and timing. The first update adds the RP technician 2 as a position available to perform a sample per AOP-032, High RCS Activity. Plant procedural guidance allows for either a Chemistry technician or RP technician to perform sampling in accordance with AOP-032 and CRC-821, Post Accident Sampling. **The RP technicians are qualified to perform this sampling activity. There is no overlap between this sampling activity and other RP functions performed by the RP technician.** Therefore, this change aligns personnel responsibilities to responsibilities governed by AOP-032 and CRC-821. The second update removes an action for the I&C technician (ICT) to 'Check pressure switches for MFP reset/Drain Pumps'. The action for the ICT to check pressure switches for MFP reset/Drain Pumps was determined to be unnecessary for the Reactor Coolant Pump Rotor Seizure event immediate response. GP-006, Normal Plant Shutdown From Power Operation to Hot Standby (Mode 1 to Mode 3), contains instructions for the ICT to check pressure switches for MFP reset/Drain Pumps, however this action may be completed after personnel have been called out to support a response to this event. **The MFPs are not safety-related components and are not needed to mitigate a postulated accident. The safety-related Auxiliary Feedwater Pumps (AFWPs) would also be available for immediate use if needed in response to this event.** The third change removes an action for the mechanic (MT) to 'Station at Turbine coastdown/ensure proper turning gear ops'. The action for the MT to station at Turbine coastdown/ensure proper turning gear ops was determined to be unnecessary for the Reactor Coolant Pump Rotor Seizure event immediate response. This action may be completed after personnel have been called out to support a response to this event. **This action is intended to protect the turbine as an asset and does not provide any mitigating benefit to the postulated accident.**

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

10 CFR 50.54(q) Review Form

Change 7 includes updates to the on-shift positions in Table 1 for the Reactor Coolant Pump Rotor Seizure event, based upon Change 6 described above.

Change 8 includes updates to the Plant Operations & Safe Shutdown Analysis in Table 2 for the Reactor Coolant Pump Rotor Seizure event, based upon Change 6 described above.

Change 9 includes updates to the Radiation Protection and Chemistry Analysis in Table 4 for the Reactor Coolant Pump Rotor Seizure event, based upon Change 6 described above.

Change 10 includes updates to the Steam Generator Tube Rupture (SGTR) event tasks and timing. The first update removes an action for the RP technician 1 to 'Notify CT for sampling CVPET [**Condensate Vacuum Pump Effluent Treatment System**]'. The action for the RP technician 1 to notify CT for sampling CVPET was determined to be unnecessary for the SGTR event immediate response. The second update removes an action for the CT to 'Sample CVPET'. The action for CT to sample the CVPET was determined to be unnecessary for the SGTR event immediate response. ***This sampling provides indication of the overall primary to secondary leakage, but does not assist with determining which steam generators are intact for immediate event response, which is determined by other available indications as described in procedural guidance. EOP-E-0, Reactor Trip, steps 27 through 29 instruct the operator to consider any abnormal secondary radiation monitor (main steamline radiation monitors, steam generator blowdown radiation monitor, condenser vacuum pump effluent radiation monitor, and the Turbine Building Vent Stack radiation monitor) indications/ trends, an uncontrolled steam generator level rise, and a steam generator activity sample for evaluating entry into EOP-E-3, Steam Generator Tube Rupture. EOP-E-3 contains instructions to consider any of the following conditions to identify a ruptured steam generator: main steamline radiation monitor high radiation alarms, steam generator level rising in an uncontrolled manner, and a sample from the steam generator blowdown lines with high radiation. AOP-046, Steam Generator Tube Leak, provides guidance for determining a leaking steam generator by: individual SGBD samples, main steamline radiation monitor levels, and local surveys of SGBD lines. There are various radiation monitor indications available for detecting primary to secondary leakage. Sampling activities for responding to a SGTR may be completed as necessary after personnel have been called out to support a response to this event without challenging any immediate emergency response activities.*** ~~The CVPET sampling activity may be completed if necessary after personnel have been called out to support a response to this event.~~

Change 11 includes updates to the on-shift positions in Table 1 for the SGTR event, based upon Change 10 described above.

Change 13 includes updates to the Radiation Protection and Chemistry Analysis in Table 4 for the SGTR event, based upon Change 10 described above.

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

10 CFR 50.54(q) Review Form

Change 18 includes an update to the Probable Aircraft Threat event tasks and timing. The action for the CT to 'Perform surveillances' was removed. The action for the CT to perform surveillances was determined to be unnecessary for the Probable Aircraft Threat event immediate response. AOP-038, Rapid Downpower, contains guidance for an operator to direct Chemistry to initiate surveillances required by RST-204, Reactor Coolant System Chemistry and Radiochemistry Surveillance, and RST-211, Gaseous Effluent Radiochemistry Surveillance. However, these surveillances may be completed after personnel have been called out to support a response to this event. ***The Chemistry Technician is required to complete these surveillances within two to six hours following a thermal power change exceeding 15 percent of rated thermal power to meet TS 4/4.4.8, Reactor Coolant System Specific Activity.*** ~~The shortest timeframe for Chemistry completing these surveillances is six hours following the event (that would involve a thermal power change exceeding 15 percent).~~

Change 19 includes updates to the on-shift positions in Table 1 for the Probable Aircraft Threat event, based upon Change 18 described above.

Change 21 includes updates to the Radiation Protection and Chemistry Analysis in Table 4 for the Probable Aircraft Threat event, based upon Change 18 described above.

Change 3 removed Chemistry Technician, Mechanic, and I&C Technician from the bulleted list of on-shift personnel and their respective locations in Section 3.4. Change 24 updated the title of Table 4 to remove Chemistry for various analysis events. These updates are based upon other changes to event tasks and responsibilities described under changes 6, 10, and 18 described above. The Chemistry Technician, Mechanic, and I&C Technician do not have tasks in the proposed Revision 1 of the EP-HNP-OSSA and are not required on-shift per the emergency plan, technical specifications, or the UFSAR.

These changes do not cause any of the major functional areas or major tasks identified in the emergency plan to be unassigned. The changes do not eliminate key positions identified in the emergency plan nor reassign the responsibilities of the eliminated positions to other key positions. The changes do not result in an ERO member being assigned duties that could be expected to be performed concurrently rather than sequentially. The changes do not reduce the effectiveness of the emergency plan as the on-shift ERO staffing complement is unaffected by these changes.

The proposed changes to HNP's On Shift Staffing Analysis continue to show the capability of implementing the site's emergency plan to address a spectrum initiating events and consequences. The key emergency response functions and tasks as described in NUREG-0654 include:

- Shutdown the reactor and maintain safe shutdown
- Mitigate event consequences
- Notify augmented ERO staff and Offsite Response Organizations (OROs)
- Determine Protective Action Recommendations (PARs) for site personnel and the public

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

10 CFR 50.54(q) Review Form

- Perform firefighting
- Provide medical assistance if needed

The changes listed above do not change ERO staffing as set forth in EP-ALL-EPLAN, Duke Energy Common Emergency Plan as on-shift emergency response responsibilities are staffed and assigned. The changes do not reduce the availability of personnel relied upon in the plan. Therefore, the changes do not reduce the effectiveness of the Duke Energy Common Emergency Plan.

These changes continue 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.

These change(s) continue (continues) to meet NRC requirements, as described in 10 CFR 50.47(b) and 10 CFR 50, Appendix E as well as the requirements of the Duke Energy Site's Emergency Plans as written and approved.

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

Attachment 2
Page 22 of 23

10 CFR 50.54(q) Review Form

Section XII: Evaluation Conclusion	
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"/>
Section XII: Conclusion	
Questions 1, 2 and 3 are answered YES, complete step below to create a General CAS assignment, and then continue on to Section XIV 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 Sections XIII and Section XIV .	<input type="checkbox"/>

Section XIII: Disposition of Proposed Change Requiring Prior NRC Approval	
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 Section XIV 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 Section XIV .	

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 9

Attachment 2
Page 23 of 23

10 CFR 50.54(q) Review Form

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): Sarah McDaniel	Preparer Signature: See NAS	Date: See NAS
Reviewer Name (Print): Jamey Sharlow	Reviewer Signature: See NAS	Date: See NAS
Approver Name (Print): William Gunter	Approver Signature: See NAS	Date: See NAS
Approver (EP CFAM, as required) Name (Print): N/A	Approver Signature: N/A	Date: N/A

QA RECORD