DUKE ENERGY®

Bentley K. Jones
Director, Organizational Effectiveness
Harris Nuclear Plant
5413 Shearon Harris Rd
New Hill, NC 27562-9300

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

December 19, 2018
Serial: RA-18-0266

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) Evaluations

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) Screening Evaluation Forms and the 10 CFR 50.54(q) Effectiveness Evaluation Forms for revisions to Shearon Harris Nuclear Power Plant, Unit 1, Emergency Plan implementing procedures. EP-EAL, "Emergency Action Levels," Revision 18, was issued on December 5, 2018, and PEP-310, "Notifications and Communications," Revision 40, was issued on December 4, 2018.

This submittal contains no regulatory commitments. Please refer any questions regarding this submittal to Sarah McDaniel at (919) 362-2002.

Sincerely,

Bentley K. Jones

Enclosure: 10 CFR 50.54(q) Screening Evaluation Form and 10 CFR 50.54(q) Effectiveness Evaluation Form for EP-EAL, Revision 18
10 CFR 50.54(q) Screening Evaluation Form and 10 CFR 50.54(q) Effectiveness Evaluation Form for PEP-310, Revision 40

cc: J. Zeiler, NRC Senior Resident Inspector, HNP
M. Barillas, NRC Project Manager, HNP
NRC Regional Administrator, Region II

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ENCLOSURE

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1

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

10 CFR 50.54(Q) SCREENING EVALUATION FORM AND 10 CFR 50.54(Q) EFFECTIVENESS EVALUATION FORM FOR EP-EAL, REVISION 18

10 CFR 50.54(Q) SCREENING EVALUATION FORM AND 10 CFR 50.54(Q) EFFECTIVENESS EVALUATION FORM FOR PEP-310, REVISION 40

(33 PAGES PLUS COVER)

<< 10 CFR 50.54(q) Screening Evaluation Form >>

Screening and Evaluation Number		Applicable Sites	
EREG #: 2212873		BNP	☐
		CNS	☐
		CR3	☐
		HNP	✓
5AD #: 2210604		MNS	☐
		ONS	☐
		RNP	☐
		GO	☐
Document and Revision EP-EAL Revision 18	Emergency Action Levels (FSAR Amendment 61, CHRRM TIC Condition–Accept As-Is)		

<< 10 CFR 50.54(q) Screening Evaluation Form >>

Part I. Description of Proposed Change:

The overall proposed change will adjust the current site description of the Containment High Range Radiation Monitor (CHRRM) performance in the Final Safety Analysis Report (FSAR) to include a period of time in which CHRRMs accuracy exceeds factor of two accuracy consistent with the predicted impact of Temperature Induced Current (TIC). Training in support of the change will also be provided to Operations SROs, Emergency Coordinators, TSC Engineering Mangers, and TSC Radiation Protection Managers, to ensure adequate site response to a given a DBA. The overall function of monitoring the status of fission product barriers (RCS and Fuel Clad) and for detecting and tracking the status of releases into containment during and after and design basis accident will remain.

Specific activities being evaluated:

1. Impact to Declaring EALs FG1.1, FS1.1 and FA1.1 (Fission Product Barrier Matrix)
2. EP-EAL Changes

PRR 2061249
Page 22, added new definition:
Thermally Induced Current (TIC) related to Containment High Range Radiation Monitors (CHRRM)
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.

PRR 2061249
Page 24 added new Abbreviations/Acronyms:
CHRRM Containment High Range Radiation Monitors

PRR 2061249
Page 25 added new Abbreviations/Acronyms:
TIC Thermally Induced Current

PRR 2223988
Attachment 1, page 151, EAL SU5.1 revised Basis statement by adding last sentence:
"Failure to isolate the leak within 15 minutes, or if known that the leak cannot be isolated within 15 minutes from the start of the leak, requires immediate classification."

PRR 2061249
Attachment 1, Page 170, EAL FA1.1 revised Basis statement by adding the following to the beginning of the Basis statement:

<< 10 CFR 50.54(q) Screening Evaluation Form >>

Thermally Induced Current Impact-Fuel Damage Accidents with LOCA.

RM-1CR-3589-SA and RM-1CR-3590-SB are susceptible to Thermally Induced Current (TIC).

A Main Steam Line Break or a Loss of Coolant Accident with little radiation consequence may result in a false indication of the following conditions for approximately four minutes:

Loss of Coolant Accident (LOCA) with Fuel Clad Damage causing 150 R/hr in containment.

Loss of Coolant Accident (LOCA) with Fuel Clad Damage causing 600 R/hr in containment.

Following the 4-minute timeframe from T-0 of the accident, RM-1CR-3589-SA and RM 1CR 3590-SB will read appropriate radiation levels for EAL declaring purposes. Utilizing all means of diverse indications is necessary to ensure accurate declarations at the start of the initiating condition.

If negative TIC occurs, the monitor “no pulse” LED will be lit, but the monitor will return itself to service when the condition clears and the rad monitor will indicate true data. No operator action is required.

Attachment 1, Page 171, EAL FS1.1 revised Basis statement by adding the following to the beginning of the Basis statement:

Thermally Induced Current Impact-Fuel Damage Accidents with LOCA.

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Attachment 1, Page 173, EAL FG1.1 revised Basis statement by adding the following to the beginning of the Basis statement:

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If negative TIC occurs, the monitor “no pulse” LED will be lit, but the monitor will return itself to service when the condition clears and the rad monitor will indicate true data. No operator action is required.

Attachment 2, Page 176 added the following note to Category C Fuel Clad (FC) Barrier Loss and Containment (CNMT) Barrier Potential Loss.

RM-1CR-3589-SA and RM-1CR-3590-SB may not provide accurate indications for up to approximately 4 minutes following a sudden significant Containment temperature change, caused by a Loss of Primary or Secondary Coolant. Diverse indications such as, but not limited to, RM-1CR-3561A-SA, RM-1CR-3561B-SB, RM-1CR-3561C-SA, or RM-1CR-3561D-SB readings should be referenced to validate radiation levels inside Containment during this 4-minute period. Negative TIC will subside in the event of fuel damage.

<< 10 CFR 50.54(q) Screening Evaluation Form >>

Attachment 2, Page 182, Fission Product Barrier Loss/Potential Loss Matrix and Bases, Fuel Clad, C. CNMT Radiation/RCS Activity, Loss revised Basis statement by adding the following to the beginning of the Basis statement:

Thermally Induced Current Impact-Fuel Damage Accidents with LOCA.

RM-1CR-3589-SA and RM-1CR-3590-SB are susceptible to Thermally Induced Current (TIC).

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Attachment 2, Page 208, Fission Product Barrier Loss/Potential Loss Matrix and Bases, Containment, C. CNMT Radiation/RCS Activity, Potential Loss revised Basis statement by adding the following to the beginning of the Basis statement:

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Part II. Activity Previously Reviewed?	Yes ☐	No ✓
Is this activity Fully bounded by an NRC approved 10 CFR 50.90 submittal or Alert and Notification System Design Report? If yes, identify bounding source document number or approval reference and ensure the basis for concluding the source document fully bounds the proposed change is documented below: Justification:	10 CFR 50.54(q) Effectiveness Evaluation is not required. Enter justification below and complete Attachment 4, Part V.	Continue to Attachment 4, 10 CFR 50.54(q) Screening Evaluation Form, Part III
Bounding document attached (optional)		☐

<< 10 CFR 50.54(q) Screening Evaluation Form >>

Part III. Editorial Change	Yes ☐	No ✓
Is this activity an editorial or typographical change only, such as formatting, paragraph numbering, spelling, or punctuation that does not change intent? Justification:	10 CFR 50.54(q) Effectiveness Evaluation is not required. Enter justification and complete Attachment 4, Part V.	Continue to Attachment 4, Part IV and address non editorial changes

Part IV. Emergency Planning Element and Function Screen (Reference Attachment 1, Considerations for Addressing Screening Criteria)

Does this activity involve any of the following, including program elements from NUREG-0654/FEMA REP-1 Section II? If answer is yes, then check box.

1	10 CFR 50.47(b)(1) Assignment of Responsibility (Organization Control)	
1a	Responsibility for emergency response is assigned.	☐
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.	☐
2	10 CFR 50.47(b)(2) Onsite Emergency Organization	
2a	Process ensures that onshift emergency response responsibilities are staffed and assigned	☐
2b	The process for timely augmentation of onshift staff is established and maintained.	☐
3	10 CFR 50.47(b)(3) Emergency Response Support and Resources	
3a	Arrangements for requesting and using off site assistance have been made.	☐
3b	State and local staff can be accommodated at the EOF in accordance with the emergency plan. (NA for CR3)	☐
4	10 CFR 50.47(b)(4) Emergency Classification System	
4a	A standard scheme of emergency classification and action levels is in use. (Requires final approval of Screen and Evaluation by EP CFAM.)	■
5	10 CFR 50.47(b)(5) Notification Methods and Procedures	
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.	☐
5b	Administrative and physical means have been established for alerting and providing prompt instructions to the public within the plume exposure pathway. (NA for CR3)	☐
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. (NA for CR3)	☐

<< 10 CFR 50.54(q) Screening Evaluation Form >>

Part IV. Emergency Planning Element and Function Screen (cont.)		
6	10 CFR 50.47(b)(6) Emergency Communications	
6a	Systems are established for prompt communication among principal emergency response organizations.	☐
6b	Systems are established for prompt communication to emergency response personnel.	☐
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). (NA for CR3)	☐
7b	Coordinated dissemination of public information during emergencies is established.	☐
8	10 CFR 50.47(b)(8) Emergency Facilities and Equipment	
8a	Adequate facilities are maintained to support emergency response.	☐
8b	Adequate equipment is maintained to support emergency response.	■
9	10 CFR 50.47(b)(9) Accident Assessment	
9a	Methods, systems, and equipment for assessment of radioactive releases are in use.	■
10	10 CFR 50.47(b)(10) Protective Response	
10a	A range of public PARs is available for implementation during emergencies. (NA for CR3)	☐
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. (NA for CR3)	☐
10c	A range of protective actions is available for plant emergency workers during emergencies, including those for hostile action events.	☐
10d	KI is available for implementation as a protective action recommendation in those jurisdictions that chose to provide KI to the public.	☐
11	10 CFR 50.47(b)(11) Radiological Exposure Control	
11a	The resources for controlling radiological exposures for emergency workers are established.	☐
12	10 CFR 50.47(b)(12) Medical and Public Health Support	
12a	Arrangements are made for medical services for contaminated, injured individuals.	☐
13	10 CFR 50.47(b)(13) Recovery Planning and Post-accident Operations	
13a	Plans for recovery and reentry are developed.	☐
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.	☐
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.	☐
14c	Identified weaknesses are corrected.	☐
15	10 CFR 50.47(b)(15) Emergency Response Training	
15a	Training is provided to emergency responders.	☐

<< 10 CFR 50.54(q) Screening Evaluation Form >>

Part IV. Emergency Planning Element and Function Screen (cont.)		
16	10 CFR 50.47(b)(16) Emergency Plan Maintenance	
16a	Responsibility for emergency plan development and review is established.	☐
16b	Planners responsible for emergency plan development and maintenance are properly trained.	☐
PART IV. Conclusion If no Part IV criteria are checked, then provide Justification and complete Part V below. Justification: If any Attachment 4, 10 CFR 50.54(q) Screening Evaluation Form, Part IV criteria are checked, then complete Attachment 4, 10 CFR 50.54(q) Screening Evaluation Form, Part V and perform a 10 CFR 50.54(q) Effectiveness Evaluation. Program Element 4a requires final approval of Screen and Evaluation by EP CFAM.		☐ ■

Part V. Signatures: EP CFAM Final Approval is required for changes affecting Program Element 4a. 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.		
Preparer Name (Print): Jamey Sharlow	Preparer Signature: Signed electronically in CAS	Date: 12/04/18
Reviewer Name (Print): David Stih	Reviewer Signature: Signed electronically in CAS	Date: 12/04/18
Approver (EP Manager Name (Print): Bentley Jones	Approver Signature: Signed electronically in CAS	Date: 12/04/18
Approver (EP CFAM, as required) Name (Print) David Thompson	Approver Signature: Signed electronically in CAS	Date: 12/05/18

QA RECORD

<< 10 CFR 50.54(q) Effectiveness Evaluation Form >>

Screening and Evaluation Number		Applicable Sites	
EREG #: 2212873		BNP	☐
		CNS	☐
		CR3	☐
		HNP	✓
5AD #: 2210604		MNS	☐
		ONS	☐
		RNP	☐
		GO	☐
Document and Revision EP-EAL Revision 18	Emergency Action Levels (FSAR Amendment 61, CHRRM TIC Condition–Accept As-Is)		

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PRR 2061249

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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.

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PRR 2061249

Page 24 added new Abbreviations/Acronyms:

CHRRM Containment High Range Radiation Monitors

PRR 2061249

Page 25 added new Abbreviations/Acronyms:

TIC Thermally Induced Current

PRR 2223988

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PRR 2061249

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<< 10 CFR 50.54(q) Effectiveness Evaluation Form >>

SA, or RM-1CR-3561D-SB readings should be referenced to validate radiation levels inside Containment during this 4-minute period. Negative TIC will subside in the event of fuel damage.

Attachment 2, Page 182, Fission Product Barrier Loss/Potential Loss Matrix and Bases, Fuel Clad, C. CNMT Radiation/RCS Activity, Loss revised Basis statement by adding the following to the beginning of the Basis statement:

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Attachment 6, 10 CFR 50.54(q) Initiating Condition (IC) and Emergency Action Level (EAL) and EAL Bases Validation and Verification (V&V) Form , is attached (required for IC or EAL change)	Yes ☐ No ■

<< 10 CFR 50.54(q) Effectiveness Evaluation Form >>

Part II. Description and Review of Licensing Basis Affected by the Proposed Change:

- PLP-201 Revision 3, Emergency Plan (Original License Basis dated 1983)
- PLP-201 Revision 69, Emergency Plan (Current License Basis)
- NRC Safety Evaluation Report, Amendment 149-NPF-63 under docket 50-400. (SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1 - ISSUANCE OF AMENDMENT TO ADOPT EMERGENCY ACTION LEVEL SCHEME PURSUANT TO NEI 99-01, REVISION 6, "DEVELOPMENT OF EMERGENCY ACTION LEVELS FOR NON-PASSIVE REACTORS" (CAC NO. MF6196))
- EP-EAL Revision 17

This review concludes that the proposed change in Revision 18 of EP-EAL, Emergency Action Level Basis Document does not affect the licensing basis of PLP-201, Harris Emergency Plan. These changes provide clarification to the existing EAL thresholds. The ability to declare EALs are not impacted. Both regulations and commitments continue to be met with the proposed changes to EP-EAL.

No change to Licensing Basis.

This evaluation nor previous evaluations on the associated proposed changes have reduced the effectiveness of the HNP Emergency Plan.

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

<< 10 CFR 50.54(q) Effectiveness Evaluation Form >>

Part III. Description of How the Proposed Change Complies with Regulation and Commitments.

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)**:**

PRR 2223988

Attachment 1, page 151, EAL SU5.1 revised Basis statement by adding last sentence:

"Failure to isolate the leak within 15 minutes, or if known that the leak cannot be isolated within 15 minutes from the start of the leak, requires immediate classification."

This sentence provides a clarification to the end user to not delay classification activities for leak isolation. The intent of the EAL still remains.

Added Note 9 and references to Note 9

RM-1CR-3589-SA and RM-1CR-3590-SB may not provide accurate indications of fission barrier status for up to approximately 4 minutes following a sudden significant Containment temperature change, caused by a Loss of Primary or Secondary Coolant. Diverse indications such as, but not limited to, RM-1CR-3561A-SA, RM-1CR-3561B-SB, RM-1CR-3561C-SA, or RM-1CR-3561D-SB readings should be referenced to validate radiation levels inside Containment during this 4-minute period.

Currently, the Containment High Range Radiation Monitors (CHRRMs), tagged RM-01CR-3989SA and RM-01CR-3990SB, are considered inoperable. As documented per NCR 2034217, the CHRRMs are susceptible to impact from a phenomenon known as Temperature Induced Current (TIC). Per Information Notice (IN) 97-45 Supplement 1, a rapid change in temperature can impact the accuracy of the CHRRMs, as the rapid change in temperature can cause a current to develop within the cables providing signal to the CHRRMs, which then impacts the amount of radiation displayed by the CHRRMs. Readings beyond the factor-of-two accuracy requirement can result in the first few minutes after a major release of steam. In cases of a rapid increase in temperature, a false high radiation signal at the CHRRMs can result as an effect of TIC. In cases of a rapid decrease in temperature, a false-low radiation signal can result.

10CFR50.59 Evaluation 2210618 addresses this condition and acceptance of "as is" condition. (Reference)

The overall proposed change will adjust the current site description of the Containment High Range Radiation Monitor (CHRRM) performance in the Final Safety Analysis Report (FSAR) to include a period of time in which CHRRMs accuracy exceeds factor of two accuracy consistent with the predicted impact of Temperature Induced Current (TIC). Training in support of the change will also be provided to ensure adequate site response to a given a DBA. The overall function of monitoring the status of fission product barriers (RCS and Fuel Clad) and for detecting and tracking the status of releases into containment during and after and design basis accident will remain.

Specific activities being evaluated:

2. FSAR Section 11.5.2.7.2.17 for High Range Containment Monitors description, add: "NRC Information Notice 97-45 Supplement 1 documents a potential impact on the Containment High Range Radiation Monitors during rapid temperature changes inside Containment, such as after a Loss of Coolant Accident or Main Steam Line Break. This phenomenon, commonly called 'Temperature Induced Current', has been evaluated per Harris Calculation HNP-I/INST-1078. The impact of TIC is accounted for in Harris operating procedures as to not significantly impact the site's response to either a LOCA or MSLB."

<< 10 CFR 50.54(q) Effectiveness Evaluation Form >>

The site completed Calculation HNP-I/INST-1078 to identify the specific anticipated impact of TIC on the Harris CHRRMs. The following is a summary of the expected impacts provided for reference. (Note: Impact on CHRRMs in terms of accuracy is more pronounced at lower radiation levels in containment. The most pronounced impact would be normal radiation levels in containment where the 1R/hr keep-live source for the CHRRMs are the only major source detectable by the CHRRMs.)

Calculation HNP-I/INST-1078 was initiated to determine TIC effects based on site specific conditions and a wide range of containment temperature transients. This evaluation concluded that the TIC condition would only result in readings above the declaration threshold (150 R/hr) for up to about 4 minutes. The proposed changes will address the potential for reduced accuracy of RM-3989SA/RM-3990 during the TIC impacted period RM-01CR-3989SA and RM-01CR-3990SB. These proposed changes enhance the Emergency Action Level Matrix and ensure Emergency Coordinators are aware of CHRRM response during DBAs. The addition of the note ensures diverse indications are used when assessing emergency conditions as related to CHRRMs (RM-1CR-3561A-SA, RM-1CR-3561B-SB, RM-1CR-3561C-SA, or RM-1CR-3561D-SB). This will prevent a misclassification when determining Fuel Cladding damage or loss of a Reactor Coolant System barrier or a potential challenge to Containment integrity during an emergency event.

Compliance with 10 CFR 50.47(b) and 10 CFR 50, Appendix E Requirements:

These proposed changes do not affect the emergency planning function associated with 10 CFR 50.47(b)(4), because these changes continue to ensure that a standard scheme of emergency classification and action levels is in use at HNP. The EAL Technical Bases provide a valid, logical and intelligible methodology for the determination of an emergency classification. The proposed changes continue to ensure that there is a means available for determining the magnitude of, and for continually assessing the impact of, the release of radioactive materials, 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 NRC, and other Federal agencies. The proposed changes continue to ensure use of emergency action levels for determining when and what type of protective measures should be considered within and outside the site boundary to protect health and safety and include EALs for hostile action that may adversely affect the plant. In addition, the change continues to ensure emergency action levels that are based on in-plant conditions, in addition to onsite and offsite monitoring. These proposed changes continue to support the requirements described in 10 CFR 50, Appendix E.IV.B.1.

The proposed changes continue to ensure the capability to assess, classify, and declare an emergency condition within fifteen minutes after the availability of indications that an EAL has been exceeded and to declare the emergency as soon as possible following identification of the appropriate emergency classification level. These proposed changes continue to support the requirements described in 10 CFR 50, Appendix E.IV.C.2.

Four (4) minutes was determined as the most limiting time based on the Calculation HNP-I/INST-1078 evaluation. This calculation considers containment temperature transients and provides an evaluation of FSAR described design functions.

A Note (9) describing four minutes for TIC response was incorporated into EP-EAL Revision 18. (NEI 99-01 Rev. 6) The Note describes the condition and reminds ERO members to use diverse indications to validate readings. This was done to minimize the possibility of declaring an event based off CHRRM indications that were inaccurate due to TIC. The addition of the Note did not change the emergency classification scheme. The addition of the Note continues to comply with regulations 10CFR50.47(b)(4) as it continues to ensure a standard emergency classification and action level scheme. The bases of the scheme continue to include facility systems and effluent parameters.

<< 10 CFR 50.54(q) Effectiveness Evaluation Form >>

The addition of the Note that describes the TIC effect and how long it could last does not change 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. The Note describes that for up to four (4) minutes of the 15-minute allowed to declare, CHRRM indications could be inaccurate and operators should use diverse indications to verify the indications. This change reminds personnel that alternate indicators should be utilized to validate/verify the emergency condition. The use of diverse indications is an expectation when classifying Emergency Actions Levels. It does not extend the 15-minute window for classification. This provides further assurance that HNP is maintaining 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 promptly declare the emergency condition as soon as possible following identification of the appropriate emergency classification level as required by 10 CFR 50, Appendix E Section IV. C.

During a simulated accident sequence in the MCR-Simulator, the operating crew was observed addressing a Main Steam Line Break inside containment. This observation was to gather data regarding the timing of Emergency Operating Procedural (EOP) actions (EOP-E-2, Faulted Steam Generator Isolation). The radiation monitors were referenced during the accident sequence around 5 minutes into the event, after the TIC effect subsided. This is merely a data point, and the Emergency Coordinator was making classification efforts with diverse indications in parallel to the EOP actions. The crew was able to diagnose the Main Steam Line Break inside of Containment (Without Fuel Damage) within one minute of the triggers.

For events of negative TIC impact the operating crew understands that if fuel damage occurs during the negative TIC timeframe, that the Containment High Range Radiation Monitors will read true radiation level data, even though the “no pulse received” light is indication on the RM-23 panel. Just in Time Training has been developed and a Standing Instruction issued to communicate this to all stakeholders. Using diverse indications to correlate any potential fuel damage, TIC, and high energy release in containment still stands for this accident sequence.

The changes described continue to meet NRC requirements as described in 10 CFR 50.47(b) and 10 CFR 50, Appendix E.

<< 10 CFR 50.54(q) Effectiveness Evaluation Form >>

Part IV. Description of Emergency Plan Planning Standards, Functions and Program Elements Affected by the Proposed Change (Address each function identified in Attachment 4, 10 CFR 50.54(q) Screening Evaluation Form, Part IV of associated Screen):

50.47(b)(4), Emergency Classification System

Risk Significant 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.

RSPS Function:

The emergency planning function associated with 10 CFR 50.47(b)(4) states:

- A standard scheme of emergency classification and action levels is in use.

Supporting requirements which are described in 10 CFR 50, Appendix E Sections IV. B (in part) and IV. C (in part) state:

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.

C. Activation of Emergency Organization:

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.

Program Elements:

- An emergency classification and emergency action level scheme must be established by the licensee.
- The specific instruments, parameters or equipment status shall be shown for establishing each emergency class, in the in-plant emergency procedures.
- The initiating conditions include all postulated accidents in the Final Safety Analysis Report (FSAR) for the nuclear facility.

<< 10 CFR 50.54(q) Effectiveness Evaluation Form >>

50.47(b)(8), Emergency Facilities and Equipment

Planning Standard: Adequate emergency facilities and equipment to support the emergency response are provided and maintained.

PS Function:
2. Adequate equipment is maintained to support emergency response.

Supporting Requirements: 10 CFR Part 50, Appendix E, Sections IV.E1–4, IV.E.8, IV.G (in part) state
E. Emergency Facilities and Equipment
Adequate provisions shall be made and described for emergency facilities and equipment, including:
2. Equipment for determining the magnitude of and for continuously assessing the impact of the release of radioactive materials to the environment;
8.c(1). The capability for obtaining and displaying plant data and radiological information for each reactor at a nuclear power reactor site and for each nuclear power reactor site that the facility serves

G. Maintaining Emergency Preparedness
Provisions to be employed to ensure that the emergency plan, its implementing procedures, and emergency equipment and supplies are maintained up to date shall be described.

Program Elements:
- Each licensee shall identify and establish onsite monitoring systems that are to be used to initiate emergency measures
- The equipment shall include radiological monitors, (e.g., emergency, effluent)
- Each licensee shall make provision to acquire data from radiological monitors

50.47(b)(9), Emergency Assessment Capability

RISK SIGNIFICANT PLANNING STANDARD: Adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use.

RSPS FUNCTION:
Methods, systems, and equipment for assessment of radioactive releases are in use.

Supporting requirements which are described in 10 CFR Part 50, Appendix E, Sections IV. B and IV.E.2 (in part) state
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.

<< 10 CFR 50.54(q) Effectiveness Evaluation Form >>

Appendix E. IV. E.2

E. Emergency Facilities and Equipment

Adequate provisions shall be made and described for emergency facilities and equipment, including:

2. Equipment for determining the magnitude of and for continuously assessing the impact of the release of radioactive materials to the environment;

Program Elements:

- Adequate methods, systems and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use.
- Each licensee shall identify plant system and effluent parameter values characteristic of a spectrum of off-normal conditions and accidents
- Such parameter values and the corresponding emergency class shall be included in the appropriate facility emergency procedures.
- Facility emergency procedures shall specify the kinds of instruments being used and their capabilities.
- Each licensee shall establish methods and techniques to be used for determining:
- the source term of releases of radioactive material within plant systems
- the magnitude of the release of radioactive materials
- Each licensee shall establish the relationship between effluent monitor readings and onsite and offsite exposures and contamination for various meteorological conditions.

<< 10 CFR 50.54(q) Effectiveness Evaluation Form >>

Part V. Description of Impact of the Proposed Change on the Effectiveness of Emergency Plan Functions:

The proposed changes in Revision 18 of EP-EAL, Emergency Action Level Basis Document do not reduce the effectiveness of the Harris Emergency Plan. Instead, these changes continue to provide additional assurance that the Harris Emergency Response Organization has the ability and capability to:

- respond to an emergency;
- perform functions in a timely manner;
- effectively identify and take measures to ensure protection of the public health and safety; and
- effectively use response equipment and emergency response procedures.
- The proposed changes in Revision 18 of EP-EAL enhance ERO readiness to support a classified emergency, resulting in an improved capability to ensure health and safety of plant personnel and the public. These changes continue to meet NRC requirements, as described in 10 CFR 50.47(b) and 10 CFR 50, Appendix E and are an overall improvement to the HNP Emergency Preparedness Program.

The addition of a Note to ensure EAL evaluators are aware of TIC (Positive and Negative) on CHRRMs continues to ensure a standard scheme of emergency classification and action levels remains in use at HNP. The Note does not reduce the effectiveness of the EAL scheme because HNP maintains the capability to declare emergencies based off containment radiation conditions within 15 minutes of an event. This Note is a reminder to ERO decision makers that adverse containment atmosphere conditions may adversely impact the CHRRMs and that in those first 4 minutes of 15-minute emergency declaration, and in cases where negative TIC impact is present with no actual fuel damage, that diverse indicators should be reviewed to verify/validate the instrument readings on the CHRRMs. The Note ensures decision makers make the correct decision using a variety of currently installed plant equipment and that they validate indications. The Note provides additional assurance that decision makers will not declare an emergency based off CHRRMs that could be inaccurate while temperature is stabilizing in Containment.

Thus, there is no reduction in effectiveness of the Emergency Plan.

<< 10 CFR 50.54(q) Effectiveness Evaluation Form >>

Part VI. 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 ■	No ☐
2	Does the proposed change maintain the effectiveness of the emergency plan (i.e., no reduction in effectiveness)?	Yes ■	No ☐
3	Does the proposed change maintain the current Emergency Action Level (EAL) scheme?	Yes ■	No ☐
4	Choose one of the following conclusions:		
a	The activity does continue to comply with the requirements of 10 CFR 50.47(b) and 10 CFR 50, Appendix E, and the activity does not constitute a reduction in effectiveness or change in the current Emergency Action Level (EAL) scheme. Therefore, the activity can be implemented without prior NRC approval.		■
b	The activity does not continue to comply with the requirements of 10 CFR 50.47(b) or 10 CFR 50 Appendix E or the activity does constitute a reduction in effectiveness or EAL scheme change. Therefore, the activity cannot be implemented without prior NRC approval.		☐
Part VII. Disposition of Proposed Change Requiring Prior NRC Approval			
Will the proposed change determined to require prior NRC approval be either revised or rejected?		Yes ☐	No ☐
If No, 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:_____.			

<< 10 CFR 50.54(q) Effectiveness Evaluation Form >>

Part VIII. Signatures: EP CFAM Final Approval is required for changes affecting risk significant planning standard 10 CFR 50.47(b)(4) (i.e., Emergency Action Levels and Emergency Action Level Bases). If CFAM approval is **NOT** required, then mark the CFAM signature block as not applicable (N/A) to indicate that signature is not required.		
Preparer Name (Print): Jamey Sharlow	Preparer Signature: Signed electronically in CAS	Date: 12/04/18
Reviewer Name (Print): David Stih	Reviewer Signature: Signed electronically in CAS	Date: 12/04/18
Approver (EP Manager) Name (Print): Bentley Jones	Approver Signature: Signed electronically in CAS	Date: 12/04/18
Approver (CFAM, as required) Name (Print): David Thompson	Approver Signature: Signed electronically in CAS	Date: 12/05/18

If the proposed activity is a change to the E-Plan or implementing procedures, then create two EREG General Assignments. If required by Section 5.6, Submitting Reports of Changes to the NRC, then create two EREG General Assignments.	
• One for EP to provide the 10 CFR 50.54(q) summary of the analysis, or the completed 10 CFR 50.54(q), to Licensing.	■
• One for Licensing to submit the 10 CFR 50.54(q) information to the NRC within 30 days after the change is put in effect.	■

QA RECORD

<< 10 CFR 50.54(q) Screening Evaluation Form >>

Screening and Evaluation Number	Applicable Sites	
EREG #:___2183102_____	BNP	☐
	CNS	☐
	CR3	☐
	HNP	✔
5AD #:_2183096_____	MNS	☐
	ONS	☐
	RNP	☐
	GO	☐
Document and Revision PEP-310, REV 040		

Part I. Description of Activity 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):

Section 3.1
Deleted Step 3.1.4 - Activation of the NRC ERDS data link is required within 60 minutes of an Alert or higher event declaration. PRR 2223568

Section 4.7
Deleted Section 4.7 - ERDS Activation and removed references to activate ERDS. This supports EP Excellence Plan action SDEP - 1.7. The Standard ERDS Response project that always leave ERDS on to transmit data. PRR 2223568

Attachment 1
Sheet 1 of 2
Step 2:
Added new item b which reads as follows: "Record the location of the request: □ Harris Nuclear Plant □ Fire Training Center
Updated item c to read as follows: "c. Contact the selected organization and say the following: (1) "This is the Harris Nuclear Plant located at 5421 Shearon Harris Road, New Hill, NC 27562 (2) Please dispatch (as designated in step 1) to (as designated in step 2.b)" PRR 2171756

Attachment 1
Replaced Apex Rescue Squad (Ambulance) with Wake County EMS since Apex EMS is no longer in service. PRR 2206334

Attachment 7
Step 3 corrected to read follow-up ENF not initial ENF. PRR 2098155

Attachment 10
Revised the login and control panel instructions. WebEOC is being upgraded from version 7.8 to 8.5 and the login instructions have changed slightly. PRR 2228686

Attachment 10
Note in wrong place due to recent procedure revision. Moved note prior to Step 7 to before Step 5 "Emergency Release is defined as ANY unplanned quantifiable discharge to the environment of radioactive effluent attributable to a declared emergency event (i.e. any SG tube leak, RCS leak outside containment, or fuel handling accident that results in a declared emergency is to be reported as an "Emergency Release.")". PRR 2235055

Attachment 10
Note prior to Step 5 - Added "defined as" to second note for clarity.

Attachment 10
Added Step 9.c to use backup Met Tower data points if the primary points are not available. PRR 2009717
If the primary source is not available in Step 9.b, then enter data manually using the following EP-NET points:
Wind Direction from (MMT1114)
Wind Speed (MMT1108)
Precipitation (MMT1103)
Stability Class (MMT1117)

Attachment 15
Step 1.a moved "Emergency Event Not Determined" to be the first option. For an accelerated call, Emergency Event Not Determined will most likely be the item selected. PRR 2209165

Part II. Activity Previously Reviewed? Is this activity Fully bounded by an NRC approved 10 CFR 50.90 submittal or Alert and Notification System Design Report? If yes, identify bounding source document number or approval reference and ensure the basis for concluding the source document fully bounds the proposed change is documented below: Justification:	Yes	☐	No	■
	10 CFR 50.54(q) Effectiveness Evaluation is not required. Enter justification below and complete Attachment 4, Part V.		Continue to Attachment 4, 10 CFR 50.54(q) Screening Evaluation Form, Part III	
Bounding document attached (optional)				☐
Part III. Editorial Change	Yes	☐	No	■

Is this activity an editorial or typographical change only, such as formatting, paragraph numbering, spelling, or punctuation that does not change intent? Justification: **The following changes have been identified as editorial per AD-EP-ALL-0602:** **Attachment 1** **Sheet 1 of 2** **Step 2:** **Added new item b which reads as follows: "Record the location of the request: □ Harris Nuclear Plant □ Fire Training Center** **Updated item c to read as follows: "c. Contact the selected organization and say the following: (1) "This is the Harris Nuclear Plant located at 5421 Shearon Harris Road, New Hill, NC 27562 (2) Please dispatch (as designated in step 1) to (as designated in step 2.b)" PRR 2171756** **Attachment 1** **Replaced Apex Rescue Squad (Ambulance) with Wake County EMS since Apex EMS is no longer in service. PRR 2206334** **Attachment 7** **Step 3 corrected to read follow-up ENF not initial ENF. PRR 2098155** **Attachment 10** **Revised the login and control panel instructions. WebEOC is being upgraded from version 7.8 to 8.5 and the login instructions have changed slightly. PRR 2228686** **Attachment 10** **Note in wrong place due to recent procedure revision. Moved note prior to Step 7 to before Step 5 "Emergency Release is defined as ANY unplanned quantifiable discharge to the environment of radioactive effluent attributable to a declared emergency event (i.e. any SG tube leak, RCS leak outside containment, or fuel handling accident that results in a declared emergency is to be reported as an "Emergency Release.")". PRR 2235055** **Attachment 10** **Note prior to Step 5 - Added "defined as" to second note for clarity.** **Attachment 15** **Step 1.a moved "Emergency Event Not Determined" to be the first option. For an accelerated call, Emergency Event Not Determined will most likely be the item selected. PRR 2209165**	10 CFR 50.54(q) Effectiveness Evaluation is not required. Enter justification and complete Attachment 4, Part V.	Continue to Attachment 4, Part IV and address non editorial changes

Part IV. Emergency Planning Element and Function Screen (Reference Attachment 1, Considerations for Addressing Screening Criteria)

Does this activity involve any of the following, including program elements from NUREG-0654/FEMA REP-1 Section II? If answer is yes, then check box.

1	10 CFR 50.47(b)(1) Assignment of Responsibility (Organization Control)	
1a	Responsibility for emergency response is assigned.	☐
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.	☐
2	10 CFR 50.47(b)(2) Onsite Emergency Organization	
2a	Process ensures that onshift emergency response responsibilities are staffed and assigned	☐
2b	The process for timely augmentation of onshift staff is established and maintained.	☐
3	10 CFR 50.47(b)(3) Emergency Response Support and Resources	
3a	Arrangements for requesting and using off site assistance have been made.	☐
3b	State and local staff can be accommodated at the EOF in accordance with the emergency plan. (NA for CR3)	☐
4	10 CFR 50.47(b)(4) Emergency Classification System	
4a	A standard scheme of emergency classification and action levels is in use. (Requires final approval of Screen and Evaluation by EP CFAM.)	☐
5	10 CFR 50.47(b)(5) Notification Methods and Procedures	
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.	☐
5b	Administrative and physical means have been established for alerting and providing prompt instructions to the public within the plume exposure pathway. (NA for CR3)	☐
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. (NA for CR3)	☐

Part IV. Emergency Planning Element and Function Screen (cont.)		
6	10 CFR 50.47(b)(6) Emergency Communications	
6a	Systems are established for prompt communication among principal emergency response organizations.	☐
6b	Systems are established for prompt communication to emergency response personnel.	☐
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). (NA for CR3)	☐
7b	Coordinated dissemination of public information during emergencies is established.	☐
8	10 CFR 50.47(b)(8) Emergency Facilities and Equipment	
8a	Adequate facilities are maintained to support emergency response.	☐
8b	Adequate equipment is maintained to support emergency response.	■
9	10 CFR 50.47(b)(9) Accident Assessment	
9a	Methods, systems, and equipment for assessment of radioactive releases are in use.	☐
10	10 CFR 50.47(b)(10) Protective Response	
10a	A range of public PARs is available for implementation during emergencies. (NA for CR3)	☐
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. (NA for CR3)	☐
10c	A range of protective actions is available for plant emergency workers during emergencies, including those for hostile action events.	☐
10d	KI is available for implementation as a protective action recommendation in those jurisdictions that chose to provide KI to the public.	☐
11	10 CFR 50.47(b)(11) Radiological Exposure Control	
11a	The resources for controlling radiological exposures for emergency workers are established.	☐
12	10 CFR 50.47(b)(12) Medical and Public Health Support	
12a	Arrangements are made for medical services for contaminated, injured individuals.	☐
13	10 CFR 50.47(b)(13) Recovery Planning and Post-accident Operations	
13a	Plans for recovery and reentry are developed.	☐
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.	☐
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.	☐
14c	Identified weaknesses are corrected.	☐
15	10 CFR 50.47(b)(15) Emergency Response Training	
15a	Training is provided to emergency responders.	☐
Part IV. Emergency Planning Element and Function Screen (cont.)		
16	10 CFR 50.47(b)(16) Emergency Plan Maintenance	

16a	Responsibility for emergency plan development and review is established.	☐
16b	Planners responsible for emergency plan development and maintenance are properly trained.	☐

PART IV. Conclusion

If no Part IV criteria are checked, a 10 CFR 50.54(q) Effectiveness Evaluation is not required, then complete Attachment 4, 10 CFR 50.54(q) Screening Evaluation Form, Part V. ☐

Justification:

For the ERDS change Duke Energy is transitioning to an "always-on" mode of ERDS transmission, making the steps to activate ERDS unnecessary. Deletion of the ERDS Activation steps does not affect any of the 50.47(b) emergency planning standards, as ERDS is addressed in 10 CFR Appendix E to Part 50 in section VI, Emergency Response Data System, not in the 50.47(b) Planning Standards.

With regard to 10 CFR Appendix E to Part 50 in section VI, ERDS remains a direct near real-time electronic data link between the licensee's onsite computer system and the NRC Operations Center, and the features listed in Section VI are maintained: the testing method and frequency; the software and hardware; the selected plant parameters; and the transmission rate.

No further evaluation of this change is required by 50.54(q).

The change to utilize the backup MET Tower Data points if the primary points are not available will be evaluated under Planning Standard 8b, as part of the 50.54.Q evaluation action.

If any Attachment 4, 10 CFR 50.54(q) Screening Evaluation Form, Part IV criteria are checked, then complete Attachment 4, 10 CFR 50.54(q) Screening Evaluation Form, Part V and perform a 10 CFR 50.54(q) Effectiveness Evaluation. Program Element 4a requires final approval of Screen and Evaluation by EP CFAM. ■

Part V. Signatures:

EP CFAM Final Approval is required for changes affecting Program Element 4a. 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.

Preparer Name (Print): Jamey Sharlow	Preparer Signature: Signed electronically in CAS	Date: 12/04/18
Reviewer Name (Print): David Stih	Reviewer Signature: Signed electronically in CAS	Date: 12/04/18
Approver (EP Manager Name (Print): Bentley Jones	Approver Signature: Signed electronically in CAS	Date: 12/04/18
Approver (EP CFAM, as required) Name (Print) N/A	Approver Signature: N/A	Date:

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Screening and Evaluation Number	Applicable Sites	
EREG #: 2183102	BNP	☐
	CNS	☐
	CR3	☐
	HNP	■
5AD #: 2183096	MNS	☐
	ONS	☐
	RNP	☐
	GO	☐

Document and Revision	
PEP-310, Revision 040	

Part I. Description of Proposed Change:

Section 3.1
Deleted Step 3.1.4 - Activation of the NRC ERDS data link is required within 60 minutes of an Alert or higher event declaration. PRR 2223568

Section 4.7
Deleted Section 4.7 - ERDS Activation and removed references to activate ERDS. This supports EP Excellence Plan action SDEP - 1.7. The Standard ERDS Response project that always leave ERDS on to transmit data. PRR 2223568

Attachment 10
Added Step 9.c to use backup Met Tower data points if the primary points are not available. PRR 2009717
If the primary source is not available in Step 9.b, then enter data manually using the following EP-NET points:
Wind Direction from (MMT1114)
Wind Speed (MMT1108)
Precipitation (MMT1103)
Stability Class (MMT1117)

Attachment 6, 10 CFR 50.54(q) Initiating Condition (IC) and Emergency Action Level (EAL) and EAL Bases Validation and Verification (V&V) Form , is attached (required for IC or EAL change)	Yes ☐ No ■

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Part II. Description and Review of Licensing Basis Affected by the Proposed Change:

- PLP-201 Revision 3, Emergency Plan (Original License Basis dated 1983)
- PLP-201 Revision 69, Emergency Plan (Current License Basis)

This review concludes that the proposed change in Revision 40 to the PEP-310 Document does not affect the licensing basis of PLP-201, Harris Emergency Plan. Both regulations and commitments continue to be met with the proposed changes to PEP-310.

No change to Licensing Basis.

This evaluation nor previous evaluations on the associated proposed changes have reduced the effectiveness of the HNP Emergency Plan.

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

Part III. Description of How the Proposed Change Complies with Regulation and Commitments.

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)**:**

Compliance with 10 CFR 50.47(b) and 10 CFR 50, Appendix E Requirements:

ERDS change:

Duke Energy is transitioning to an "always-on" mode of ERDS transmission, making the steps to activate ERDS unnecessary. Deletion of the ERDS Activation steps does not affect any of the 50.47(b) emergency planning standards, as ERDS is addressed in 10 CFR Appendix E to Part 50 in section VI, Emergency Response Data System, not in the 50.47(b) Planning Standards.

With regard to 10 CFR Appendix E to Part 50 in section VI, ERDS remains a direct near real-time electronic data link between the licensee's onsite computer system and the NRC Operations Center, and the features listed in Section VI are maintained: the testing method and frequency; the software and hardware; the selected plant parameters; and the transmission rate.

MET Tower Backup Points Change:

The addition of the backup points for MET data is an enhancement to the existing process. These data points are part of the Qualified Data System and available on EP-NET as well as the Emergency Facility Information System (ERFIS). These data points enhance the existing process for obtaining MET data and the existing processes remain unchanged. This is only an addition.

The changes described continue to meet NRC requirements as described in 10 CFR 50.47(b) and 10 CFR 50, Appendix E.

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Part IV. Description of Emergency Plan Planning Standards, Functions and Program Elements Affected by the Proposed Change (Address each function identified in Attachment 4, 10 CFR 50.54(q) Screening Evaluation Form, Part IV of associated Screen):

50.47(b)(8), Emergency Facilities and Equipment

Planning Standard: Adequate emergency facilities and equipment to support the emergency response are provided and maintained.

PS Function:

2. Adequate equipment is maintained to support emergency response.

Supporting Requirements: 10 CFR Part 50, Appendix E, Sections IV.E1–4, IV.E.8, IV.G (in part) state

E. Emergency Facilities and Equipment

Adequate provisions shall be made and described for emergency facilities and equipment, including:

2. Equipment for determining the magnitude of and for continuously assessing the impact of the release of radioactive materials to the environment;

8.c(1). The capability for obtaining and displaying plant data and radiological information for each reactor at a nuclear power reactor site and for each nuclear power reactor site that the facility serves

G. Maintaining Emergency Preparedness

Provisions to be employed to ensure that the emergency plan, its implementing procedures, and emergency equipment and supplies are maintained up to date shall be described.

Program Elements:

- Each licensee shall identify and establish onsite monitoring systems that are to be used to initiate emergency measures
- The equipment shall include radiological monitors, (e.g., emergency, effluent)
- Each licensee shall make provision to acquire data from radiological monitors

Appendix E. IV. E.2

E. Emergency Facilities and Equipment

Adequate provisions shall be made and described for emergency facilities and equipment, including:

2. Equipment for determining the magnitude of and for continuously assessing the impact of the release of radioactive materials to the environment;

Program Elements:

- Adequate methods, systems and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use.
- Each licensee shall identify plant system and effluent parameter values characteristic of a spectrum of off-normal conditions and accidents
- Such parameter values and the corresponding emergency class shall be included in the appropriate facility emergency procedures.
- Facility emergency procedures shall specify the kinds of instruments being used and their capabilities.
- Each licensee shall establish methods and techniques to be used for determining:
- the source term of releases of radioactive material within plant systems

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- the magnitude of the release of radioactive materials
- Each licensee shall establish the relationship between effluent monitor readings and onsite and offsite exposures and contamination for various meteorological conditions.

Part V. Description of Impact of the Proposed Change on the Effectiveness of Emergency Plan Functions:

The Duke Energy change to constantly transmit ERDS data to the NRC was designed to enhance efficiency. Now an ERO member does not have to manually activate the system, saving time for additional Emergency Plan Actions. The addition of MET Tower Data Points was also a change designed for efficiency. Currently several methods exist for retrieving live MET data, and this addition adds to the system that is currently in place.

Thus, there is no reduction in effectiveness for the Emergency Plan.

Part VI. 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 ■	No ☐
2	Does the proposed change maintain the effectiveness of the emergency plan (i.e., no reduction in effectiveness)?	Yes ■	No ☐
3	Does the proposed change maintain the current Emergency Action Level (EAL) scheme?	Yes ■	No ☐
4	Choose one of the following conclusions:		
a	The activity does continue to comply with the requirements of 10 CFR 50.47(b) and 10 CFR 50, Appendix E, and the activity does not constitute a reduction in effectiveness or change in the current Emergency Action Level (EAL) scheme. Therefore, the activity can be implemented without prior NRC approval.		■
b	The activity does not continue to comply with the requirements of 10 CFR 50.47(b) or 10 CFR 50 Appendix E or the activity does constitute a reduction in effectiveness or EAL scheme change. Therefore, the activity cannot be implemented without prior NRC approval.		☐

Part VII. Disposition of Proposed Change Requiring Prior NRC Approval

Will the proposed change determined to require prior NRC approval be either revised or rejected?	Yes ☐	No ■

If No, 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:_____.

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Part VIII. Signatures: EP CFAM Final Approval is required for changes affecting risk significant planning standard 10 CFR 50.47(b)(4) (i.e., Emergency Action Levels and Emergency Action Level Bases). If CFAM approval is **NOT** required, then mark the CFAM signature block as not applicable (N/A) to indicate that signature is not required.		
Preparer Name (Print): Jamey Sharlow	Preparer Signature: Signed electronically in CAS	Date: 12/18/18
Reviewer Name (Print): David Stih	Reviewer Signature: Signed electronically in CAS	Date: 12/18/18
Approver (EP Manager) Name (Print): Bentley Jones	Approver Signature: Signed electronically in CAS	Date: 12/18/18
Approver (CFAM, as required) Name (Print): N/A	Approver Signature: N/A	Date: N/A

If the proposed activity is a change to the E-Plan or implementing procedures, then create two EREG General Assignments. If required by Section 5.6, Submitting Reports of Changes to the NRC, then create two EREG General Assignments.	
• One for EP to provide the 10 CFR 50.54(q) summary of the analysis, or the completed 10 CFR 50.54(q), to Licensing.	☐
• One for Licensing to submit the 10 CFR 50.54(q) information to the NRC within 30 days after the change is put in effect.	☐

QA RECORD