



Tom Simril
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RA-20-0122

10CFR 50.54(q)

April 16, 2020

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

Subject: Duke Energy Carolinas, LLC
Catawba Nuclear Station Units 1 and 2
Docket Nos. 50-413 and 50-414
Emergency Plan, Revision 20-03

Enclosed for NRC Staff use is Revision 20-03 to the Catawba Nuclear Station Emergency Plan. The revision is effective as of March 26, 2020. All changes have been specifically highlighted (side-barred). Also enclosed are the 50.54(q) evaluations for the revision.

Additionally, a revision for the 50.54(q) for EPA B, revision 167 is included. This replaces the 50.54(q) that was submitted in E-Plan 19-04, submitted on October 10, 2019. The editorial revision did not result in a change to the Emergency Plan or the results of the evaluations.

This revision is being submitted in accordance with 10CFR 50.54(q) and does not constitute a reduction in the effectiveness of the Emergency Plan for Catawba Nuclear Station. The 10CFR 50.54(q) Evaluation for Revision 20-03 to the Emergency Plan is provided as Attachment 1.

If there are any questions, please contact Mandy Hare at 803-701-2218.

Sincerely,

Tom Simril
Vice President, Catawba Nuclear Station

Attachments: 1. Emergency Plan 10CFR50.54 (q) Evaluation(s) and screen(s)
2. Plan update instructions
3. Emergency Plan, Revision 20-03

Catawba Nuclear Station
E-Plan Revision 20-03
RA-20-0122
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xc (w/attachments):

Laura Dudes, Regional Administrator
U. S. Nuclear Regulatory Commission - Region II
Marquis One Tower
245 Peachtree Center Ave., NE Suite 1200
Atlanta, GA 30303-1257

xc (w/o attachments):

Michael Mahoney
NRC Project Manager (CNS)
U.S. Nuclear Regulatory Commission
One White Flint North, Mail Stop O8B1A
11555 Rockville Pike
Rockville, MD 20852-2738

Joseph D. Austin
NRC Senior Resident Inspector (CNS)

Catawba Nuclear Station
Attachment 1
Emergency Plan Revision 20-03
10CFR 50.54(q) Evaluation(s) and screen(s)



Duke Energy

ACTION REQUEST - 02322014

ASSIGNMENT NBR - 01

Action Request Assignment Details

AR NUMBER : 02322014

ASSIGNMENT NUMBER : 01

Type	: EP01	Due Date	: 03/26/2020	Pri Resp Fac	:
Status	: COMPLETE	Reschedule	: 0	Pri Resp Group	:
Assigned To	: MICHAEL R COYLE			Sec Resp Fac	:
Subject	: 50.54(Q) SCREEN			Sec Resp Group	:
Aff Facility	: CN	Unit	:	System	:
UCR	:	Schedule Ref	:		
Organization	:	Department	: 18255	Discipline	:
Est Manhrs	: 0	Est Comp Date	:		

Description

COMPLETE 50.54(Q) SCREEN IN ACCORDANCE WITH AD-EP-ALL-0602.

Action Request Assignment Completion Notes

See notes. I have reviewed and approved the EREG.

Action Request Assignment Status History

<u>Updated Date</u>	<u>Updated By</u>	<u>Assgn Status</u>	<u>Assgn Due Date</u>
03/24/2020	MRCOYL1	INPROG	
03/24/2020	MRCOYL1		03/26/2020
03/24/2020	MRCOYL1	NTFY/ASG	
03/24/2020	MRCOYL1	ACC/ASG	
03/24/2020	MRCOYL1	AWAIT/C	
03/25/2020	I18938	ACC/ASG	
03/25/2020	MRCOYL1	AWAIT/C	
03/26/2020	MEHARE	ACC/ASG	
03/26/2020	MRCOYL1	AWAIT/C	
03/26/2020	I18938	ACC/ASG	
03/26/2020	MRCOYL1	AWAIT/C	
03/26/2020	MEHARE	COMPLETE	

Action Request Assignment Routing/Return Comments

Routing Comments from the X601 Panel
uncheck part IV

Updated On
20200325

Updated By
I18938



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ACTION REQUEST - 02322014

ASSIGNMENT NBR - 01

The changes for The List of Figures, Tables and Attachments
and the changes for the Introduction are not contained in
the 50.54Q screen. Please add those changes. With the changes, ensure
additional items in the Q that refer to items 1-6 are updated
to reflect the two additional change items added.
reorder added changes

Routing Comments from the X602 Panel

*** No Return Comments Found ***

20200326 MEHARE
20200326 MEHARE
20200326 MEHARE
20200326 MEHARE
20200326 MEHARE
20200326 I18938

Updated On Updated By

Action Request Assignment Completion Approval

Route List : 001

Route List Initiator : MRCOYL1

<u>Passport</u>	<u>Fac</u>	<u>Group</u>	<u>Type</u>	<u>Send Date</u>	<u>Send Time</u>	<u>Action Taken</u>	<u>Action Date</u>	<u>Time</u>	<u>Last Name</u>
I18938			A	03/25/2020	1632	RETURNED	03/25/2020	1632	NELSON
MEHARE			A	03/25/2020	1713	RETURNED	03/26/2020	1537	HARE
I18938			A	03/25/2020	1710	APPROVED	03/25/2020	1713	NELSON
I18938			A	03/26/2020	1625	APPROVED	03/26/2020	1629	NELSON
MEHARE			A	03/26/2020	1629	APPROVED	03/26/2020	1636	HARE
I18938			A	03/26/2020	1604	RETURNED	03/26/2020	1619	NELSON
I18938			A	03/24/2020	1140	APPROVED	03/25/2020	1601	NELSON
MEHARE			A	03/25/2020	1601	BYPASSED	03/25/2020	1632	HARE

Action Request Assignment Cause/Action

Action Request Assignment Reference Documents

<u>Facility</u>	<u>Doc Type</u>	<u>Sub Type</u>	<u>Document</u>	<u>Sheet</u>	<u>Rev</u>	<u>Minor Rev</u>	<u>Title</u>
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Duke Energy

ACTION REQUEST - 02322014

ASSIGNMENT NBR - 01

Action Request Assignment Reference Equipment

<u>Facility</u>	<u>Unit</u>	<u>System</u>	<u>Equip Type</u>	<u>Equip Number</u>	<u>Equip Tag</u>	<u>Equip Status</u>	<u>Rev</u>	<u>Status</u>
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Action Request Assignment Cross References

<u>Ref Type</u>	<u>Ref Nbr</u>	<u>Ref Sub</u>	<u>Ref Nbr Type</u>	<u>Status</u>	<u>Limit AS Cls</u>	<u>Description</u>
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Action Request Assignment Appendices

[APPENDIX 1](#)

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 6

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

Screening and Evaluation Number		Applicable Sites	
EREG #: <u>2322014</u>		BNP	<input type="checkbox"/>
		CNS	<input checked="" type="checkbox"/>
		CR3	<input type="checkbox"/>
		HNP	<input type="checkbox"/>
5AD #: <u>2322011</u>		MNS	<input type="checkbox"/>
		ONS	<input type="checkbox"/>
		RNP	<input type="checkbox"/>
		GO	<input type="checkbox"/>
Document and Revision		EPA List of Effective Pages, Rev. 161	
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):			
1	EPA LOEP - Emergency Plan Approval Cover Sheet	Emergency Plan Approval Cover Sheet 16-1 March 2016	Removed from document
2	EPA LOEP - Table of Contents	Table of Contents 1 150 February 2019 2 150 February 2019 3 150 February 2019 4 150 February 2019 5 150 February 2019 6 150 February 2019	Table of Contents 1 151 March 2020 2 151 March 2020 3 151 March 2020 4 151 March 2020 5 151 March 2020 6 151 March 2020

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3	EPA LOEP - List of Figures, Tables and Attachments	List of Figures, Tables and Attachments 7 16-1 March 2016 8 16-1 March 2016 9 16-1 March 2016	List of Figures, Tables and Attachments 7 151 March 2020 8 151 March 2020 9 151 March 2020
4	EPA LOEP - Introduction	Introduction i-1 16-1 March 2016 i-2 16-1 March 2016 i-3 16-1 March 2016 i-4 16-1 March 2016 i-5 16-1 March 2016 i-6 16-1 March 2016	Introduction i-1 151 March 2020 i-2 151 March 2020 i-3 151 March 2020 i-4 151 March 2020 i-5 151 March 2020 i-6 151 March 2020
5	EPA LOEP - Section A	Section A A-1 150 September 2017 A-2 150 September 2017 A-3 150 September 2017 A-4 150 September 2017 A-5 150	Section A A-1 151 March 2020 A-2 151 March 2020 A-3 151 March 2020 A-4 151 March 2020 A-5 151

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		September 2017	March 2020
6	EPA LOEP - Section J	Section J J-1 148 December 2019 J-2 148 December 2019 J-3 148 December 2019 J-4 148 December 2019 J-5 148 December 2019 J-6 148 December 2019 J-7 148 December 2019 J-8 148 December 2019 J-9 148 December 2019	Section J J-1 149 March 2020 J-2 149 March 2020 J-3 149 March 2020 J-4 149 March 2020 J-5 149 March 2020 J-6 149 March 2020 J-7 149 March 2020 J-8 149 March 2020 Removed from Document: J-9 148 December 2019
7	EPA LOEP - Section L	Section L L-1 11-1 May 2011 L-2 11-1 May 2011	Section L L-1 112 March 2020 L-2 112 March 2020
8	EPA LOEP - Section Q	Section Q Q-1 154 November 2019	Section Q Q-1 155 March 2020

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	Appendix 1	Appendix 1
	Q-1.1	Q-1.1
	154	155
	November 2019	March 2020
	Q-1.2	Q-1.2
	154	155
	November 2019	March 2020
	Q-1.3	Q-1.3
	154	155
	November 2019	March 2020
	Q-1.4	Q-1.4
	154	155
	November 2019	March 2020
	Q-1.5	Q-1.5
	154	155
	November 2019	March 2020
	Q-1.6	Q-1.6
	154	155
	November 2019	March 2020
	Q-1.7	Q-1.7
	154	155
	November 2019	March 2020
	Q-1.8	Q-1.8
	154	155
	November 2019	March 2020
	Q-1.9	Q-1.9
	154	155
	November 2019	March 2020
	Section Q, Appendix 2	Section Q, Appendix 2
	Q-2.1	Q-2.1
	154	155
	November 2019	March 2020
	Q-2.2	Q-2.2
	154	155
	November 2019	March 2020
	Q-2.3	Q-2.3
	154	155
	November 2019	March 2020
	Q-2.4	Q-2.4
	154	155
	November 2019	March 2020
	Q-2.5	Q-2.5
	154	155
	November 2019	March 2020

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
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	Appendix 3 Q-3.1 154 November 2019 Q-3.2 154 November 2019 Q-3.3 154 November 2019 Q-3.4 154 November 2019 Q-3.5 154 November 2019 Appendix 4 Q-4.1 154 November 2019 Appendix 5 Q-5.1 154 November 2019 Q-5.2 154 November 2019 Q-5.3 154 November 2019	Appendix 3 Q-3.1 155 March 2020 Q-3.2 155 March 2020 Q-3.3 155 March 2020 Q-3.4 155 March 2020 Q-3.5 155 March 2020 Appendix 4 Q-4.1 155 March 2020 Appendix 5 Q-5.1 155 March 2020 Q-5.2 155 March 2020 Removed from Document: Q-5.3 154 November 2019
Part II. Activity Previously Reviewed?		
		Yes <input type="checkbox"/> No <input type="checkbox"/> <input checked="" type="checkbox"/>

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<p>Is this activity Fully bounded by an NRC approved 10 CFR 50.90 submittal or Alert and Notification System Design Report?</p> <p>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:</p> <p>Justification:</p>	<p>10 CFR 50.54(q) Effectiveness Evaluation is not required. Enter justification below and complete Attachment 4, Part V.</p>	<p>Continue to Attachment 4, 10 CFR 50.54(q) Screening Evaluation Form, Part III</p>
<p>Bounding document attached (optional)</p>		<p align="right"><input type="checkbox"/></p>
<p></p>		
<p>Part III. Editorial Change</p> <p>Is this activity an editorial or typographical change only, such as formatting, paragraph numbering, spelling, or punctuation that does not change intent?</p> <p>Justification:</p> <p>Changes 1-8 are all editorial because the changes are updating revision numbers and dates of the revisions or removing a reference that is no longer applicable. AD-EP-ALL-0602 step 3.0.6.b states changes are editorial if the changes are "Correcting references to steps, pages, attachments, forms, documents, tables, exhibits, or procedures."</p>	<p align="center">Yes <input type="checkbox"/></p> <p>10 CFR 50.54(q) Effectiveness Evaluation is not required. Enter justification and complete Attachment 4, Part V.</p>	<p align="center">No or Partially <input type="checkbox"/></p> <p>Continue to Attachment 4, Part IV and address non editorial changes</p>
<p>Part IV. Emergency Planning Element and Function Screen (Reference Attachment 1, Considerations for Addressing Screening Criteria)</p>		
<p>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.</p>		
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. (NA for CR3)	<input type="checkbox"/>

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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.)	<input type="checkbox"/>
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.	<input type="checkbox"/>
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)	<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. (NA for CR3)	<input type="checkbox"/>

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
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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.	<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). (NA for CR3)	<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	
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	
10a	A range of public PARs is available for implementation during emergencies. (NA for CR3)	<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. (NA for CR3)	<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"/>

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Part IV. Emergency Planning Element and Function Screen (cont.)		
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"/>
PART IV. Conclusion		
If no Part IV criteria are checked, then provide Justification and complete Part V below.		<input type="checkbox"/>
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.		<input type="checkbox"/>
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): Ryder Coyle	Preparer Signature: See CAS	Date: See CAS
Reviewer Name (Print): Matthew Nelson	Reviewer Signature: See CAS	Date: See CAS
Approver (Manager, Nuclear Support Services) Name (Print): Mandy Hare	Approver Signature: See CAS	Date: See CAS
Approver (EP CFAM, as required) Name (Print): NA	Approver Signature: NA	Date: NA
If the proposed activity is a change to the E-Plan, then initiate PRRs.		<input type="checkbox"/>
If the proposed activity is a change to the E-Plan, 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.		<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> 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. 		<input checked="" type="checkbox"/>

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
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QA RECORD

*****END OF REPORT*****



Duke Energy

ACTION REQUEST - 02322031

ASSIGNMENT NBR - 01

Action Request Assignment Details

AR NUMBER : 02322031

ASSIGNMENT NUMBER : 01

Type	: EP01	Due Date	: 03/26/2020	Pri Resp Fac	:
Status	: COMPLETE	Reschedule	: 0	Pri Resp Group	:
Assigned To	: MICHAEL R COYLE			Sec Resp Fac	:
Subject	: 50.54(Q) SCREEN			Sec Resp Group	:
Aff Facility	: CN	Unit	:	System	:
UCR	:	Schedule Ref	:		
Organization	:	Department	: 18255	Discipline	:
Est Manhrs	: 0	Est Comp Date	:		

Description

COMPLETE 50.54(Q) SCREEN IN ACCORDANCE WITH AD-EP-ALL-0602.

Action Request Assignment Completion Notes

see notes.

Action Request Assignment Status History

<u>Updated Date</u>	<u>Updated By</u>	<u>Assgn Status</u>	<u>Assgn Due Date</u>
03/24/2020	MRCOYL1	INPROG	
03/24/2020	MRCOYL1		03/26/2020
03/24/2020	MRCOYL1	NTFY/ASG	
03/24/2020	MRCOYL1	ACC/ASG	
03/24/2020	MRCOYL1	AWAIT/C	
03/25/2020	I18938	ACC/ASG	
03/25/2020	MRCOYL1	AWAIT/C	
03/26/2020	MEHARE	COMPLETE	

Action Request Assignment Routing/Return Comments

Routing Comments from the X601 Panel

uncheck part IV

Updated On

20200325

Updated By

I18938

Routing Comments from the X602 Panel

*** No Return Comments Found ***

Updated On

Updated By



Duke Energy

ACTION REQUEST - 02322031

ASSIGNMENT NBR - 01

Action Request Assignment Completion Approval

Route List : 001

Route List Initiator : MRCOYL1

<u>Passport</u>	<u>Fac</u>	<u>Group</u> / <u>Type</u>	<u>Send</u> <u>Date</u>	<u>Send</u> <u>Time</u>	<u>Action</u> <u>Taken</u>	<u>Action</u> <u>Date</u> / <u>Time</u>	<u>Last Name</u>
I18938		A	03/24/2020	1226	RETURNED	03/25/2020 1618	NELSON
MEHARE		A	03/25/2020	1714	APPROVED	03/26/2020 1614	HARE
I18938		A	03/25/2020	1712	APPROVED	03/25/2020 1714	NELSON

Action Request Assignment Cause/Action

Action Request Assignment Reference Documents

<u>Facility</u>	<u>Doc</u> <u>Type</u>	<u>Sub</u> <u>Type</u>	<u>Document</u>	<u>Sheet</u>	<u>Rev</u>	<u>Minor</u> <u>Rev</u>	<u>Title</u>
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Action Request Assignment Reference Equipment

<u>Facility</u>	<u>Unit</u>	<u>System</u>	<u>Equip</u> <u>Type</u>	<u>Equip</u> <u>Number</u>	<u>Equip</u> <u>Tag</u>	<u>Equip</u> <u>Status</u>	<u>Rev</u> <u>Status</u>
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Action Request Assignment Cross References

<u>Ref</u> <u>Type</u>	<u>Ref</u> <u>Nbr</u>	<u>Ref</u> <u>Sub</u>	<u>Ref Nbr</u> <u>Type</u>	<u>Status</u>	<u>Limit</u> <u>AS CIs</u>	<u>Description</u>
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Action Request Assignment Appendices

[APPENDIX 1](#)

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
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Screening and Evaluation Number		Applicable Sites	
EREG #: <u>2322031</u>		BNP	<input type="checkbox"/>
		CNS	<input checked="" type="checkbox"/>
		CR3	<input type="checkbox"/>
		HNP	<input type="checkbox"/>
5AD #: <u>2322012</u>		MNS	<input type="checkbox"/>
		ONS	<input type="checkbox"/>
		RNP	<input type="checkbox"/>
		GO	<input type="checkbox"/>
Document and Revision		EPA Table of Contents, Rev. 151	
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):			
1	EPA TOC – Section D	D. Emergency Classification System D.1 Deleted D.1.a Deleted D.1.b Deleted D.1.c Deleted D.1.d Deleted D.2 Deleted Reformatted entire section (pages 1-258)	D. Emergency Classification System D.1 Deleted D.1.a Deleted D.1.b Deleted D.1.c Deleted D.1.d Deleted D.2 Deleted Entire section (pages 1-258) Superseded
2	EPA TOC – Section J	J-2 Guidance for Offsite Protective Actions J-8	J-2 Deleted
3	EPA TOC – Section J	J-3 Catawba Nuclear Station Evacuation Road Network and Nodes J-9	J-3 Catawba Nuclear Station Evacuation Road Network and Nodes J-8
Part II. Activity Previously Reviewed?			
		Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/>

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
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<p>Is this activity Fully bounded by an NRC approved 10 CFR 50.90 submittal or Alert and Notification System Design Report?</p> <p>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:</p> <p>Justification:</p>	<p>10 CFR 50.54(q) Effectiveness Evaluation is not required. Enter justification below and complete Attachment 4, Part V.</p>	<p>Continue to Attachment 4, 10 CFR 50.54(q) Screening Evaluation Form, Part III</p>								
<p>Bounding document attached (optional)</p>		<p align="center"><input type="checkbox"/></p>								
<p>Part III. Editorial Change</p> <p>Is this activity an editorial or typographical change only, such as formatting, paragraph numbering, spelling, or punctuation that does not change intent?</p> <p>Justification:</p> <p>Changes 1-3 are editorial because the changes will update superseded procedures or correct references. AD-EP-ALL-0602 in section 3.0.6.b and g states editorial changes "Correct references to steps, pages, attachments, forms, documents, tables, exhibits, and procedures." and "Correct references or annotations that are no longer applicable (e.g., site procedure superseded by fleet procedure)."</p>	<table border="1"> <tr> <td align="center">Yes</td> <td align="center"><input type="checkbox"/></td> </tr> <tr> <td colspan="2">10 CFR 50.54(q) Effectiveness Evaluation is not required. Enter justification and complete Attachment 4, Part V.</td> </tr> </table>	Yes	<input type="checkbox"/>	10 CFR 50.54(q) Effectiveness Evaluation is not required. Enter justification and complete Attachment 4, Part V.		<table border="1"> <tr> <td align="center">No or Partially</td> <td align="center"><input type="checkbox"/></td> </tr> <tr> <td colspan="2">Continue to Attachment 4, Part IV and address non editorial changes</td> </tr> </table>	No or Partially	<input type="checkbox"/>	Continue to Attachment 4, Part IV and address non editorial changes	
Yes	<input type="checkbox"/>									
10 CFR 50.54(q) Effectiveness Evaluation is not required. Enter justification and complete Attachment 4, Part V.										
No or Partially	<input type="checkbox"/>									
Continue to Attachment 4, Part IV and address non editorial changes										
<p>Part IV. Emergency Planning Element and Function Screen (Reference Attachment 1, Considerations for Addressing Screening Criteria)</p> <p>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.</p>										
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. (NA for CR3)	<input type="checkbox"/>								
4	10 CFR 50.47(b)(4) Emergency Classification System									

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4a	A standard scheme of emergency classification and action levels is in use. (Requires final approval of Screen and Evaluation by EP CFAM.)	<input type="checkbox"/>
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.	<input type="checkbox"/>
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)	<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. (NA for CR3)	<input type="checkbox"/>

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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.	<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). (NA for CR3)	<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	
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	
10a	A range of public PARs is available for implementation during emergencies. (NA for CR3)	<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. (NA for CR3)	<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"/>

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
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Part IV. Emergency Planning Element and Function Screen (cont.)		
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"/>
PART IV. Conclusion		
If no Part IV criteria are checked, then provide Justification and complete Part V below.		<input type="checkbox"/>
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.		<input type="checkbox"/>
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): Ryder Coyle	Preparer Signature: See CAS	Date: See CAS
Reviewer Name (Print): Matthew Nelson	Reviewer Signature: See CAS	Date: See CAS
Approver (Manager, Nuclear Support Services) Name (Print): Mandy Hare	Approver Signature: See CAS	Date: See CAS
Approver (EP CFAM, as required) Name (Print) NA	Approver Signature: NA	Date: NA
If the proposed activity is a change to the E-Plan, then initiate PRRs.		<input type="checkbox"/>
If the proposed activity is a change to the E-Plan, 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.		<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> 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. 		<input checked="" type="checkbox"/>

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*****END OF REPORT*****



Duke Energy

ACTION REQUEST - 02321336

ASSIGNMENT NBR - 01

Action Request Assignment Details

AR NUMBER : 02321336

ASSIGNMENT NUMBER : 01

Type	: EP01	Due Date	: 03/26/2020	Pri Resp Fac	:
Status	: COMPLETE	Reschedule	: 0	Pri Resp Group	:
Assigned To	: MATTHEW L NELSON			Sec Resp Fac	:
Subject	: 50.54(Q) SCREEN			Sec Resp Group	:
Aff Facility	: CN	Unit	:	System	:
UCR	:	Schedule Ref	:		
Organization	:	Department	: 46924	Discipline	:
Est Manhrs	: 0	Est Comp Date	:		

Description

COMPLETE 50.54(Q) SCREEN IN ACCORDANCE WITH AD-EP-ALL-0602.

Action Request Assignment Completion Notes

I have reviewed these changes and approve the EREG.

Action Request Assignment Status History

<u>Updated Date</u>	<u>Updated By</u>	<u>Assgn Status</u>	<u>Assgn Due Date</u>
03/18/2020	MRCOYL1	INPROG	
03/18/2020	MRCOYL1		03/26/2020
03/18/2020	MRCOYL1	NTFY/ASG	
03/21/2020	I18938	ACC/ASG	
03/21/2020	I18938	AWAIT/C	
03/23/2020	MRCOYL1	ACC/ASG	
03/23/2020	I18938	AWAIT/C	
03/25/2020	MEHARE	COMPLETE	

Action Request Assignment Routing/Return Comments

Routing Comments from the X601 Panel

Geoff's comments

Updated On

20200323

Updated By

I18938

Routing Comments from the X602 Panel

*** No Return Comments Found ***

Updated On

Updated By



Duke Energy

ACTION REQUEST - 02321336

ASSIGNMENT NBR - 01

Action Request Assignment Completion Approval

Route List : 001

Route List Initiator : I18938

<u>Passport</u>	<u>Fac</u>	<u>Group</u> / <u>Type</u>	<u>Send</u> <u>Date</u>	<u>Send</u> <u>Time</u>	<u>Action</u> <u>Taken</u>	<u>Action</u> <u>Date</u> / <u>Time</u>	<u>Last Name</u>
MRCOYL1		A	03/23/2020	1312	APPROVED	03/23/2020 1629	COYLE
MRCOYL1		A	03/21/2020	0708	RETURNED	03/23/2020 1032	COYLE
MEHARE		A	03/23/2020	1629	APPROVED	03/25/2020 1551	HARE

Action Request Assignment Cause/Action

Action Request Assignment Reference Documents

<u>Facility</u>	<u>Doc</u> <u>Type</u>	<u>Sub</u> <u>Type</u>	<u>Document</u>	<u>Sheet</u>	<u>Rev</u>	<u>Minor</u> <u>Rev</u>	<u>Title</u>
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Action Request Assignment Reference Equipment

<u>Facility</u>	<u>Unit</u>	<u>System</u>	<u>Equip</u> <u>Type</u>	<u>Equip</u> <u>Number</u>	<u>Equip</u> <u>Tag</u>	<u>Equip</u> <u>Status</u>	<u>Rev</u> <u>Status</u>
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Action Request Assignment Cross References

<u>Ref</u> <u>Type</u>	<u>Ref</u> <u>Nbr</u>	<u>Ref</u> <u>Sub</u>	<u>Ref Nbr</u> <u>Type</u>	<u>Status</u>	<u>Limit</u> <u>AS CIs</u>	<u>Description</u>
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Action Request Assignment Appendices

[APPENDIX 1](#)

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Screening and Evaluation Number		Applicable Sites	
EREG #: <u>2321336</u>		BNP	<input type="checkbox"/>
		CNS	<input checked="" type="checkbox"/>
		CR3	<input type="checkbox"/>
		HNP	<input type="checkbox"/>
5AD #: <u>2321332</u>		MNS	<input type="checkbox"/>
		ONS	<input type="checkbox"/>
		RNP	<input type="checkbox"/>
		GO	<input type="checkbox"/>
Document and Revision		EPA A, Assignment of Responsibility, Rev. 151	
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):			
#	E-Plan or Procedure Section Reference	Current (Existing) Text	Proposed (Change) Text
1	Footer	Rev. 150 September 2017	Rev. 151 March 2020
2	A.1.a	<u>Private Sector</u> The principal organizations in the private sector that are part of the overall response organization for the EPZ are: Westinghouse AT & T The Independent Telephone Companies Radio and Television Stations Bethel Volunteer Fire Department Various vendors such as GTS and Bartlett Carolinas Medical Center Center for Emergency Medicine (Rock Hill, S.C.) Member's Southeastern Electric Exchange The Salvation Army The American Red Cross Piedmont Medical Center (Rock Hill, SC)	<u>Private Sector</u> The principal organizations in the private sector that are part of the overall response organization for the EPZ are: Westinghouse AT & T The Independent Telephone Companies Radio and Television Stations Bethel Volunteer Fire Department Various vendors such as GTS and Bartlett Atrium Health's Carolinas Medical Center Member's Southeastern Electric Exchange The Salvation Army The American Red Cross Piedmont Medical Center (Rock Hill, SC) Removed from document: Center for Emergency Medicine (Rock Hill, S.C.)
3	A.3	<u>Agreement Letters For Emergency Response Support from Off-site Agencies</u>	<u>Agreement Letters For Emergency Response Support from Off-site Agencies</u> Section Q, Appendix 5 contains letters of

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
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	<p>Section Q, Appendix 5 contains letters of agreement with the following organizations:</p> <p>Piedmont Medical Center Carolinas Medical Center York County Emergency Management Bethel Volunteer Fire Department Charlotte-Mecklenburg Emergency Management Office Gaston County Emergency Management Center for Emergency Medicine (Rock Hill, SC) North Carolina Division of Emergency Management South Carolina Emergency Management Division Radiation Emergency Assistance Center/Training Site (REAC/TS) DOE - Savannah River INPO - Fixed Nuclear Facility Voluntary Assistance Agreement JIC - Joint Information Center York County Sheriff</p> <p>1. Duke Energy has established numerous support agreements and contracts with organizations that may be required to provide assistance in the event of an emergency.</p> <p>2. All agreements or contracts are reviewed annually to assure each contributes the desired support to the Emergency Preparedness Program.</p> <p>3. Letters of Agreement and Contracts, including the review frequency, will be documented according to the site's protocol.</p>	<p>agreement with the following organizations:</p> <p>Piedmont Medical Center Atrium Health's Carolinas Medical Center York County Emergency Management Bethel Volunteer Fire Department Charlotte-Mecklenburg Emergency Management Office Gaston County Emergency Management North Carolina Division of Emergency Management South Carolina Emergency Management Division York County Sheriff</p> <p>1. Duke Energy has established numerous support agreements and contracts with organizations that may be required to provide assistance in the event of an emergency.</p> <p>2. All agreements or contracts are reviewed annually to assure each contributes the desired support to the Emergency Preparedness Program.</p> <p>3. Letters of Agreement and Contracts, including the review frequency, will be documented according to the site's protocol.</p> <p>Removed from document: Center for Emergency Medicine (Rock Hill, SC) Radiation Emergency Assistance Center/Training Site (REAC/TS) DOE - Savannah River INPO - Fixed Nuclear Facility Voluntary Assistance Agreement JIC - Joint Information Center</p>

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
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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.	<input checked="" 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. (NA for CR3)	<input type="checkbox"/>
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.)	<input type="checkbox"/>
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.	<input type="checkbox"/>
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)	<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. (NA for CR3)	<input type="checkbox"/>

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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.	<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). (NA for CR3)	<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	
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	
10a	A range of public PARs is available for implementation during emergencies. (NA for CR3)	<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. (NA for CR3)	<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"/>

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Part IV. Emergency Planning Element and Function Screen (cont.)		
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"/>
PART IV. Conclusion		
If no Part IV criteria are checked, then provide Justification and complete Part V below.		<input type="checkbox"/>
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): Matthew Nelson	Preparer Signature: See CAS	Date: See CAS
Reviewer Name (Print): Ryder Coyle	Reviewer Signature: See CAS	Date: See CAS
Approver (Manager, Nuclear Support Services) Name (Print): Mandy Hare	Approver Signature: See CAS	Date: See CAS
Approver (EP 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, then initiate PRRs.		<input type="checkbox"/>
If the proposed activity is a change to the E-Plan, 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.		■
<ul style="list-style-type: none"> 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

*****END OF REPORT*****



Duke Energy

ACTION REQUEST - 02321336

ASSIGNMENT NBR - 02

Action Request Assignment Details

AR NUMBER : 02321336

ASSIGNMENT NUMBER : 02

Type	: EP02	Due Date	: 03/26/2020	Pri Resp Fac	:
Status	: COMPLETE	Reschedule	: 0	Pri Resp Group	:
Assigned To	: MATTHEW L NELSON			Sec Resp Fac	:
Subject	: 50.54(Q) EVALUATION			Sec Resp Group	:
Aff Facility	: CN	Unit	:	System	:
UCR	:	Schedule Ref	:		
Organization	:	Department	: 46924	Discipline	:
Est Manhrs	: 0	Est Comp Date	:		

Description

COMPLETE 50.54(Q) EVALUATION IN ACCORDANCE WITH AD-EP-ALL- 0602.

Action Request Assignment Completion Notes

I have reviewed these changes and approve the EREG.

Action Request Assignment Status History

<u>Updated Date</u>	<u>Updated By</u>	<u>Assgn Status</u>	<u>Assgn Due Date</u>
03/18/2020	MRCOYL1	INPROG	
03/21/2020	I18938		03/26/2020
03/21/2020	I18938	ACC/ASG	
03/21/2020	I18938	AWAIT/C	
03/23/2020	MRCOYL1	ACC/ASG	
03/23/2020	I18938	AWAIT/C	
03/25/2020	MEHARE	COMPLETE	

Action Request Assignment Routing/Return Comments

Routing Comments from the X601 Panel

Geoff's comments

Updated On

20200323

Updated By

MRCOYL1

Routing Comments from the X602 Panel

*** No Return Comments Found ***

Updated On

Updated By



Duke Energy

ACTION REQUEST - 02321336

ASSIGNMENT NBR - 02

Action Request Assignment Completion Approval

Route List : 001

Route List Initiator : I18938

<u>Passport</u>	<u>Fac</u>	<u>Group</u> / <u>Type</u>	<u>Send</u> <u>Date</u>	<u>Send</u> <u>Time</u>	<u>Action</u> <u>Taken</u>	<u>Action</u> <u>Date</u> / <u>Time</u>	<u>Last Name</u>
MRCOYL1		A	03/23/2020	1314	APPROVED	03/23/2020 1727	COYLE
MRCOYL1		A	03/21/2020	0712	RETURNED	03/23/2020 1033	COYLE
MEHARE		A	03/23/2020	1727	APPROVED	03/25/2020 1720	HARE

Action Request Assignment Cause/Action

Action Request Assignment Reference Documents

<u>Facility</u>	<u>Doc</u> <u>Type</u>	<u>Sub</u> <u>Type</u>	<u>Document</u>	<u>Sheet</u>	<u>Rev</u>	<u>Minor</u> <u>Rev</u>	<u>Title</u>
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Action Request Assignment Reference Equipment

<u>Facility</u>	<u>Unit</u>	<u>System</u>	<u>Equip</u> <u>Type</u>	<u>Equip</u> <u>Number</u>	<u>Equip</u> <u>Tag</u>	<u>Equip</u> <u>Status</u>	<u>Rev</u> <u>Status</u>
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Action Request Assignment Cross References

<u>Ref</u> <u>Type</u>	<u>Ref</u> <u>Nbr</u>	<u>Ref</u> <u>Sub</u>	<u>Ref Nbr</u> <u>Type</u>	<u>Status</u>	<u>Limit</u> <u>AS CIs</u>	<u>Description</u>
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Action Request Assignment Appendices

[APPENDIX 1](#)

ATTACHMENT 5**Page 1 of 8****<< 10 CFR 50.54(q) Effectiveness Evaluation Form >>**

Screening and Evaluation Number	Applicable Sites	
EREG #: <u>2321336</u>	BNP	<input type="checkbox"/>
	CNS	<input checked="" type="checkbox"/>
	CR3	<input type="checkbox"/>
	HNP	<input type="checkbox"/>
5AD #: <u>2321332</u>	MNS	<input type="checkbox"/>
	ONS	<input type="checkbox"/>
	RNP	<input type="checkbox"/>
	GO	<input type="checkbox"/>

Document and Revision

EPA A, Assignment of Responsibility, Rev. 151

Part I. Description of Proposed Change:

#	E-Plan or Procedure Section Reference	Current (Existing) Text	Proposed (Change) Text
1	Footer	Rev. 150 September 2017	Rev. 151 March 2020
2	A.1.a	<u>Private Sector</u> The principal organizations in the private sector that are part of the overall response organization for the EPZ are: Westinghouse AT & T The Independent Telephone Companies Radio and Television Stations Bethel Volunteer Fire Department Various vendors such as GTS and Bartlett Carolinas Medical Center Center for Emergency Medicine (Rock Hill, S.C.) Member's Southeastern Electric Exchange The Salvation Army The American Red Cross Piedmont Medical Center (Rock Hill, SC)	<u>Private Sector</u> The principal organizations in the private sector that are part of the overall response organization for the EPZ are: Westinghouse AT & T The Independent Telephone Companies Radio and Television Stations Bethel Volunteer Fire Department Various vendors such as GTS and Bartlett Atrium Health's Carolinas Medical Center Member's Southeastern Electric Exchange The Salvation Army The American Red Cross Piedmont Medical Center (Rock Hill, SC) Removed from document: Center for Emergency Medicine (Rock Hill, S.C.)
3	A.3	<u>Agreement Letters For Emergency Response Support from Off-site Agencies</u> Section Q, Appendix 5 contains letters of agreement with the following organizations: Piedmont Medical Center	<u>Agreement Letters For Emergency Response Support from Off-site Agencies</u> Section Q, Appendix 5 contains letters of agreement with the following organizations: Piedmont Medical Center Atrium Health's Carolinas Medical Center

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	<p> Carolinas Medical Center York County Emergency Management Bethel Volunteer Fire Department Charlotte-Mecklenburg Emergency Management Office Gaston County Emergency Management Center for Emergency Medicine (Rock Hill, SC) North Carolina Division of Emergency Management South Carolina Emergency Management Division Radiation Emergency Assistance Center/Training Site (REAC/TS) DOE - Savannah River INPO - Fixed Nuclear Facility Voluntary Assistance Agreement JIC - Joint Information Center York County Sheriff </p> <p> 1. Duke Energy has established numerous support agreements and contracts with organizations that may be required to provide assistance in the event of an emergency. </p> <p> 2. All agreements or contracts are reviewed annually to assure each contributes the desired support to the Emergency Preparedness Program. </p> <p> 3. Letters of Agreement and Contracts, including the review frequency, will be documented according to the site's protocol. </p>	<p> York County Emergency Management Bethel Volunteer Fire Department Charlotte-Mecklenburg Emergency Management Office Gaston County Emergency Management North Carolina Division of Emergency Management South Carolina Emergency Management Division York County Sheriff </p> <p> 1. Duke Energy has established numerous support agreements and contracts with organizations that may be required to provide assistance in the event of an emergency. </p> <p> 2. All agreements or contracts are reviewed annually to assure each contributes the desired support to the Emergency Preparedness Program. </p> <p> 3. Letters of Agreement and Contracts, including the review frequency, will be documented according to the site's protocol. </p> <p> Removed from document: Center for Emergency Medicine (Rock Hill, SC) Radiation Emergency Assistance Center/Training Site (REAC/TS) DOE - Savannah River INPO - Fixed Nuclear Facility Voluntary Assistance Agreement JIC - Joint Information Center </p>
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Change 1 screened out as editorial and will not be evaluated any further. Changes 2 and 3 involve PS 1, Assignment of Responsibility (Organization Control), and will be evaluated.

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 <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Part II. Description and Review of Licensing Basis Affected by the Proposed Change:

Licensing Basis

- Catawba Emergency Plan Revision 2 (dated January 1983), Revision 97-1 (dated January 1997), and Revision 11-2 (dated September 2011)

Current Emergency Plans

Catawba Nuclear Station Emergency Plan

Section A, Assignment of Responsibility, Rev. 150, Paragraphs A.1.a and A.3

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

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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):

Change 2 removes reference to Center for Emergency Medicine as a principal organization in the private sector that are part of the overall response organization for the CNS EPZ. Center for Emergency Medicine previously operated Piedmont Medical Center Emergency Department. Piedmont Medical Center continues to operate the Emergency Department. No agreements or capabilities have been removed with this change. This change also updates Carolinas Medical Center name based on new owners. CNS continues to have arrangements in place for local (Piedmont Medical Center) and backup (Atrium Health's Carolinas Medical Center) hospital and medical services. This change continues to meet 10 CFR 50.47(b)(1) because it continues to ensure primary responsibilities for emergency response by the nuclear facility licensee and by State and local organizations within the Emergency Planning Zones have been assigned, the emergency responsibilities of the various supporting organizations have been specifically established, and each principal response organization has staff to respond and to augment its initial response on a continuous basis.

Change 3 remove references to Letters of Agreement (LOA) that are no longer needed to support the CNS Emergency Plan.

- Letter 9, Center for Emergency Medicine
All agreements incorporated into Letter 1 for Piedmont Medical Center. Letter 9 was for Apollo Group which previously operated Piedmont Medical Center Emergency Department. Newly revised Letter 1 continues to have agreements for emergency medical services for injured/contaminated patients, drill/exercise support, and training of medical staff. No agreements or capabilities have been removed with this change.
- Letter 11, REACTS, and Letter 12, DOE
Removing LOAs that are not needed. Assistance will continue to be provided, as necessary, by federal agencies that are mandated by regulations or law to protect public health and safety. LOAs are not required with these agencies mandated by regulations and law. Support agreements are only necessary when an agency, organization or individual is expected to provide assistance to CNS and is not required otherwise to do so.
- Letter 13, INPO
Agreement not needed to support the CNS Emergency Plan. This agreement made voluntarily by INPO to coordinate resources as needed from the Nuclear Industry. No specific resource or capability has been identified or is needed to support CNS Emergency Plan.
- Letter 15, Joint Information Center
Letter no longer needed since State and County agreement letters describe agreement for JIC/JIS support during declared emergencies. CNS JIC/JIS will continue to be staffed if needed as described in Section G of CNS Emergency Plan.

This change also updates Carolinas Medical Center name based on new owners. This change continues to meet 10 CFR 50.47(b)(1) because it continues to ensure primary responsibilities for emergency response by the nuclear facility licensee and by State and local organizations within the Emergency Planning Zones have been assigned, the emergency responsibilities of the various supporting organizations have been specifically established, and each principal response organization has staff to respond and to augment its initial response on a continuous basis.

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):

Planning Standard 10 CFR 50.47(b)(1) Primary responsibilities for emergency response by the nuclear facility licensee and by State and local organizations within the Emergency Planning Zones have been assigned, the emergency responsibilities of the various supporting organizations have been specifically established, and each principal response organization has staff to respond and to augment its initial response on a continuous basis.

Supporting requirements of Appendix E to 10 CFR Part 50 are contained in Sections IV.A.6 and 7

6. A description of the local offsite services to be provided in support of the licensee's emergency organization.

7. By June 23, 2014, identification of, and a description of the assistance expected from, appropriate State, local, and Federal agencies with responsibilities for coping with emergencies, including hostile action at the site. For purposes of this appendix, "hostile action" is defined as an act directed toward a nuclear power plant 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.

Emergency Plan Planning Function 1a - Responsibility for emergency response is assigned.

Program Elements from NUREG-0654 II.A

1.a. Each plan shall identify the State, local, Federal and private sector organizations (including utilities), that are intended to be part of the overall response organization for Emergency Planning Zones. (See Appendix 5).

3. Each plan shall include written agreements referring to the concept of operations developed between Federal, State, and local agencies and other support organizations having an emergency response role within the Emergency Planning Zones. The agreements shall identify the emergency measures to be provided and the mutually acceptable criteria for their implementation, and specify the arrangements for exchange of information. These agreements may be provided in an appendix to the plan or the plan itself may contain descriptions of these matters and a signature page in the plan may serve to verify the agreements. The signature page format is appropriate for organizations where response functions are covered by laws, regulations or executive orders where separate written agreements are not necessary.

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

Change 2 removes reference to Center for Emergency Medicine as a principal organization in the private sector that are part of the overall response organization for the CNS EPZ. Center for Emergency Medicine previously operated Piedmont Medical Center Emergency Department. Piedmont Medical Center continues to operate the Emergency Department. No agreements or capabilities have been removed with this change. This change also updates Carolinas Medical Center name based on new owners. CNS continues to have arrangements in place for local (Piedmont Medical Center) and backup (Atrium Health's Carolinas Medical Center) hospital and medical services. This change does not affect the function of Assignment of Responsibility (Organization Control) because this change continues to ensure responsibility for emergency response is assigned.

Change 3 remove references to Letters of Agreement (LOA) that are no longer needed to support the CNS Emergency Plan.

- Letter 9, Center for Emergency Medicine
All agreements incorporated into Letter 1 for Piedmont Medical Center. Letter 9 was for Apollo Group which previously operated Piedmont Medical Center Emergency Department. Newly revised Letter 1 continues to have agreements for emergency medical services for injured/contaminated patients, drill/exercise support, and training of medical staff. No agreements or capabilities have been removed with this change.
- Letter 11, REACTS, and Letter 12, DOE
Removing LOAs that are not needed. Assistance will continue to be provided, as necessary, by federal agencies that are mandated by regulations or law to protect public health and safety. LOAs are not required with these agencies mandated by regulations and law. Support agreements are only necessary when an agency, organization or individual is expected to provide assistance to CNS and is not required otherwise to do so.
- Letter 13, INPO
Agreement not needed to support the CNS Emergency Plan. This agreement made voluntarily by INPO to coordinate resources as needed from the Nuclear Industry. No specific resource or capability has been identified or is needed to support CNS Emergency Plan.
- Letter 15, Joint Information Center
Letter no longer needed since State and County agreement letters describe agreement for JIC/JIS support during declared emergencies. CNS JIC/JIS will continue to be staffed if needed as described in Section G of CNS Emergency Plan.

This change also updates Carolinas Medical Center name based on new owners. This change does not affect the function of Assignment of Responsibility (Organization Control) because this change continues to ensure responsibility for emergency response is assigned.

The changes described provide assurance that the normal plant operating organization and ERO 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.

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

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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 <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"/>
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.	<input checked="" type="checkbox"/>	
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.	<input type="checkbox"/>	
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 <input type="checkbox"/>	No <input type="checkbox"/>
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): Matthew Nelson	Preparer Signature: See CAS	Date: See CAS
Reviewer Name (Print): Ryder Coyle	Reviewer Signature: See CAS	Date: See CAS
Approver (Manager, Nuclear Support Services) Name (Print): Mandy Hare	Approver Signature: See CAS	Date: See CAS
Approver (EP CFAM, as required) Name (Print) N/A	Approver Signature: N/A	Date: N/A
<p>If the proposed activity is a change to the E-Plan, then initiate PRRs.</p> <p>If the proposed activity is a change to the E-Plan, then create two EREG General Assignments.</p> <p>If required by Section 5.6, Submitting Reports of Changes to the NRC, then create two EREG General Assignments.</p> <ul style="list-style-type: none"> 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. 		
		<input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>

QA RECORD

*****END OF REPORT*****



Duke Energy

ACTION REQUEST - 02320665

ASSIGNMENT NBR - 01

Action Request Assignment Details

AR NUMBER : 02320665

ASSIGNMENT NUMBER : 01

Type	: EP01	Due Date	: 03/26/2020	Pri Resp Fac	:
Status	: COMPLETE	Reschedule	: 0	Pri Resp Group	:
Assigned To	: MATTHEW L NELSON			Sec Resp Fac	:
Subject	: 50.54(Q) SCREEN			Sec Resp Group	:
Aff Facility	: CN	Unit	:	System	:
UCR	:	Schedule Ref	:		
Organization	:	Department	: 46924	Discipline	:
Est Manhrs	: 0	Est Comp Date	:		

Description

COMPLETE 50.54(Q) SCREEN IN ACCORDANCE WITH AD-EP-ALL-0602.

Action Request Assignment Completion Notes

I have reviewed the changes and approve the EREG.

Action Request Assignment Status History

<u>Updated Date</u>	<u>Updated By</u>	<u>Assgn Status</u>	<u>Assgn Due Date</u>
03/12/2020	MRCOYL1	INPROG	
03/12/2020	MRCOYL1		03/26/2020
03/12/2020	MRCOYL1	NTFY/ASG	
03/21/2020	I18938	ACC/ASG	
03/21/2020	I18938	AWAIT/C	
03/23/2020	MRCOYL1	ACC/ASG	
03/23/2020	I18938	AWAIT/C	
03/25/2020	MEHARE	COMPLETE	

Action Request Assignment Routing/Return Comments

Routing Comments from the X601 Panel

Geoff's comments

Updated On

20200323

Updated By

MRCOYL1

Routing Comments from the X602 Panel

*** No Return Comments Found ***

Updated On

Updated By



Duke Energy

ACTION REQUEST - 02320665

ASSIGNMENT NBR - 01

Action Request Assignment Completion Approval

Route List : 001

Route List Initiator : I18938

<u>Passport</u>	<u>Fac</u>	<u>Group</u>	<u>/</u>	<u>Type</u>	<u>Send</u> <u>Date</u>	<u>Send</u> <u>Time</u>	<u>Action</u> <u>Taken</u>	<u>Action</u> <u>Date</u>	<u>/</u>	<u>Time</u>	<u>Last Name</u>
MRCOYL1				A	03/23/2020	1315	APPROVED	03/23/2020		1729	COYLE
MRCOYL1				A	03/21/2020	0718	RETURNED	03/23/2020		1033	COYLE
MEHARE				A	03/23/2020	1729	APPROVED	03/25/2020		1749	HARE

Action Request Assignment Cause/Action

Action Request Assignment Reference Documents

<u>Facility</u>	<u>Doc</u> <u>Type</u>	<u>Sub</u> <u>Type</u>	<u>Document</u>	<u>Sheet</u>	<u>Rev</u>	<u>Minor</u> <u>Rev</u>	<u>Title</u>
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Action Request Assignment Reference Equipment

<u>Facility</u>	<u>Unit</u>	<u>System</u>	<u>Equip</u> <u>Type</u>	<u>Equip</u> <u>Number</u>	<u>Equip</u> <u>Tag</u>	<u>Equip</u> <u>Status</u>	<u>Rev</u> <u>Status</u>
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Action Request Assignment Cross References

<u>Ref</u> <u>Type</u>	<u>Ref</u> <u>Nbr</u>	<u>Ref</u> <u>Sub</u>	<u>Ref Nbr</u> <u>Type</u>	<u>Status</u>	<u>Limit</u> <u>AS CIs</u>	<u>Description</u>
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Action Request Assignment Appendices

[APPENDIX 1](#)

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Screening and Evaluation Number		Applicable Sites													
EREG #: <u>2320665</u>		BNP	<input type="checkbox"/>												
		CNS	<input checked="" type="checkbox"/>												
		CR3	<input type="checkbox"/>												
		HNP	<input type="checkbox"/>												
5AD #: <u>2320662</u>		MNS	<input type="checkbox"/>												
		ONS	<input type="checkbox"/>												
		RNP	<input type="checkbox"/>												
		GO	<input type="checkbox"/>												
Document and Revision		EPA J, Protective Response, Rev. 149													
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):															
#	E-Plan or Procedure Section Reference	Current (Existing) Text	Proposed (Change) Text												
1	Footer	Rev 148 December 2019	Rev 149 March 2020												
2	J.7 2 nd paragraph	Protective Action Guides are adopted from EPA 400-R-92-001 and are shown in Figure J-2.	Protective Action Guides are adopted from EPA 400-R-92-001.												
3	J.10.m	Figure J-2 describes the considerations used by Duke management in developing protective action recommendations.	AD-EP-ALL-0109, Off Site Protective Actions Recommendations, describes the considerations used by Duke management in developing protective action recommendations.												
4	Figure J-2	<p align="center">PROTECTIVE ACTION GUIDES (a)</p> <p>Projected Dose</p> <table border="1"> <thead> <tr> <th>Total Effective Dose Equivalent (TEDE)</th> <th>Committed Dose Equivalent Thyroid (CDE Thyroid)</th> <th>Protective Action Recommendation</th> </tr> </thead> <tbody> <tr> <td>< 1 rem</td> <td>< 5 rem</td> <td>No Protective Action is required based on projected dose.</td> </tr> <tr> <td>≥ 1 rem</td> <td>≥ 5 rem</td> <td>Evacuate affected zones and shelter the remainder of the 10 mile EPZ not evacuated.</td> </tr> <tr> <td>N/A</td> <td>≥ 5 rem (b)</td> <td>Consider the use of KI (potassium iodide) in accordance with State Plans and Policy.</td> </tr> </tbody> </table> <p>(a) Protective Action Guides (PAGs) are levels of radiation dose at which prompt protective actions should be initiated and are based on EPA 400-R-92-001, <u>Manual of Protective Action Guides and Protective Actions for Nuclear Incidents</u></p> <p>(b) PAG for KI taken from <u>Potassium Iodide as a Thyroid Blocking Agent in Radiation Emergencies, FDA Guidance, November 2001 and Guidance for Industry, KI in Radiation Emergencies, Questions and Answers, FDA, December 2002.</u></p>	Total Effective Dose Equivalent (TEDE)	Committed Dose Equivalent Thyroid (CDE Thyroid)	Protective Action Recommendation	< 1 rem	< 5 rem	No Protective Action is required based on projected dose.	≥ 1 rem	≥ 5 rem	Evacuate affected zones and shelter the remainder of the 10 mile EPZ not evacuated.	N/A	≥ 5 rem (b)	Consider the use of KI (potassium iodide) in accordance with State Plans and Policy.	Removed from document. Renumbered subsequent page.
Total Effective Dose Equivalent (TEDE)	Committed Dose Equivalent Thyroid (CDE Thyroid)	Protective Action Recommendation													
< 1 rem	< 5 rem	No Protective Action is required based on projected dose.													
≥ 1 rem	≥ 5 rem	Evacuate affected zones and shelter the remainder of the 10 mile EPZ not evacuated.													
N/A	≥ 5 rem (b)	Consider the use of KI (potassium iodide) in accordance with State Plans and Policy.													

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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 <input type="checkbox"/> No <input type="checkbox"/>	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)			<input type="checkbox"/>
Part III. Editorial Change Is this activity an editorial or typographical change only, such as formatting, paragraph numbering, spelling, or punctuation that does not change intent? Justification: Change 1 is editorial and does not change the intent of the guidance. The change updates revision number and date. This change will not be evaluated any further.	Yes <input type="checkbox"/> No or Partially <input type="checkbox"/>	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

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
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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.	<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. (NA for CR3)	<input type="checkbox"/>
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.)	<input type="checkbox"/>
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.	<input type="checkbox"/>
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)	<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. (NA for CR3)	<input type="checkbox"/>

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
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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.	<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). (NA for CR3)	<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	
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	
10a	A range of public PARs is available for implementation during emergencies. (NA for CR3)	<input checked="" 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. (NA for CR3)	<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"/>

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
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Part IV. Emergency Planning Element and Function Screen (cont.)		
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"/>
PART IV. Conclusion		
If no Part IV criteria are checked, then provide Justification and complete Part V below.		<input type="checkbox"/>
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.		<input checked="" type="checkbox"/>
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): Matthew Nelson	Preparer Signature: See CAS	Date: See CAS
Reviewer Name (Print): Ryder Coyle	Reviewer Signature: See CAS	Date: See CAS
Approver (Manager, Nuclear Support Services) Name (Print): Mandy Hare	Approver Signature: See CAS	Date: See CAS
Approver (EP 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, then initiate PRRs.		<input type="checkbox"/>
If the proposed activity is a change to the E-Plan, 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.		<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> 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. 		<input checked="" type="checkbox"/>

QA RECORD

*****END OF REPORT*****



Duke Energy

ACTION REQUEST - 02320665

ASSIGNMENT NBR - 02

Action Request Assignment Details

AR NUMBER : 02320665

ASSIGNMENT NUMBER : 02

Type	: EP02	Due Date	: 03/26/2020	Pri Resp Fac	:
Status	: COMPLETE	Reschedule	: 0	Pri Resp Group	:
Assigned To	: MATTHEW L NELSON			Sec Resp Fac	:
Subject	: 50.54(Q) EVALUATION			Sec Resp Group	:
Aff Facility	: CN	Unit	:	System	:
UCR	:	Schedule Ref	:		
Organization	:	Department	: 46924	Discipline	:
Est Manhrs	: 0	Est Comp Date	:		

Description

COMPLETE 50.54(Q) EVALUATION IN ACCORDANCE WITH AD-EP-ALL- 0602.

Action Request Assignment Completion Notes

I have reviewed the changes and approve the EREG.

Action Request Assignment Status History

<u>Updated Date</u>	<u>Updated By</u>	<u>Assgn Status</u>	<u>Assgn Due Date</u>
03/12/2020	MRCOYL1	INPROG	
03/21/2020	I18938		03/26/2020
03/21/2020	I18938	ACC/ASG	
03/21/2020	I18938	AWAIT/C	
03/23/2020	MRCOYL1	ACC/ASG	
03/23/2020	I18938	AWAIT/C	
03/25/2020	MEHARE	COMPLETE	

Action Request Assignment Routing/Return Comments

Routing Comments from the X601 Panel

Geoff's comments

Updated On

20200323

Updated By

MRCOYL1

Routing Comments from the X602 Panel

*** No Return Comments Found ***

Updated On

Updated By



Duke Energy

ACTION REQUEST - 02320665

ASSIGNMENT NBR - 02

Action Request Assignment Completion Approval

Route List : 001

Route List Initiator : I18938

<u>Passport</u>	<u>Fac</u>	<u>Group</u>	<u>/</u>	<u>Type</u>	<u>Send</u> <u>Date</u>	<u>Send</u> <u>Time</u>	<u>Action</u> <u>Taken</u>	<u>Action</u> <u>Date</u>	<u>/</u>	<u>Time</u>	<u>Last Name</u>
MRCOYL1				A	03/23/2020	1318	APPROVED	03/23/2020		1736	COYLE
MRCOYL1				A	03/21/2020	0722	RETURNED	03/23/2020		1033	COYLE
MEHARE				A	03/23/2020	1736	APPROVED	03/25/2020		1759	HARE

Action Request Assignment Cause/Action

Action Request Assignment Reference Documents

<u>Facility</u>	<u>Doc</u> <u>Type</u>	<u>Sub</u> <u>Type</u>	<u>Document</u>	<u>Sheet</u>	<u>Rev</u>	<u>Minor</u> <u>Rev</u>	<u>Title</u>
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Action Request Assignment Reference Equipment

<u>Facility</u>	<u>Unit</u>	<u>System</u>	<u>Equip</u> <u>Type</u>	<u>Equip</u> <u>Number</u>	<u>Equip</u> <u>Tag</u>	<u>Equip</u> <u>Status</u>	<u>Rev</u> <u>Status</u>
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Action Request Assignment Cross References

<u>Ref</u> <u>Type</u>	<u>Ref</u> <u>Nbr</u>	<u>Ref</u> <u>Sub</u>	<u>Ref Nbr</u> <u>Type</u>	<u>Status</u>	<u>Limit</u> <u>AS CIs</u>	<u>Description</u>
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Action Request Assignment Appendices

[APPENDIX 1](#)

ATTACHMENT 5**Page 1 of 5****<< 10 CFR 50.54(q) Effectiveness Evaluation Form >>**

Screening and Evaluation Number		Applicable Sites													
EREG #: <u>2320665</u>		BNP	<input type="checkbox"/>												
		CNS	<input checked="" type="checkbox"/>												
		CR3	<input type="checkbox"/>												
		HNP	<input type="checkbox"/>												
5AD #: <u>2320662</u>		MNS	<input type="checkbox"/>												
		ONS	<input type="checkbox"/>												
		RNP	<input type="checkbox"/>												
		GO	<input type="checkbox"/>												
Document and Revision		EPA J, Protective Response, Rev. 149													
Part I. Description of Proposed Change:															
#	E-Plan or Procedure Section Reference	Current (Existing) Text	Proposed (Change) Text												
1	Footer	Rev 148 December 2019	Rev 149 March 2020												
2	J.7 2 nd paragraph	Protective Action Guides are adopted from EPA 400-R-92-001 and are shown in Figure J-2.	Protective Action Guides are adopted from EPA 400-R-92-001.												
3	J.10.m	Figure J-2 describes the considerations used by Duke management in developing protective action recommendations.	AD-EP-ALL-0109, Off Site Protective Actions Recommendations, describes the considerations used by Duke management in developing protective action recommendations.												
4	Figure J-2	<p>PROTECTIVE ACTION GUIDES (a)</p> <p>Projected Dose</p> <table border="1"> <thead> <tr> <th>Total Effective Dose Equivalent (TEDE)</th> <th>Committed Dose Equivalent Thyroid (CDE Thyroid)</th> <th>Protective Action Recommendation</th> </tr> </thead> <tbody> <tr> <td>< 1 rem</td> <td>< 5 rem</td> <td>No Protective Action is required based on projected dose.</td> </tr> <tr> <td>≥ 1 rem</td> <td>≥ 5 rem</td> <td>Evacuate affected zones and shelter the remainder of the 10 mile EPZ not evacuated.</td> </tr> <tr> <td>N/A</td> <td>≥ 5 rem (b)</td> <td>Consider the use of KI (potassium iodide) in accordance with State Plans and Policy.</td> </tr> </tbody> </table> <p>(a) Protective Action Guides (PAGs) are levels of radiation dose at which prompt protective actions should be initiated and are based on EPA 400-R-92-001, <u>Manual of Protective Action Guides and Protective Actions for Nuclear Incidents</u></p> <p>(b) PAG for KI taken from <u>Potassium Iodide as a Thyroid Blocking Agent in Radiation Emergencies, FDA Guidance, November 2001 and Guidance for Industry, KI in Radiation Emergencies, Questions and Answers, FDA, December 2002.</u></p>	Total Effective Dose Equivalent (TEDE)	Committed Dose Equivalent Thyroid (CDE Thyroid)	Protective Action Recommendation	< 1 rem	< 5 rem	No Protective Action is required based on projected dose.	≥ 1 rem	≥ 5 rem	Evacuate affected zones and shelter the remainder of the 10 mile EPZ not evacuated.	N/A	≥ 5 rem (b)	Consider the use of KI (potassium iodide) in accordance with State Plans and Policy.	Removed from document. Renumbered subsequent page.
Total Effective Dose Equivalent (TEDE)	Committed Dose Equivalent Thyroid (CDE Thyroid)	Protective Action Recommendation													
< 1 rem	< 5 rem	No Protective Action is required based on projected dose.													
≥ 1 rem	≥ 5 rem	Evacuate affected zones and shelter the remainder of the 10 mile EPZ not evacuated.													
N/A	≥ 5 rem (b)	Consider the use of KI (potassium iodide) in accordance with State Plans and Policy.													
Change 1 screened out as editorial and will not be evaluated any further. Changes 2-4 involve PS 10, Protective Response, and will be evaluated.															
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 <input type="checkbox"/> No <input checked="" type="checkbox"/>												

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
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Part II. Description and Review of Licensing Basis Affected by the Proposed Change:

Licensing Basis

- Catawba Emergency Plan Revision 2 (dated January 1983), Revision 97-1 (dated January 1997), and Revision 11-2 (dated September 2011)

Current Emergency Plans

Catawba Nuclear Station Emergency Plan

Section J, Protective Response, Rev. 148, Paragraphs J.7 and J.10.m and Figure J-2

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

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):

Figure J-2 is being replaced with AD-EP-ALL-0109, OFFSITE PROTECTIVE ACTION RECOMMENDATIONS, which describes the considerations used by Duke management in developing Protective Action Recommendations (PARs). CNS PARs continue to use Protective Action Guides adopted from EPA 400-R-92-001 as described in AD-EP-ALL-0109. This change updates CNS Emergency plan PAR bases to match current PAR strategy and does not result in a change to CNS PAR strategy. CNS PAR strategy continues to align with current CNS Evacuation Time Estimate (ETE). CNS will continue to issue evacuation PARs based on plant conditions and dose assessment results. This change continues to meet 10 CFR 50.47(b)(10) because it continues to ensure a range of protective actions has been developed for the plume exposure pathway EPZ for emergency workers and the public.

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

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

Planning Standard 10 CFR 50.47(b)(10) A range of protective actions has been developed for the plume exposure pathway EPZ for emergency workers and the public. In developing this range of actions, consideration has been given to evacuation, sheltering, and as a supplement to these, the prophylactic use of potassium iodide (KI), as appropriate. Evacuation time estimates have been developed by applicants and licensees. Licensees shall update the evacuation time estimates on a periodic basis. Guidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place, and protective actions for the ingestion exposure pathway EPZ appropriate to the locale have been developed.

Emergency Plan Planning Function 10a - A range of public PARs is available for implementation during emergencies.

Program Elements from NUREG-0654 II.J

7. Each licensee shall establish a mechanism for recommending protective actions to the appropriate State and local authorities. These shall include Emergency Action Levels corresponding to projected dose to the population-at-risk, in accordance with Appendix 1 and with the recommendations set forth in Tables 2.1 and 2.2 of the Manual of Protective Action Guides and Protective Actions for Nuclear Incidents (EPA-520/1-75-001). As specified in Appendix 1, prompt notification shall be made directly to the offsite authorities responsible for implementing protective measures within the plume exposure pathway Emergency Planning Zone.

10.m The bases for the choice of recommended protective actions from the plume exposure pathway during emergency conditions. This shall include expected local protection afforded in residential units or other shelter for direct and inhalation exposure, as well as evacuation time estimates.

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
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Part V. Description of Impact of the Proposed Change on the Effectiveness of Emergency Plan Functions:

Figure J-2 is being replaced with AD-EP-ALL-0109, OFFSITE PROTECTIVE ACTION RECOMMENDATIONS, which describes the considerations used by Duke management in developing Protective Action Recommendations (PARs). CNS PARs continue to use Protective Action Guides adopted from EPA 400-R-92-001 as described in AD-EP-ALL-0109. This change updates CNS Emergency plan PAR bases to match current PAR strategy and does not result in a change to CNS PAR strategy. CNS PAR strategy continues to align with current CNS Evacuation Time Estimate (ETE). CNS will continue to issue evacuation PARs based on plant conditions and dose assessment results. This change does not affect the function of Protective Response because this change continues to ensure a range of public PARs is available for implementation during emergencies.

The changes described provide assurance that the normal plant operating organization and ERO 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.

Thus, there is no reduction in effectiveness of 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 <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"/>
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.	<input checked="" type="checkbox"/>	
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.	<input type="checkbox"/>	

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 <input type="checkbox"/>	No <input type="checkbox"/>
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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: _____.

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
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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 <u>NOT</u> required, then mark the CFAM signature block as not applicable (N/A) to indicate that signature is not required.		
Preparer Name (Print): Matthew Nelson	Preparer Signature: See CAS	Date: See CAS
Reviewer Name (Print): Ryder Coyle	Reviewer Signature: See CAS	Date: See CAS
Approver (Manager, Nuclear Support Services) Name (Print): Mandy Hare	Approver Signature: See CAS	Date: See CAS
Approver (EP CFAM, as required) Name (Print) N/A	Approver Signature: N/A	Date: N/A
<p>If the proposed activity is a change to the E-Plan, then initiate PRRs.</p> <p>If the proposed activity is a change to the E-Plan, then create two EREG General Assignments.</p> <p>If required by Section 5.6, Submitting Reports of Changes to the NRC, then create two EREG General Assignments.</p> <ul style="list-style-type: none"> 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. 		
		<input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>

QA RECORD

*****END OF REPORT*****



Duke Energy

ACTION REQUEST - 02321025

ASSIGNMENT NBR - 01

Action Request Assignment Details

AR NUMBER : 02321025

ASSIGNMENT NUMBER : 01

Type	: EP01	Due Date	: 03/24/2020	Pri Resp Fac	:
Status	: COMPLETE	Reschedule	: 1	Pri Resp Group	:
Assigned To	: MATTHEW L NELSON			Sec Resp Fac	:
Subject	: 50.54(Q) SCREEN			Sec Resp Group	:
Aff Facility	: CN	Unit	:	System	:
UCR	:	Schedule Ref	:		
Organization	:	Department	: 46924	Discipline	:
Est Manhrs	: 0	Est Comp Date	:		

Description

COMPLETE 50.54(Q) SCREEN IN ACCORDANCE WITH AD-EP-ALL-0602.

Action Request Assignment Completion Notes

See Notes Section for EREG. I have reviewed and approve these changes.

Action Request Assignment Status History

<u>Updated Date</u>	<u>Updated By</u>	<u>Assgn Status</u>	<u>Assgn Due Date</u>
03/17/2020	MRCOYL1	INPROG	
03/17/2020	MRCOYL1		04/02/2020
03/17/2020	MRCOYL1	NTFY/ASG	
03/17/2020	MRCOYL1	ACC/ASG	
03/18/2020	MRCOYL1	NTFY/ASG	03/24/2020
03/21/2020	I18938	ACC/ASG	
03/21/2020	I18938	AWAIT/C	
03/23/2020	MRCOYL1	ACC/ASG	
03/23/2020	I18938	AWAIT/C	
03/24/2020	MEHARE	COMPLETE	

Action Request Assignment Routing/Return Comments

Routing Comments from the X601 Panel

Geoff's comments

Updated On

20200323

Updated By

MRCOYL1

Routing Comments from the X602 Panel

*** No Return Comments Found ***

Updated On

Updated By



Duke Energy

ACTION REQUEST - 02321025

ASSIGNMENT NBR - 01

Action Request Assignment Completion Approval

Route List : 001

Route List Initiator : I18938

<u>Passport</u>	<u>Fac</u>	<u>Group</u> / <u>Type</u>	<u>Send</u> <u>Date</u>	<u>Send</u> <u>Time</u>	<u>Action</u> <u>Taken</u>	<u>Action</u> <u>Date</u> / <u>Time</u>	<u>Last Name</u>
MRCOYL1		A	03/23/2020	1321	APPROVED	03/23/2020 1737	COYLE
MRCOYL1		A	03/21/2020	0728	RETURNED	03/23/2020 1034	COYLE
MEHARE		A	03/23/2020	1737	APPROVED	03/24/2020 1924	HARE

Action Request Assignment Cause/Action

Action Request Assignment Reference Documents

<u>Facility</u>	<u>Doc</u> <u>Type</u>	<u>Sub</u> <u>Type</u>	<u>Document</u>	<u>Sheet</u>	<u>Rev</u>	<u>Minor</u> <u>Rev</u>	<u>Title</u>
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Action Request Assignment Reference Equipment

<u>Facility</u>	<u>Unit</u>	<u>System</u>	<u>Equip</u> <u>Type</u>	<u>Equip</u> <u>Number</u>	<u>Equip</u> <u>Tag</u>	<u>Equip</u> <u>Status</u>	<u>Rev</u> <u>Status</u>
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Action Request Assignment Cross References

<u>Ref</u> <u>Type</u>	<u>Ref</u> <u>Nbr</u>	<u>Ref</u> <u>Sub</u>	<u>Ref Nbr</u> <u>Type</u>	<u>Status</u>	<u>Limit</u> <u>AS CIs</u>	<u>Description</u>
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Action Request Assignment Appendices

[APPENDIX 1](#)

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
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Screening and Evaluation Number		Applicable Sites	
EREG #: <u>2321025</u>		BNP	<input type="checkbox"/>
		CNS	<input checked="" type="checkbox"/>
		CR3	<input type="checkbox"/>
		HNP	<input type="checkbox"/>
5AD #: <u>2321412</u>		MNS	<input type="checkbox"/>
		ONS	<input type="checkbox"/>
		RNP	<input type="checkbox"/>
		GO	<input type="checkbox"/>
Document and Revision		EPA L, Medical and Public Health Support, Rev. 112	
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):			
#	E-Plan or Procedure Section Reference	Current (Existing) Text	Proposed (Change) Text
1	Footer	Rev. 11-1 May, 2011	Rev. 112 March 2020
2	L.1	<u>Hospital and Medical Support</u> <u>Hospitals –</u> Piedmont Medical Center; Rock Hill, SC - (Agreement #1, App. 5) Carolinas Medical Center - (Agreement #2, App. 5) <u>Medical Support –</u> Local – Center for Emergency Medicine. (Agreement #9 App. 5) Backup - Oak Ridge National Lab Hospital, Oak Ridge, Tennessee (Agreement #11, App. 5) <u>Ambulance Service</u> Piedmont Medical Center; Rock Hill, S.C. (Agreement #1 App. 5)	<u>Hospital and Medical Support</u> <u>Hospitals –</u> Piedmont Medical Center; Rock Hill, SC - (Agreement #1, App. 5) Atrium Health's Carolinas Medical Center - (Agreement #2, App. 5) <u>Ambulance Service</u> Piedmont Medical Center; Rock Hill, S.C. (Agreement #1 App. 5) Removed from document: <u>Medical Support –</u> Local – Center for Emergency Medicine. (Agreement #9 App. 5) Backup - Oak Ridge National Lab Hospital, Oak Ridge, Tennessee (Agreement #11, App. 5)

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
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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.	<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. (NA for CR3)	<input type="checkbox"/>
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.)	<input type="checkbox"/>
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.	<input type="checkbox"/>
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)	<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. (NA for CR3)	<input type="checkbox"/>

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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.	<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). (NA for CR3)	<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	
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	
10a	A range of public PARs is available for implementation during emergencies. (NA for CR3)	<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. (NA for CR3)	<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 checked="" 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"/>

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
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Part IV. Emergency Planning Element and Function Screen (cont.)		
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"/>
PART IV. Conclusion		
If no Part IV criteria are checked, then provide Justification and complete Part V below.		<input type="checkbox"/>
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): Matthew Nelson	Preparer Signature: See CAS	Date: See CAS
Reviewer Name (Print): Ryder Coyle	Reviewer Signature: See CAS	Date: See CAS
Approver (Manager, Nuclear Support Services) Name (Print): Mandy Hare	Approver Signature: See CAS	Date: See CAS
Approver (EP 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, then initiate PRRs.		<input type="checkbox"/>
If the proposed activity is a change to the E-Plan, 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.		■
<ul style="list-style-type: none"> 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

*****END OF REPORT*****



Duke Energy

ACTION REQUEST - 02321025

ASSIGNMENT NBR - 02

Action Request Assignment Details

AR NUMBER : 02321025

ASSIGNMENT NUMBER : 02

Type	: EP02	Due Date	: 03/26/2020	Pri Resp Fac	:
Status	: COMPLETE	Reschedule	: 0	Pri Resp Group	:
Assigned To	: MATTHEW L NELSON			Sec Resp Fac	:
Subject	: 50.54(Q) EVALUATION			Sec Resp Group	:
Aff Facility	: CN	Unit	:	System	:
UCR	:	Schedule Ref	:		
Organization	:	Department	: 46924	Discipline	:
Est Manhrs	: 0	Est Comp Date	:		

Description

COMPLETE 50.54(Q) EVALUATION IN ACCORDANCE WITH AD-EP-ALL- 0602.

Action Request Assignment Completion Notes

See Notes Section for EREG. I have reviewed all of these changes and approve.

Action Request Assignment Status History

<u>Updated Date</u>	<u>Updated By</u>	<u>Assgn Status</u>	<u>Assgn Due Date</u>
03/17/2020	MRCOYL1	INPROG	
03/21/2020	I18938		03/26/2020
03/21/2020	I18938	ACC/ASG	
03/21/2020	I18938	AWAIT/C	
03/23/2020	MRCOYL1	ACC/ASG	
03/23/2020	I18938	AWAIT/C	
03/24/2020	MEHARE	COMPLETE	

Action Request Assignment Routing/Return Comments

Routing Comments from the X601 Panel

Geoff's comments

Updated On

20200323

Updated By

MRCOYL1

Routing Comments from the X602 Panel

*** No Return Comments Found ***

Updated On

Updated By



Duke Energy

ACTION REQUEST - 02321025

ASSIGNMENT NBR - 02

Action Request Assignment Completion Approval

Route List : 001

Route List Initiator : I18938

<u>Passport</u>	<u>Fac</u>	<u>Group</u>	<u>/</u>	<u>Type</u>	<u>Send</u> <u>Date</u>	<u>Send</u> <u>Time</u>	<u>Action</u> <u>Taken</u>	<u>Action</u> <u>Date</u>	<u>/</u>	<u>Time</u>	<u>Last Name</u>
MRCOYL1				A	03/21/2020	0732	RETURNED	03/23/2020		1034	COYLE
MEHARE				A	03/23/2020	1742	APPROVED	03/24/2020		1929	HARE
MRCOYL1				A	03/23/2020	1322	APPROVED	03/23/2020		1742	COYLE

Action Request Assignment Cause/Action

Action Request Assignment Reference Documents

<u>Facility</u>	<u>Doc</u> <u>Type</u>	<u>Sub</u> <u>Type</u>	<u>Document</u>	<u>Sheet</u>	<u>Rev</u>	<u>Minor</u> <u>Rev</u>	<u>Title</u>
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Action Request Assignment Reference Equipment

<u>Facility</u>	<u>Unit</u>	<u>System</u>	<u>Equip</u> <u>Type</u>	<u>Equip</u> <u>Number</u>	<u>Equip</u> <u>Tag</u>	<u>Equip</u> <u>Status</u>	<u>Rev</u> <u>Status</u>
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Action Request Assignment Cross References

<u>Ref</u> <u>Type</u>	<u>Ref</u> <u>Nbr</u>	<u>Ref</u> <u>Sub</u>	<u>Ref Nbr</u> <u>Type</u>	<u>Status</u>	<u>Limit</u> <u>AS Cls</u>	<u>Description</u>
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Action Request Assignment Appendices

[APPENDIX 1](#)

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

Screening and Evaluation Number	Applicable Sites	
EREG #: <u>2321025</u>	BNP	<input type="checkbox"/>
	CNS	<input checked="" type="checkbox"/>
	CR3	<input type="checkbox"/>
	HNP	<input type="checkbox"/>
5AD #: <u>2321412</u>	MNS	<input type="checkbox"/>
	ONS	<input type="checkbox"/>
	RNP	<input type="checkbox"/>
	GO	<input type="checkbox"/>

Document and Revision

EPA L, Medical and Public Health Support, Rev. 112

Part I. Description of Proposed Change:

#	E-Plan or Procedure Section Reference	Current (Existing) Text	Proposed (Change) Text
1	Footer	Rev. 11-1 May, 2011	Rev. 112 March 2020
2	L.1	<u>Hospital and Medical Support</u> <u>Hospitals –</u> Piedmont Medical Center; Rock Hill, SC - (Agreement #1, App. 5) Carolinas Medical Center - (Agreement #2, App. 5) <u>Medical Support –</u> Local – Center for Emergency Medicine. (Agreement #9 App. 5) Backup - Oak Ridge National Lab Hospital, Oak Ridge, Tennessee (Agreement #11, App. 5) <u>Ambulance Service</u> Piedmont Medical Center; Rock Hill, S.C. (Agreement #1 App. 5)	<u>Hospital and Medical Support</u> <u>Hospitals –</u> Piedmont Medical Center; Rock Hill, SC - (Agreement #1, App. 5) Atrium Health's Carolinas Medical Center - (Agreement #2, App. 5) <u>Ambulance Service</u> Piedmont Medical Center; Rock Hill, S.C. (Agreement #1 App. 5) Removed from document: <u>Medical Support –</u> Local – Center for Emergency Medicine. (Agreement #9 App. 5) Backup - Oak Ridge National Lab Hospital, Oak Ridge, Tennessee (Agreement #11, App. 5)

Change 1 screened out as editorial and will not be evaluated any further. Change 2 involves PS 12, Medical and Public Health Support, and will be evaluated.

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
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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 <input type="checkbox"/> No <input checked="" type="checkbox"/>
Part II. Description and Review of Licensing Basis Affected by the Proposed Change:	
<p><u>Licensing Basis</u></p> <ul style="list-style-type: none"> Catawba Emergency Plan Revision 2 (dated January 1983), Revision 97-1 (dated January 1997), and Revision 11-2 (dated September 2011) <p><u>Current Emergency Plans</u></p> <p>Catawba Nuclear Station Emergency Plan Section L, Medical and Public Health Support, Rev. 11-1, Paragraph L.1</p> <p>The differences in approved revisions and the current revisions of the Emergency Plans have been reviewed, and they have been determined to meet the regulatory requirements required during the course of revisions.</p>	

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

Agreement letters for Center for Emergency Medicine and REAC/TS are being removed, which includes Oak Ridge National Lab Hospital.

- Letter 9, Center for Emergency Medicine
All agreements incorporated into Letter 1 for Piedmont Medical Center. Letter 9 was for Apollo Group which previously operated Piedmont Medical Center Emergency Department. Newly revised Letter 1 continues to have agreements for emergency medical services for injured/contaminated patients, drill/exercise support, and training of medical staff. No agreements or capabilities have been removed with this change.
- Letter 11, REACTS
Removing LOAs that are not needed. Assistance will continue to be provided, as necessary, by federal agencies that are mandated by regulations or law to protect public health and safety. LOAs are not required with these agencies mandated by regulations and law. Support agreements are only necessary when an agency, organization or individual is expected to provide assistance to CNS and is not required otherwise to do so.

This change also updates Carolinas Medical Center name based on new owners. CNS continues to have arrangements in place for local (Piedmont Medical Center) and backup (Atrium Health's Carolinas Medical Center) hospital and medical services. This change continues to meet 10 CFR 50.47(b)(12) because it continues to ensure arrangements are made for medical services for contaminated injured individuals.

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

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

Planning Standard 10 CFR 50.47(b)(12) Arrangements are made for medical services for contaminated injured individuals.

Supporting requirements of Appendix E to 10 CFR Part 50 are contained in Section IV.E.5-7

- 5. Arrangements for medical service providers qualified to handle radiological emergencies onsite;
- 6. Arrangements for transportation of contaminated injured individuals from the site to specifically identified treatment facilities outside the site boundary;
- 7. Arrangements for treatment of individuals injured in support of licensed activities on the site at treatment facilities outside the site boundary;

Emergency Plan Planning Function 12a - Arrangements are made for medical services for contaminated, injured individuals.

Program Elements from NUREG-0654 II.L

- 1. Each organization shall arrange for local and backup hospital and medical services having the capability for evaluation of radiation exposure and uptake, including assurance that persons providing these services are adequately prepared to handle contaminated individuals.

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
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Part V. Description of Impact of the Proposed Change on the Effectiveness of Emergency Plan Functions:

Agreement letters for Center for Emergency Medicine and REAC/TS are being removed, which includes Oak Ridge National Lab Hospital.

- Letter 9, Center for Emergency Medicine
All agreements incorporated into Letter 1 for Piedmont Medical Center. Letter 9 was for Apollo Group which previously operated Piedmont Medical Center Emergency Department. Newly revised Letter 1 continues to have agreements for emergency medical services for injured/contaminated patients, drill/exercise support, and training of medical staff. No agreements or capabilities have been removed with this change.
- Letter 11, REACTS
Removing LOAs that are not needed. Assistance will continue to be provided, as necessary, by federal agencies that are mandated by regulations or law to protect public health and safety. LOAs are not required with these agencies mandated by regulations and law. Support agreements are only necessary when an agency, organization or individual is expected to provide assistance to CNS and is not required otherwise to do so.

This change also updates Carolinas Medical Center name based on new owners. CNS continues to have arrangements in place for local (Piedmont Medical Center) and backup (Atrium's Health Carolinas Medical Center) hospital and medical services. This change does not affect the function of Medical and Public Health Support because this change continues to ensure arrangements are made for medical services for contaminated, injured individuals.

The changes described provide assurance that the normal plant operating organization and ERO 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.

Thus, there is no reduction in effectiveness of 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 <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"/>
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.	<input checked="" type="checkbox"/>	

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
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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.	<input type="checkbox"/>
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 <input type="checkbox"/> No <input type="checkbox"/>
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:_____.		

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
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<< 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 <u>NOT</u> required, then mark the CFAM signature block as not applicable (N/A) to indicate that signature is not required.		
Preparer Name (Print): Matthew Nelson	Preparer Signature: See CAS	Date: See CAS
Reviewer Name (Print): Ryder Coyle	Reviewer Signature: See CAS	Date: See CAS
Approver (Manager, Nuclear Support Services) Name (Print): Mandy Hare	Approver Signature: See CAS	Date: See CAS
Approver (EP CFAM, as required) Name (Print) N/A	Approver Signature: N/A	Date: N/A
<p>If the proposed activity is a change to the E-Plan, then initiate PRRs.</p> <p>If the proposed activity is a change to the E-Plan, then create two EREG General Assignments.</p> <p>If required by Section 5.6, Submitting Reports of Changes to the NRC, then create two EREG General Assignments.</p> <ul style="list-style-type: none"> 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. 		
		<input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>

QA RECORD

*****END OF REPORT*****



Duke Energy

ACTION REQUEST - 02319187

ASSIGNMENT NBR - 01

Action Request Assignment Details

AR NUMBER : 02319187

ASSIGNMENT NUMBER : 01

Type	: EP01	Due Date	: 03/26/2020	Pri Resp Fac	:
Status	: COMPLETE	Reschedule	: 0	Pri Resp Group	:
Assigned To	: MATTHEW L NELSON			Sec Resp Fac	:
Subject	: 50.54(Q) SCREEN			Sec Resp Group	:
Aff Facility	: CN	Unit	:	System	:
UCR	:	Schedule Ref	:		
Organization	:	Department	: 46924	Discipline	:
Est Manhrs	: 0	Est Comp Date	:		

Description

COMPLETE 50.54(Q) SCREEN IN ACCORDANCE WITH AD-EP-ALL-0602.

Action Request Assignment Completion Notes

I have reviewed and I approve the EREG.

Action Request Assignment Status History

<u>Updated Date</u>	<u>Updated By</u>	<u>Assgn Status</u>	<u>Assgn Due Date</u>
03/04/2020	MRCOYL1	INPROG	
03/04/2020	MRCOYL1		03/26/2020
03/04/2020	MRCOYL1	NTFY/ASG	
03/04/2020	MRCOYL1	ACC/ASG	
03/04/2020	MRCOYL1	NTFY/ASG	
03/05/2020	I18938	ACC/ASG	
03/21/2020	I18938	AWAIT/C	
03/23/2020	MRCOYL1	ACC/ASG	
03/23/2020	I18938	AWAIT/C	
03/26/2020	MEHARE	COMPLETE	

Action Request Assignment Routing/Return Comments

Routing Comments from the X601 Panel

Geoff's comments

Updated On

20200323

Updated By

MRCOYL1

Routing Comments from the X602 Panel

*** No Return Comments Found ***

Updated On

Updated By



Duke Energy

ACTION REQUEST - 02319187

ASSIGNMENT NBR - 01

Action Request Assignment Completion Approval

Route List : 001

Route List Initiator : I18938

<u>Passport</u>	<u>Fac</u>	<u>Group</u> / <u>Type</u>	<u>Send</u> <u>Date</u>	<u>Send</u> <u>Time</u>	<u>Action</u> <u>Taken</u>	<u>Action</u> <u>Date</u> / <u>Time</u>	<u>Last Name</u>
MRCOYL1		A	03/23/2020	1617	APPROVED	03/23/2020 1745	COYLE
MRCOYL1		A	03/21/2020	0737	RETURNED	03/23/2020 1035	COYLE
MEHARE		A	03/23/2020	1745	APPROVED	03/26/2020 1501	HARE

Action Request Assignment Cause/Action

Action Request Assignment Reference Documents

<u>Facility</u>	<u>Doc</u> <u>Type</u>	<u>Sub</u> <u>Type</u>	<u>Document</u>	<u>Sheet</u>	<u>Rev</u>	<u>Minor</u> <u>Rev</u>	<u>Title</u>
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Action Request Assignment Reference Equipment

<u>Facility</u>	<u>Unit</u>	<u>System</u>	<u>Equip</u> <u>Type</u>	<u>Equip</u> <u>Number</u>	<u>Equip</u> <u>Tag</u>	<u>Equip</u> <u>Status</u>	<u>Rev</u> <u>Status</u>
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Action Request Assignment Cross References

<u>Ref</u> <u>Type</u>	<u>Ref</u> <u>Nbr</u>	<u>Ref</u> <u>Sub</u>	<u>Ref Nbr</u> <u>Type</u>	<u>Status</u>	<u>Limit</u> <u>AS Cls</u>	<u>Description</u>
OT	2310476					
OT	2319182					

Action Request Assignment Appendices

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EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
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<< 10 CFR 50.54(q) Screening Evaluation Form >>

Screening and Evaluation Number		Applicable Sites	
EREG #: <u>2319187</u>		BNP	<input type="checkbox"/>
		CNS	<input checked="" type="checkbox"/>
		CR3	<input type="checkbox"/>
		HNP	<input type="checkbox"/>
5AD #: <u>2319182</u>		MNS	<input type="checkbox"/>
		ONS	<input type="checkbox"/>
		RNP	<input type="checkbox"/>
		GO	<input type="checkbox"/>
Document and Revision		EPA Q, Appendices, Rev. 155	
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):			
#	E-Plan or Procedure Section Reference	Current (Existing) Text	Proposed (Change) Text
1	Footer	Rev 154 November 2019	Rev 155 March 2020
2	Appendix 2, page Q-2.3	<u>Operator Aid Computer (OAC) to Plant Databases</u> The Operator Aid Computer systems use process monitoring equipment. Meteorological data is received at the station, converted from digital to analog, and scanned each minute by the Unit 2 OAC. Each minute, the fifteen minute running average of each parameter is calculated and passed to the Unit 1 OAC. Each OAC transmits data to two databases, one hosted on the site VAX system and the other hosted on a site PC server. ERO personnel can access the data on either database using PCs located in each emergency facility. Alternatively, the current data may be accessed directly on either OAC using terminals located in the Technical Support Center.	<u>Operator Aid Computer (OAC) to Plant Databases</u> The Operator Aid Computer systems use process monitoring equipment. Each unit OAC is a backup for the other, capable of supplying the same required meteorological values. Meteorological data is received and transferred to the PI server for long-term data storage and retrieval. Plant data on the PI server is accessible to computers that are used for emergency effluent dispersion modeling and dose calculation. The data is also available to all personnel in the TSC, OSC, and EOF.
3	Appendix 3 Notes, page Q-3.3	1. Quarterly full cycle tests fulfill/exceed the requirements for quarterly growl test	1. Full cycle tests fulfill/exceed the requirements for growl tests
4	Appendix 5, page Q-5.1	9. Center for Emergency Medicine - Describes the arrangements Center of	9. Deleted

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		Emergency Medicine and Duke Energy Corporation relative to the medical care and treatment and to also have injured personnel that may also have radioactive contamination.	Removed from document: Summary of agreement letter.
5	Appendix 5, page Q-5.2	11. REACTS - Describes the arrangement for the US Department of Energy (DOE) REAC/TS facilities and team to be available to provide back-up capability and assistance to Duke Energy Carolinas, LLC, and Duke Energy Progress, Inc. in the event of a radiological emergency.	11. Deleted Removed from document: Summary of agreement letter.
6	Appendix 5, page Q-5.2	12. DOE - Savannah River - DOE - Savannah River--Describes the arrangements between the US Department of Energy, National Nuclear Safety Administration to support the Emergency Plans of the Duke Energy Carolinas and Duke Energy Progress nuclear sites DOE/NNSA assistance will be advice, detection and identification of radioactive materials, and/or monitoring and assessment actions essential for the control of the immediate hazards to health and safety.	12. Deleted Removed from document: Summary of agreement letter.
7	Appendix 5, page Q-5.2	13. INPO - Certifies that INPO will assist the Catawba Nuclear Station in acquiring of other organizations in the nuclear industry as described in Section 1 of the Emergency Resources Manual, INPO 03-001 and the United States Industry Response Framework.	13. Deleted Removed from document: Summary of agreement letter.
8	Appendix 5, page Q-5.2	15. Joint Information Center - Establishes an agreement regarding, and provides reference to, the operating guidelines, processes, and procedures governing the use of Joint Information System (JIS) and Joint Information Centers (JIC) by providing a holistic approach for a communications response to a declared emergency or significant event at the Catawba Nuclear Station.	15. Deleted Removed from document: Summary of agreement letter.
9	Appendix 5, page Q-5.2	16. Memorandum of Understanding between CNS EP, Work Control, Operations, Site Services and Information Technology on Use of OSC/OCC Area - Establishes that the OSC/OCC/WCC is a multi-purpose facility with the OSC in a state of readiness at all times for compliance with the station's	16. Deleted Removed from document: Summary of agreement letter.

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		Emergency Plan.	
10	Appendix 5, page Q-5.2	18. Deleted.	18. Deleted
11	Appendix 5, page Q-5.2	20. Memorandum of Understanding between Safe Industries and Catawba, McGuire and Oconee Nuclear Sites - Describes the agreement to the request by Duke Energy regarding assistance with technical support after hours and in emergency situation. In the event a Duke Energy site is in need of emergency technical support, trouble shooting, or assistance with the equipment or operation of Hale pumps	20. Deleted Removed from document: Summary of agreement letter.
12	Appendix 5, page Q-5.3	21	21.
13	Appendix 5, page Q-5.3	21 Operating Agreement between Duke Energy's Lincoln Combustion Turbine Facility and McGuire, Catawba and Oconee Nuclear Stations Nuclear Supply Chain - Documents the contingency plan between Duke Energy's Lincoln Combustion Turbine Facility and Duke Energy's McGuire, Catawba, and Oconee Nuclear Stations concerning the Lincoln Combustion Turbine Facility providing the emergency supply of diesel fuel during a disruption of normal diesel fuel supply.	21. Deleted Removed from document: Summary of agreement letter. Renumbered pages.

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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	<input type="checkbox"/>	No	<input type="checkbox"/>
	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)				<input type="checkbox"/>
Part III. Editorial Change Is this activity an editorial or typographical change only, such as formatting, paragraph numbering, spelling, or punctuation that does not change intent? Justification: Changes 1, 10, and 12 are editorial and do not change the intent of the guidance. Change 1 updates revision number and date. Change 10 removes a period and change 12 adds a period. These changes will not be evaluated any further.	Yes	<input type="checkbox"/>	No or Partially	<input type="checkbox"/>
	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	

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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.	<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 checked="" type="checkbox"/>
3b	State and local staff can be accommodated at the EOF in accordance with the emergency plan. (NA for CR3)	<input type="checkbox"/>
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.)	<input type="checkbox"/>
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.	<input type="checkbox"/>
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)	<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. (NA for CR3)	<input checked="" type="checkbox"/>

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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.	<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). (NA for CR3)	<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 checked="" type="checkbox"/>
9	10 CFR 50.47(b)(9) Accident Assessment	
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	
10a	A range of public PARs is available for implementation during emergencies. (NA for CR3)	<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. (NA for CR3)	<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"/>

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Part IV. Emergency Planning Element and Function Screen (cont.)		
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"/>
PART IV. Conclusion		
If no Part IV criteria are checked, then provide Justification and complete Part V below.		<input type="checkbox"/>
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.		<input checked="" type="checkbox"/>
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): Matthew Nelson	Preparer Signature: See CAS	Date: See CAS
Reviewer Name (Print): Ryder Coyle	Reviewer Signature: See CAS	Date: See CAS
Approver (Manager, Nuclear Support Services) Name (Print): Mandy Hare	Approver Signature: See CAS	Date: See CAS
Approver (EP 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, then initiate PRRs.		<input type="checkbox"/>
If the proposed activity is a change to the E-Plan, 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.		<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> 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. 		<input checked="" type="checkbox"/>

QA RECORD

*****END OF REPORT*****



Duke Energy

ACTION REQUEST - 02319187

ASSIGNMENT NBR - 02

Action Request Assignment Details

AR NUMBER : 02319187

ASSIGNMENT NUMBER : 02

Type	: EP02	Due Date	: 03/26/2020	Pri Resp Fac	:
Status	: COMPLETE	Reschedule	: 0	Pri Resp Group	:
Assigned To	: MATTHEW L NELSON			Sec Resp Fac	:
Subject	: 50.54(Q) EVALUATION			Sec Resp Group	:
Aff Facility	: CN	Unit	:	System	:
UCR	:	Schedule Ref	:		
Organization	:	Department	: 46924	Discipline	:
Est Manhrs	: 0	Est Comp Date	:		

Description

COMPLETE 50.54(Q) EVALUATION IN ACCORDANCE WITH AD-EP-ALL- 0602.

Action Request Assignment Completion Notes

I have reviewed and approve the EREG.

Action Request Assignment Status History

<u>Updated Date</u>	<u>Updated By</u>	<u>Assgn Status</u>	<u>Assgn Due Date</u>
03/04/2020	MRCOYL1	INPROG	
03/21/2020	I18938		03/26/2020
03/21/2020	I18938	ACC/ASG	
03/21/2020	I18938	AWAIT/C	
03/23/2020	MRCOYL1	ACC/ASG	
03/23/2020	I18938	AWAIT/C	
03/23/2020	MRCOYL1	ACC/ASG	
03/24/2020	I18938	AWAIT/C	
03/26/2020	MEHARE	COMPLETE	

Action Request Assignment Routing/Return Comments

Routing Comments from the X601 Panel

Geoff's comments
Part III change 3, you reference 10CFR47 (b)(8) but shouldn't it be (5)?

Updated On

20200323
20200323
20200323

Updated By

MRCOYL1
MRCOYL1
MRCOYL1



Duke Energy

ACTION REQUEST - 02319187

ASSIGNMENT NBR - 02

Routing Comments from the X602 Panel

Updated On

Updated By

*** No Return Comments Found ***

Action Request Assignment Completion Approval

Route List : 001

Route List Initiator : I18938

<u>Passport</u>	<u>Fac</u>	<u>Group</u>	<u>/</u>	<u>Type</u>	<u>Send</u> <u>Date</u>	<u>Send</u> <u>Time</u>	<u>Action</u> <u>Taken</u>	<u>Action</u> <u>Date</u>	<u>/</u>	<u>Time</u>	<u>Last Name</u>
MRCOYL1				A	03/24/2020	0937	APPROVED	03/24/2020		1023	COYLE
MRCOYL1				A	03/23/2020	1617	RETURNED	03/23/2020		1800	COYLE
MRCOYL1				A	03/21/2020	0742	RETURNED	03/23/2020		1035	COYLE
MEHARE				A	03/24/2020	1023	APPROVED	03/26/2020		1511	HARE

Action Request Assignment Cause/Action

Action Request Assignment Reference Documents

<u>Facility</u>	<u>Doc</u> <u>Type</u>	<u>Sub</u> <u>Type</u>	<u>Document</u>	<u>Sheet</u>	<u>Rev</u>	<u>Minor</u> <u>Rev</u>	<u>Title</u>
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Action Request Assignment Reference Equipment

<u>Facility</u>	<u>Unit</u>	<u>System</u>	<u>Equip</u> <u>Type</u>	<u>Equip</u> <u>Number</u>	<u>Equip</u> <u>Tag</u>	<u>Equip</u> <u>Status</u>	<u>Rev</u> <u>Rev</u>	<u>Rev</u> <u>Status</u>
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Action Request Assignment Cross References

<u>Ref</u> <u>Type</u>	<u>Ref</u> <u>Nbr</u>	<u>Ref</u> <u>Sub</u>	<u>Ref Nbr</u> <u>Type</u>	<u>Status</u>	<u>Limit</u> <u>AS CIs</u>	<u>Description</u>
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Action Request Assignment Appendices

[APPENDIX 1](#)

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Screening and Evaluation Number		Applicable Sites	
EREG #: <u>2319187</u>		BNP	<input type="checkbox"/>
		CNS	<input checked="" type="checkbox"/>
		CR3	<input type="checkbox"/>
		HNP	<input type="checkbox"/>
5AD #: <u>2319182</u>		MNS	<input type="checkbox"/>
		ONS	<input type="checkbox"/>
		RNP	<input type="checkbox"/>
		GO	<input type="checkbox"/>
Document and Revision		EPA Q, Appendices, Rev. 155	
Part I. Description of Proposed Change:			
#	E-Plan or Procedure Section Reference	Current (Existing) Text	Proposed (Change) Text
1	Footer	Rev 154 November 2019	Rev 155 March 2020
2	Appendix 2, page Q-2.3	<u>Operator Aid Computer (OAC) to Plant Databases</u> The Operator Aid Computer systems use process monitoring equipment. Meteorological data is received at the station, converted from digital to analog, and scanned each minute by the Unit 2 OAC. Each minute, the fifteen minute running average of each parameter is calculated and passed to the Unit 1 OAC. Each OAC transmits data to two databases, one hosted on the site VAX system and the other hosted on a site PC server. ERO personnel can access the data on either database using PCs located in each emergency facility. Alternatively, the current data may be accessed directly on either OAC using terminals located in the Technical Support Center.	<u>Operator Aid Computer (OAC) to Plant Databases</u> The Operator Aid Computer systems use process monitoring equipment. Each unit OAC is a backup for the other, capable of supplying the same required meteorological values. Meteorological data is received and transferred to the PI server for long-term data storage and retrieval. Plant data on the PI server is accessible to computers that are used for emergency effluent dispersion modeling and dose calculation. The data is also available to all personnel in the TSC, OSC, and EOF.
3	Appendix 3 Notes, page Q-3.3	1.Quarterly full cycle tests fulfill/exceed the requirements for quarterly growl test	1. Full cycle tests fulfill/exceed the requirements for growl tests
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		contamination.	
5	Appendix 5, page Q-5.2	11. REACTS - Describes the arrangement for the US Department of Energy (DOE) REAC/TS facilities and team to be available to provide back-up capability and assistance to Duke Energy Carolinas, LLC, and Duke Energy Progress, Inc. in the event of a radiological emergency.	11. Deleted Removed from document: Summary of agreement letter.
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7	Appendix 5, page Q-5.2	13. INPO - Certifies that INPO will assist the Catawba Nuclear Station in acquiring of other organizations in the nuclear industry as described in Section 1 of the Emergency Resources Manual, INPO 03-001 and the United States Industry Response Framework.	13. Deleted Removed from document: Summary of agreement letter.
8	Appendix 5, page Q-5.2	15. Joint Information Center - Establishes an agreement regarding, and provides reference to, the operating guidelines, processes, and procedures governing the use of Joint Information System (JIS) and Joint Information Centers (JIC) by providing a holistic approach for a communications response to a declared emergency or significant event at the Catawba Nuclear Station.	15. Deleted Removed from document: Summary of agreement letter.
9	Appendix 5, page Q-5.2	16. Memorandum of Understanding between CNS EP, Work Control, Operations, Site Services and Information Technology on Use of OSC/OCC Area - Establishes that the OSC/OCC/WCC is a multi-purpose facility with the OSC in a state of readiness at all times for compliance with the station's Emergency Plan.	16. Deleted Removed from document: Summary of agreement letter.
10	Appendix 5, page Q-5.2	18. Deleted.	18. Deleted
11	Appendix 5, page Q-5.2	20. Memorandum of Understanding between Safe Industries and Catawba, McGuire and Oconee Nuclear Sites - Describes the agreement to the request by Duke Energy	20. Deleted Removed from document: Summary of agreement letter

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		regarding assistance with technical support after hours and in emergency situation. In the event a Duke Energy site is in need of emergency technical support, trouble shooting, or assistance with the equipment or operation of Hale pumps	
12	Appendix 5, page Q-5.3	21	21.
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Changes 1, 10 and 12 screened out as editorial and will not be evaluated any further.
Change 2 involves PS 8, Emergency Facilities and Equipment, and will be evaluated.
Change 3 involves PS 5, Notification Methods and Procedures, and will be evaluated.
Changes 4-9, 11, and 13 involves PS 3, Emergency Response Support and Resources, and will be evaluated.

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 <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Part II. Description and Review of Licensing Basis Affected by the Proposed Change:

Licensing Basis

- Catawba Emergency Plan Revision 2 (dated January 1983), Revision 97-1 (dated January 1997), and Revision 11-2 (dated September 2011)

Current Emergency Plans

Catawba Nuclear Station Emergency Plan

Section C, Emergency Response Support and Resources, Rev. 16-1, Paragraphs C.1.a, C.1.b, C.1.c, C.3, and C.4
Section E, Notification Methodology, Rev. 150, Paragraph E.6
Section H, Emergency Facilities and Equipment, Rev. 150, Paragraph H.1.b, H.5.a, and Figure H-8

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

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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):

Change 2 updates the description of CNS Operator Aid Computer (OAC). No changes are being made to the OAC. CNS continues to provide equipment for determining the magnitude of and for continuously assessing the impact of a release of radioactive materials to the environment. This change continues to meet 10 CFR 50.47(b)(8) because it continues to ensure adequate emergency facilities and equipment to support the emergency response are provided and maintained.

Change 3 updates information related to Siren testing frequency. The first note was updated to remove frequency requirements. Frequency requirements are contained in table above Note 1. This was redundant information not needed. This change continues to meet 10 CFR 50.47(b)(5) because it continues to ensure a means to provide early notification and clear instruction to the populace within the plume exposure pathway Emergency Planning Zone have been established.

Changes 4-9, 11, and 13 remove references to Letters of Agreement (LOA) that were either superseded or with organizations that would not typically be relied upon in an emergency to provide assistance in support of the CNS Emergency Plan.

- Letter 9, Center for Emergency Medicine
All agreements incorporated into Letter 1 for Piedmont Medical Center. Letter 9 was for Apollo Group which previously operated Piedmont Medical Center Emergency Department. Newly revised Letter 1 continues to have agreements for emergency medical services for injured/contaminated patients, drill/exercise support, and training of medical staff. No agreements or capabilities have been removed with this change.
- Letter 11, REACTS, and Letter 12, DOE
Assistance will continue to be provided, as necessary, by federal agencies that are mandated by regulations or law to protect public health and safety. LOAs are not required with these agencies as government agencies are established to provide support and do not typically sign such letters. Support agreements are only necessary when an agency, organization or individual is expected to provide assistance to CNS and is not required otherwise to do so.
- Letter 13, INPO
Agreement not needed to support the CNS Emergency Plan. This agreement made voluntarily by INPO to coordinate resources as needed from the Nuclear Industry. No specific resource or capability has been identified or is needed to support CNS Emergency Plan.
- Letter 15, Joint Information Center
Letter no longer needed. The State and County agreement letters describe the agreement for JIC/JIS support during declared emergencies, and therefore superseded this JIC specific letter of agreement. CNS JIC/JIS will continue to be staffed if needed as described in Section G of CNS Emergency Plan.
- Letter 16, Memorandum of Understanding between CNS EP, Work Control, Operations, Site Services and Information Technology on Use of OSC/OCC Area
Letter not needed. CNS Operations Support Center (OSC) and Outage Command Center are in same area. No support or assistance resources are provided by this letter. The letter will remain on file at CNS to document expectation for dual use facility.
- Letter 20, Memorandum of Understanding between Safe Industries and Catawba, McGuire and Oconee Nuclear Sites
Safe Industries provides support for Beyond design basis events and does not support CNS Emergency Plan. Duke Energy has a contract with Safe Industries to maintain equipment and resources that could be needed in the event of a beyond design basis event. The letter will remain on file with Safe Industries.

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basis documents, to document expectation for Safe Industries for maintenance on the beyond design basis accident equipment.

- Letter 21, Operating Agreement between Duke Energy's Lincoln Combustion Turbine Facility and McGuire, Catawba and Oconee Nuclear Stations Nuclear Supply Chain Agreement letter to obtain additional diesel fuel from nearby Duke Energy facility. This letter was written in response to Hurricane Katrina when the fuel pipeline was damaged and impacted normal flow of fuel to the southeast. This letter is a procurement letter to obtain fuel between Duke Energy Facilities and does not directly support the Catawba Emergency Plan. Additional diesel fuel will continue to be procured if needed for extended events from any available sources.

These changes continue to meet 10 CFR 50.47(b)(3) because they continue to ensure arrangements for requesting and effectively using assistance resources have been made.

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

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):

Planning Standard 10 CFR 50.47(b)(3) Arrangements for requesting and effectively using assistance resources have been made, arrangements to accommodate State and local staff at the licensee's Emergency Operations Facility have been made, and other organizations capable of augmenting the planned response have been identified.

Emergency Plan Planning Function 3a - Arrangements for requesting and using offsite assistance have been made.

Program Elements from NUREG-0654 II.C

1. The Federal government maintains in-depth capability to assist licensees, States and local governments through the Federal Radiological Monitoring and Assessment Plan (formerly Radiological Assistance Plan (RAP) and Interagency Radiological Assistance Plan (IRAP). Each State and licensee shall make provisions for incorporating the Federal response capability into its operation plan, including the following:

- specific persons by title authorized to request Federal assistance; see A.1.d., A.2.a.
- specific Federal resources expected, including expected times of arrival at specific nuclear facility sites; and
- specific licensee, State and local resources available to support the Federal response, e.g., air fields, command posts, telephone lines, radio frequencies and telecommunications centers.

4. Each organization shall identify nuclear and other facilities, organizations or individuals which can be relied upon in an emergency to provide assistance. Such assistance shall be identified and supported by appropriate letters of agreement.

Planning Standard 10 CFR 50.47(b)(5) Procedures have been established for notification, by the licensee, of State and local response organizations and for notification of emergency personnel by all organizations; the content of initial and follow-up messages to response organizations and the public has been established; and means to provide early notification and clear instruction to the populace within the plume exposure pathway Emergency Planning Zone have been established.

Emergency Plan Planning Function 5c - The public ANS meets the design requirements of FEMA-REP-10, "Guide for Evaluation of Alert and Notification Systems for Nuclear Power Plants" (Ref. 12), or is compliant with the licensee's

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FEMA-approved ANS design report and supporting FEMA approval letter.

Program Elements from NUREG-0654 II.E

6. Each organization shall establish administrative and physical means, and the time required for notifying and providing prompt instructions to the public within the plume exposure pathway Emergency Planning Zone. (See Appendix 3.) It shall be the licensee's responsibility to demonstrate that such means exist, regardless of who implements this requirement. It shall be the responsibility of the State and local governments to activate such a system.

Planning Standard 10 CFR 50.47(b)(8) Adequate emergency facilities and equipment to support the emergency response are provided and maintained.

Emergency Plan Planning Function 8b - Adequate equipment is maintained to support emergency response.

Program Elements from NUREG-0654 II.H

6. Each licensee shall make provision to acquire data from or for emergency access to offsite monitoring and analysis equipment including:

6.a. geophysical phenomena monitors, (e.g., meteorological, hydrologic, seismic);

6.b. radiological monitors including radiometers and sampling devices. Dosimetry shall be provided and shall meet, as a minimum, the NRC Radiological Assessment Branch Technical position for the Environmental Radiological Monitoring Program; and

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

Change 2 updates the description of CNS Operator Aid Computer (OAC). No changes are being made to the OAC. CNS continues to provide equipment for determining the magnitude of and for continuously assessing the impact of a release of radioactive materials to the environment. This change does not affect the function of Emergency Facilities and Equipment because it continues to ensure adequate equipment is maintained to support emergency response.

Change 3 updates information related to Siren testing frequency. The first note was updated to remove frequency requirements. Frequency requirements are contained in table above Note 1. This was redundant information not needed. This change does not affect the function of Notification Methods and Procedures because it continues to ensure the public ANS is compliant with CNS's FEMA-approved ANS design report and supporting FEMA approval letter.

Changes 4-9, 11, and 13 remove references to Letters of Agreement (LOA) that were either superseded or with organizations that would not typically be relied upon in an emergency to provide assistance in support of the CNS Emergency Plan.

- Letter 9, Center for Emergency Medicine
All agreements incorporated into Letter 1 for Piedmont Medical Center. Letter 9 was for Apollo Group which previously operated Piedmont Medical Center Emergency Department. Newly revised Letter 1 continues to have agreements for emergency medical services for injured/contaminated patients, drill/exercise support, and training of medical staff. No agreements or capabilities have been removed with this change.

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Assistance will continue to be provided, as necessary, by federal agencies that are mandated by regulations or law to protect public health and safety. LOAs are not required with these agencies as government agencies are established to provide support and do not typically sign such letters. Support agreements are only necessary when an agency, organization or individual is expected to provide assistance to CNS and is not required otherwise to do so.

- Letter 13, INPO
Agreement not needed to support the CNS Emergency Plan. This agreement made voluntarily by INPO to coordinate resources as needed from the Nuclear Industry. No specific resource or capability has been identified or is needed to support CNS Emergency Plan.
- Letter 15, Joint Information Center
Letter no longer needed. The State and County agreement letters describe the agreement for JIC/JIS support during declared emergencies, and therefore superseded this JIC specific letter of agreement. CNS JIC/JIS will continue to be staffed if needed as described in Section G of CNS Emergency Plan.
- Letter 16, Memorandum of Understanding between CNS EP, Work Control, Operations, Site Services and Information Technology on Use of OSC/OCC Area
Letter not needed. CNS Operations Support Center (OSC) and Outage Command Center are in same area. No support or assistance resources are provided by this letter. The letter will remain on file at CNS to document expectation for dual use facility.
- Letter 20, Memorandum of Understanding between Safe Industries and Catawba, McGuire and Oconee Nuclear Sites
Safe Industries provides support for Beyond design basis events and does not support CNS Emergency Plan. Duke Energy has a contract with Safe Industries to maintain equipment and resources that could be needed in the event of a beyond design basis event. The letter will remain on file within beyond design basis documents, to document expectation for Safe Industries for maintenance on the beyond design basis accident equipment.
- Letter 21, Operating Agreement between Duke Energy's Lincoln Combustion Turbine Facility and McGuire, Catawba and Oconee Nuclear Stations Nuclear Supply Chain
Agreement letter to obtain additional diesel fuel from nearby Duke Energy facility. This letter was written in response to Hurricane Katrina when the fuel pipeline was damaged and impacted normal flow of fuel to the southeast. This letter is a procurement letter to obtain fuel between Duke Energy Facilities and does not directly support the Catawba Emergency Plan. Additional diesel fuel will continue to be procured if needed for extended events from any available sources.

These changes do not affect the function of Emergency Response Support and Resources because it continues to ensure needed arrangements for requesting and using off site assistance have been made.

The changes described provide assurance that the normal plant operating organization and ERO 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.

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

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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 <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"/>
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.	<input checked="" type="checkbox"/>	
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.	<input type="checkbox"/>	
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 <input type="checkbox"/>	No <input type="checkbox"/>
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 <u>NOT</u> required, then mark the CFAM signature block as not applicable (N/A) to indicate that signature is not required.		
Preparer Name (Print): Matthew Nelson	Preparer Signature: See CAS	Date: See CAS
Reviewer Name (Print): Ryder Coyle	Reviewer Signature: See CAS	Date: See CAS
Approver (Manager, Nuclear Support Services) Name (Print): Mandy Hare	Approver Signature: See CAS	Date: See CAS
Approver (EP CFAM, as required) Name (Print) N/A	Approver Signature: N/A	Date: N/A
<p>If the proposed activity is a change to the E-Plan, then initiate PRRs.</p> <p>If the proposed activity is a change to the E-Plan, then create two EREG General Assignments.</p> <p>If required by Section 5.6, Submitting Reports of Changes to the NRC, then create two EREG General Assignments.</p> <ul style="list-style-type: none"> 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. 		
		<input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>

QA RECORD

*****END OF REPORT*****



Duke Energy

ACTION REQUEST - 02316896

ASSIGNMENT NBR - 01

Action Request Assignment Details

AR NUMBER : 02316896

ASSIGNMENT NUMBER : 01

Type	: EP01	Due Date	: 03/26/2020	Pri Resp Fac	:
Status	: COMPLETE	Reschedule	: 0	Pri Resp Group	:
Assigned To	: MICHAEL R COYLE			Sec Resp Fac	:
Subject	: 50.54(Q) SCREEN			Sec Resp Group	:
Aff Facility	: CN	Unit	:	System	:
UCR	:	Schedule Ref	:		
Organization	:	Department	: 18255	Discipline	:
Est Manhrs	: 0	Est Comp Date	:		

Description

COMPLETE 50.54(Q) SCREEN IN ACCORDANCE WITH AD-EP-ALL-0602.

Action Request Assignment Completion Notes

See notes. I have reviewed and approve.

Action Request Assignment Status History

<u>Updated Date</u>	<u>Updated By</u>	<u>Assgn Status</u>	<u>Assgn Due Date</u>
02/19/2020	JCONST	INPROG	
02/19/2020	JCONST		03/26/2020
02/19/2020	JCONST	NTFY/ASG	
02/19/2020	MRCOYL1	ACC/ASG	
02/19/2020	MRCOYL1	AWAIT/C	
02/19/2020	JCONST	ACC/ASG	
02/20/2020	MRCOYL1	AWAIT/C	
02/25/2020	NTART	ACC/ASG	
03/04/2020	MRCOYL1	AWAIT/C	
03/04/2020	I18938	ACC/ASG	
03/04/2020	MRCOYL1	AWAIT/C	
03/17/2020	MEHARE	COMPLETE	

Action Request Assignment Routing/Return Comments

Routing Comments from the X601 Panel

returned at performers request. JCONST 2/19/20

Updated On
20200219

Updated By
JCONST



Duke Energy

ACTION REQUEST - 02316896

ASSIGNMENT NBR - 01

return for cross reference

20200225

NTART

Add revision description.

20200304

I18938

Routing Comments from the X602 Panel

Updated On

Updated By

*** No Return Comments Found ***

Action Request Assignment Completion Approval

Route List : 001

Route List Initiator : MRCOYL1

<u>Passport</u>	<u>Fac</u>	<u>Group</u>	<u>/</u>	<u>Type</u>	<u>Send</u> <u>Date</u>	<u>Send</u> <u>Time</u>	<u>Action</u> <u>Taken</u>	<u>Action</u> <u>Date</u>	<u>/</u>	<u>Time</u>	<u>Last Name</u>
JCCONST				A	02/19/2020	1246	RETURNED	02/19/2020		1247	CONSTANT
I18938				A	03/04/2020	1128	RETURNED	03/04/2020		1529	NELSON
I18938				A	03/04/2020	1556	APPROVED	03/04/2020		1601	NELSON
I44004				A	02/19/2020	1242	BYPASSED	02/19/2020		1246	WHITE
MEHARE				A	03/04/2020	1601	APPROVED	03/17/2020		1558	HARE
NTART				A	02/20/2020	1650	RETURNED	02/25/2020		1717	TART

Action Request Assignment Cause/Action

Action Request Assignment Reference Documents

<u>Facility</u>	<u>Doc</u> <u>Type</u>	<u>Sub</u> <u>Type</u>	<u>Document</u>	<u>Sheet</u>	<u>Rev</u>	<u>Minor</u> <u>Rev</u>	<u>Title</u>
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Action Request Assignment Reference Equipment

<u>Facility</u>	<u>Unit</u>	<u>System</u>	<u>Equip</u> <u>Type</u>	<u>Equip</u> <u>Number</u>	<u>Equip</u> <u>Tag</u>	<u>Equip</u> <u>Status</u>	<u>Rev</u>	<u>Rev</u> <u>Status</u>
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Action Request Assignment Cross References

<u>Ref</u> <u>Type</u>	<u>Ref</u> <u>Nbr</u>	<u>Ref</u> <u>Sub</u>	<u>Ref Nbr</u> <u>Type</u>	<u>Status</u>	<u>Limit</u> <u>AS CIs</u>	<u>Description</u>
OT	02259629					



Duke Energy

ACTION REQUEST - 02316896

ASSIGNMENT NBR - 01

OT 02284509

Action Request Assignment Appendices

[APPENDIX 1](#)

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
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Screening and Evaluation Number		Applicable Sites	
EREG #: <u>02284510 / 02316896</u> Formatting changed in part 1 to add the template from AD-EP-ALL-0602.	BNP	<input type="checkbox"/>	
	CNS	<input checked="" type="checkbox"/>	
	CR3	<input type="checkbox"/>	
	HNP	<input type="checkbox"/>	
5AD #: <u>02284509</u>	MNS	<input type="checkbox"/>	
	ONS	<input type="checkbox"/>	
	RNP	<input type="checkbox"/>	
	GO	<input type="checkbox"/>	
Document and Revision	CNS Emergency Plan B, Site Emergency Organization Rev 167 (DRR# 02259629)		
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):			
1	Table B-1b	OAC Support (TSC) 1	Removed from Document
2	Table B-1b	Full Staff total 35	Full Staff total 33
3	FIGURE B-1	OAC Support	Removed from Document
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 <input type="checkbox"/> No <input checked="" type="checkbox"/> 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)			<input type="checkbox"/>
Part III. Editorial Change			
		Yes <input type="checkbox"/> No or Partially <input checked="" type="checkbox"/>	

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
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<< 10 CFR 50.54(q) Screening Evaluation Form >>

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.	<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 checked="" 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. (NA for CR3)	<input type="checkbox"/>	
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.)	<input type="checkbox"/>	
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.	<input type="checkbox"/>	
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)	<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. (NA for CR3)	<input type="checkbox"/>	

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
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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.	<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). (NA for CR3)	<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	
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	
10a	A range of public PARs is available for implementation during emergencies. (NA for CR3)	<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. (NA for CR3)	<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"/>

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Part IV. Emergency Planning Element and Function Screen (cont.)		
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"/>
PART IV. Conclusion		<input type="checkbox"/>
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): Michael Ryder Coyle	Preparer Signature: See CAS	Date: See CAS
Reviewer Name (Print): Matthew Nelson	Reviewer Signature: See CAS	Date: See CAS
Approver (Manager, Nuclear Support Services) Name (Print):	Approver Signature: See CAS	Date: See CAS
Approver (EP CFAM, as required) Name (Print) NA	Approver Signature: NA	Date: NA
If the proposed activity is a change to the E-Plan, then initiate PRRs. If the proposed activity is a change to the E-Plan, 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.		■
<ul style="list-style-type: none"> 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. 		■

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
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QA RECORD

*****END OF REPORT*****



Duke Energy

ACTION REQUEST - 02316896

ASSIGNMENT NBR - 02

Action Request Assignment Details

AR NUMBER : 02316896

ASSIGNMENT NUMBER : 02

Type	: EP02	Due Date	: 03/26/2020	Pri Resp Fac	:
Status	: COMPLETE	Reschedule	: 0	Pri Resp Group	:
Assigned To	: MICHAEL R COYLE			Sec Resp Fac	:
Subject	: 50.54(Q) EVALUATION			Sec Resp Group	:
Aff Facility	: CN	Unit	:	System	:
UCR	:	Schedule Ref	:		
Organization	:	Department	: 18255	Discipline	:
Est Manhrs	: 0	Est Comp Date	:		

Description

COMPLETE 50.54(Q) EVALUATION IN ACCORDANCE WITH AD-EP-ALL- 0602.

Action Request Assignment Completion Notes

See notes. I have reviewed and I approve.

Action Request Assignment Status History

<u>Updated Date</u>	<u>Updated By</u>	<u>Assgn Status</u>	<u>Assgn Due Date</u>
02/19/2020	JCONST	INPROG	
02/19/2020	JCONST		03/26/2020
02/19/2020	JCONST	NTFY/ASG	
02/19/2020	MRCOYL1	ACC/ASG	
02/20/2020	MRCOYL1	AWAIT/C	
02/25/2020	NTART	ACC/ASG	
03/04/2020	MRCOYL1	AWAIT/C	
03/04/2020	I18938	ACC/ASG	
03/04/2020	MRCOYL1	AWAIT/C	
03/17/2020	MEHARE	COMPLETE	

Action Request Assignment Routing/Return Comments

Routing Comments from the X601 Panel

cross reference needed
Add revision description.

Updated On

20200225
20200304

Updated By

NTART
I18938



Duke Energy

ACTION REQUEST - 02316896

ASSIGNMENT NBR - 02

Routing Comments from the X602 Panel

Updated On

Updated By

*** No Return Comments Found ***

Action Request Assignment Completion Approval

Route List : 001

Route List Initiator : MRCOYL1

<u>Passport</u>	<u>Fac</u>	<u>Group</u>	<u>/</u>	<u>Type</u>	<u>Send</u> <u>Date</u>	<u>Send</u> <u>Time</u>	<u>Action</u> <u>Taken</u>	<u>Action</u> <u>Date</u>	<u>/</u>	<u>Time</u>	<u>Last Name</u>
I18938				A	03/04/2020	1129	RETURNED	03/04/2020		1529	NELSON
I18938				A	03/04/2020	1558	APPROVED	03/04/2020		1601	NELSON
NTART				A	02/20/2020	1703	RETURNED	02/25/2020		1715	TART
MEHARE				A	03/04/2020	1601	APPROVED	03/17/2020		1559	HARE

Action Request Assignment Cause/Action

Action Request Assignment Reference Documents

<u>Facility</u>	<u>Doc</u> <u>Type</u>	<u>Sub</u> <u>Type</u>	<u>Document</u>	<u>Sheet</u>	<u>Rev</u>	<u>Minor</u> <u>Rev</u>	<u>Title</u>
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Action Request Assignment Reference Equipment

<u>Facility</u>	<u>Unit</u>	<u>System</u>	<u>Equip</u> <u>Type</u>	<u>Equip</u> <u>Number</u>	<u>Equip</u> <u>Tag</u>	<u>Equip</u> <u>Status</u>	<u>Rev</u> <u>Rev</u>	<u>Rev</u> <u>Status</u>
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Action Request Assignment Cross References

<u>Ref</u> <u>Type</u>	<u>Ref</u> <u>Nbr</u>	<u>Ref</u> <u>Sub</u>	<u>Ref Nbr</u> <u>Type</u>	<u>Status</u>	<u>Limit</u> <u>AS CIs</u>	<u>Description</u>
OT	02259629					
OT	02284509					

Action Request Assignment Appendices

[APPENDIX 1](#)



Duke Energy

ACTION REQUEST - 02316896

ASSIGNMENT NBR - 02

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 6

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

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Screening and Evaluation Number		Applicable Sites	
EREG #: <u>02284510 / 02316896</u> Formatting changed in part 1 to add the template from AD-EP-ALL-0602 and boxed checked "No" in part 1.		BNP	<input type="checkbox"/>
		CNS	<input checked="" type="checkbox"/>
		CR3	<input type="checkbox"/>
		HNP	<input type="checkbox"/>
5AD #: <u>02284509</u>		MNS	<input type="checkbox"/>
		ONS	<input type="checkbox"/>
		RNP	<input type="checkbox"/>
		GO	<input type="checkbox"/>
Document and Revision	CNS Emergency Plan B, Site Emergency Organization Rev 167 (DRR# 02259629)		
Part I. Description of Proposed Change:			
1	Table B-1b	OAC Support (TSC) 1	Removed from Document
2	Table B-1b	Full Staff total 35	Full Staff total 33
3	FIGURE B-1	OAC Support	Removed from Document
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 <input type="checkbox"/> No <input checked="" type="checkbox"/>

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
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Part II. Description and Review of Licensing Basis Affected by the Proposed Change:

- Catawba Emergency Plan Revision 2 (dated January 1983)
The SER approved Emergency Plan does not make mention of an OAC Support role in the ERO
- Catawba Nuclear Station Emergency Plan, Section B, Site Emergency Organization, Rev. 166
The current Emergency Plan lists the OAC Support role in the B-1b Table under Resource Allocation and Admin, and again in the Figure B-1 block diagram for the TSC. No specific mention of the OAC Support roles or responsibilities are included in the Emergency Plan.

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

Changes 1, 3- This change moves the OAC Support responsibility and procedure steps to IT Support in the TSC. The OAC Support person's only Emergency Plan-defined responsibility in AD-EP-ALL-0105, Activation and Operation of the Technical Support Center, is to verify ERDS is operating. That responsibility is also on the NRC Communicator's checklist (NRC Communicator being an on-duty minimum staffing position), and ensuring ERDS is operating has been added to the IT Support checklist.

Change 2- The Full Staff number at the bottom of Table B-1b was updated to reflect the current number of full staffing ERO members. EREG 02253730 removed the Chemistry Supervisor, but failed to decrease this full staffing count in that revision, so this change remedies that error and reduces the count by one more due to the removal of the OAC Support person.

The ERO continues to be staffed to augment initial response on a continuous basis. Thus, the Duke Energy Catawba Nuclear Station Emergency Plan will continue to comply with 10 CFR 50.47(b)(2), Onsite Emergency Organization, and 10 CFR Part 50 Appendix E, Section IV.A Organization, with no reduction in effectiveness of the Emergency Plan.

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

Standard

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

[Onshift] "...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."

Supporting Criteria from 10 CFR Part 50 Section IV.A

A. Organization

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...

Functions

Two emergency planning functions have been defined for this planning standard:

- (1) The process ensures that onshift emergency response responsibilities are staffed and assigned.
- (2) The process for timely augmentation of onshift staff is established and maintained.

Elements

Section II.B of NUREG-0654

5. Each licensee shall specify the positions or title and major tasks to be performed by the persons to be assigned to the functional areas of emergency activity...

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
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<< 10 CFR 50.54(q) Effectiveness Evaluation Form >>

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

Change 1, 3- This change moves the OAC Support responsibilities and procedure steps to IT Support in the TSC. The OAC Support person's only Emergency Plan-defined responsibility in AD-EP-ALL-0105, Activation and Operation of the Technical Support Center, is to verify ERDS is operating. That responsibility is also in the NRC Communicator's checklist (NRC Communicator being an on-duty minimum staffing position), and ensuring ERDS is operating has been added to the IT Support checklist.

Change 2- The Full Staff number at the bottom of Table B-1b was updated to reflect the current number of full staffing ERO members. EREG 02253730 removed the Chemistry Supervisor, but failed to decrease this full staffing count in that revision, so this change remedies that error and reduces the count by one more due to the removal of the OAC Support person.

The ERO continues to be staffed to augment initial response on a continuous basis. Thus, the Duke Energy Emergency Plans will continue to comply with 10 CFR 50.47(b)(2), Onsite Emergency Organization, and 10 CFR Part 50 Appendix E, Section IV.A Organization, with no reduction in effectiveness of 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 <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"/>
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.	<input checked="" type="checkbox"/>	
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.	<input type="checkbox"/>	

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 <input type="checkbox"/>	No <input type="checkbox"/>
--	------------------------------	-----------------------------

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: _____.

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
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<< 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): Michael Ryder Coyle	Preparer Signature: See CAS	Date: See CAS
Reviewer Name (Print): Matthew Nelson	Reviewer Signature: See CAS	Date: See CAS
Approver (Manager, Nuclear Support Services) Name (Print): Mandy Hare	Approver Signature: See CAS	Date: See CAS
Approver (CFAM, as required) Name (Print): NA	Approver Signature: NA	Date: NA
<p>If the proposed activity is a change to the E-Plan, then initiate PRRs.</p> <p>If the proposed activity is a change to the E-Plan, then create two EREG General Assignments.</p> <p>If required by Section 5.6, Submitting Reports of Changes to the NRC, then create two EREG General Assignments.</p> <ul style="list-style-type: none"> 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. 		<p>■</p> <p>■</p> <p>■</p>

QA RECORD

*****END OF REPORT*****

**Catawba Nuclear Station
Attachment 2
Emergency Plan Revision 20-03
Plan Update Instructions**

Replace Revision 20-02 Coversheet with Revision 20-03 Coversheet

List of Effective Pages (LOEP)

Replace all pages of this section

Table of Contents (TOC)

Replace all pages of this section

Tab A – Assignment of Responsibility

Replace all pages of this section

Tab J – Protective Response

Replace all pages of this section

Tab L – Medical and Public Health Support

Replace all pages of this section

Tab Q – Appendices

Replace all pages of this section

**Catawba Nuclear Station
Attachment 3
Emergency Plan
Emergency Plan Revision 20-03**

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DUKE ENERGY CORPORATION
CATAWBA NUCLEAR STATION
EMERGENCY PLAN

REVISION 151

March 2020

Original Issue: August, 1980

DUKE ENERGY
CATAWBA NUCLEAR STATION
EMERGENCY PLAN

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INTRODUCTION

A. PURPOSE

This Emergency Plan for the Catawba Nuclear Site is established for the protection of life and property in all emergency and accident situations. It particularly applies to those radiological situations (radiation, contamination and reactor accidents) where the health and safety of station personnel and the general public may be involved; but it also includes other general industrial emergency and accident conditions involving radioactive materials such as fire, vehicular accidents, natural disasters, medical injury or illness and industrial security.

The plan described herein will be implemented at Catawba by incorporating it into detailed station Emergency Procedures; as such, it will be coordinated with station operating, radiological control, and industrial security procedures.

B. SCOPE

The Emergency Plan is a coordinated effort involving station personnel; station facilities and equipment; the emergency resources of Duke Energy corporate organizations; emergency services of various local, state and federal agencies having appropriate jurisdiction or concern for public health and safety, particularly the radiological emergency and emergency plans of local county Preparedness Agencies; South Carolina Emergency Management Division of the S.C. Adjutant General's Office, the South Carolina Department of Health and Environmental Control, Bureau of Radiological Health; the North Carolina Department of Crime Control and Public Safety, and the North Carolina Department of Environment, Health and Natural Resources, Division of Radiation Protection.

The Emergency Plan organization and the emergency organizations that have responsibilities in the management of an emergency condition at the station are identified throughout the Plan. The Emergency Planning Zone concept is shown in NUREG-0654, Rev. 1, and is utilized in this plan.

The key elements of the Emergency Plan include:

- a. An essentially uniform means of reporting and handling any emergency or accident situation.
- b. A graded emergency classification system of increasing severity, based on specific criteria, Emergency Action Levels (EAL's) and a method for relating EALs to U.S. EPA Protective Action Guides (PAG's).
- c. Interaction with the emergency plans of appropriate local, state and federal agencies concerned with public health and safety in the event of a reactor accident.

The Emergency Plan is compatible with facility design features, site, layout and site location, with respect to such considerations as access routes, surrounding population distributions and lake and land use.

Agreements have been made with local, state and federal authorities for coordination of activities in the event of an emergency. Local agencies provide fire protection, medical support, and ambulance rescue service upon request. In addition, the emergency plans of the Emergency Preparedness Agencies of the counties involved provides assistance and logistical support in the event that evacuation of portions of the Plume Exposure Emergency Planning Zone becomes necessary. The disaster plans of the Emergency Preparedness Agencies in York County where the station is located, and of the Emergency Management Agencies in the adjacent counties (Mecklenburg and Gaston) as they relate to the protection of the public who may be affected by an accident situation at Catawba, all include the following aspects:

- a. Notification of their own Emergency Preparedness Agency personnel and other emergency services involved in their Emergency Plans.
- b. Law enforcement and traffic control.
- c. Notification or warning of persons in affected areas.
- d. Evacuation as necessary to designated schools or other public buildings out of the affected area, where shelter, food, overnight accommodations, medical care, etc., would be made available.
- e. Assistance and cooperation with related agencies in other counties, Duke Energy and other state and federal agencies.

Means have been developed for notification and coordination of emergency activities with persons and groups on site as well as within the Exclusion Area, including portions on Lake Wylie which might be affected by an accident, as well as water authorities of nearby cities and industries downstream.

Duke Energy intends to meet all of the requirements for early warning of the public and will periodically evaluate the resources necessary to provide this capability.

Radiological emergency situations, if they occur at all, are expected for the most part, to be highly localized, and only station property and station personnel are subject to any potential major hazard.

Members of the public are also within the Exclusion Area at various times (highway traffic, station visitors, boating and recreation on Lake Wylie, etc.). In case of a major accidental release of radioactivity, the general public and property in the Emergency Planning Zone may also be affected. The plan includes provisions for the protection of all persons in the plume exposure pathway, as well as in the ingestion pathway, of the Emergency Planning Zone.

C. PLANNING BASIS

The bases for this plan are the upgraded Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants, NUREG-0654/FEMA-REP 1, Rev. 1, and 10CFR50. The overall objective of the Emergency Plan is to provide for early detection, warning and protective action response and recommendations for emergency conditions at Catawba that may affect the station proper and/or off-site areas. The range of emergency conditions is very large, starting with a zero point requiring no planning at all, up to planning for the worst possible accident scenario, regardless of its extremely low likelihood. Although the planning basis is independent of specific accident scenarios, a number of emergency conditions were considered in the development of this plan, including core melt release sequences.

The planning basis also considers time frames between initial accident recognition, response actions, and recommendation of appropriate protective actions in the event a potential for, or an actual release of radioactive materials is taking place. Knowledge of the potential for and the kinds of radioactive materials released, duration of the release and the time available to activate protective response on-site and off-site is important in determining what instructions/recommendations are to be given. Location of the population affected and communication mechanisms to those authorities responsible for activating protective action is also an important part of the planning basis.

Emergency Planning Zones

With regard to the area over which planning efforts should be carried out, "Emergency Planning Zones" (EPZs) about each nuclear facility are defined both for the short term "plume exposure pathway" and for the longer term "ingestion exposure pathways." EPZs are defined as the areas for which planning is needed to assure that prompt and effective actions can be taken to protect the public in the event of an accident. The state response organizations are principally responsible for the planning associated with the ingestion exposure pathway.

The emergency plans are related to two predominant exposure pathways. They are:

- a. Plume exposure pathway -- The principal exposure sources from this pathway are: (a) external exposure to gamma radiation from the plume and from deposited material; and (b) inhalation exposure from the passing radioactive plume. The duration of the release leading to potential exposure could range from one-half hour to days. For the plume exposure pathway, shelter and/or evacuation would likely be the principal immediate protective actions to be recommended for the general public. A recommendation to administer prophylactic iodine to the public would also be considered based on radioiodine dose projections.

The size (about 10 miles radius) of the plume exposure EPZ (refer to Figure i-1) was based primarily on the following considerations:

- a. projected doses from the traditional design basis accidents would not exceed Protective Action Guide levels outside the zone;
- b. projected doses from most core melt sequences would not exceed Protective Action Guide levels outside the zone;

- c. for the worst core melt sequences, immediate life threatening doses would generally not occur outside the zone;
 - d. detailed planning within 10 miles would provide a substantial base for expansion of response efforts in the event that this proved necessary.
- b. Ingestion exposure pathway -- The principal exposure from this pathway would be from ingestion of contaminated water or foods such as milk, fresh vegetables or aquatic foodstuffs.

The duration of potential exposure could range in length from hours to months. For the ingestion exposure pathway, the planning effort involves the identification of major exposure pathways from contaminated food and water and the associated control and interdiction points and methods. The ingestion pathway exposures in general would represent a longer term problem, although some early protective actions to minimize subsequent contamination of milk or other supplies should be initiated (e.g., remove cows from pasture and put them on stored feed).

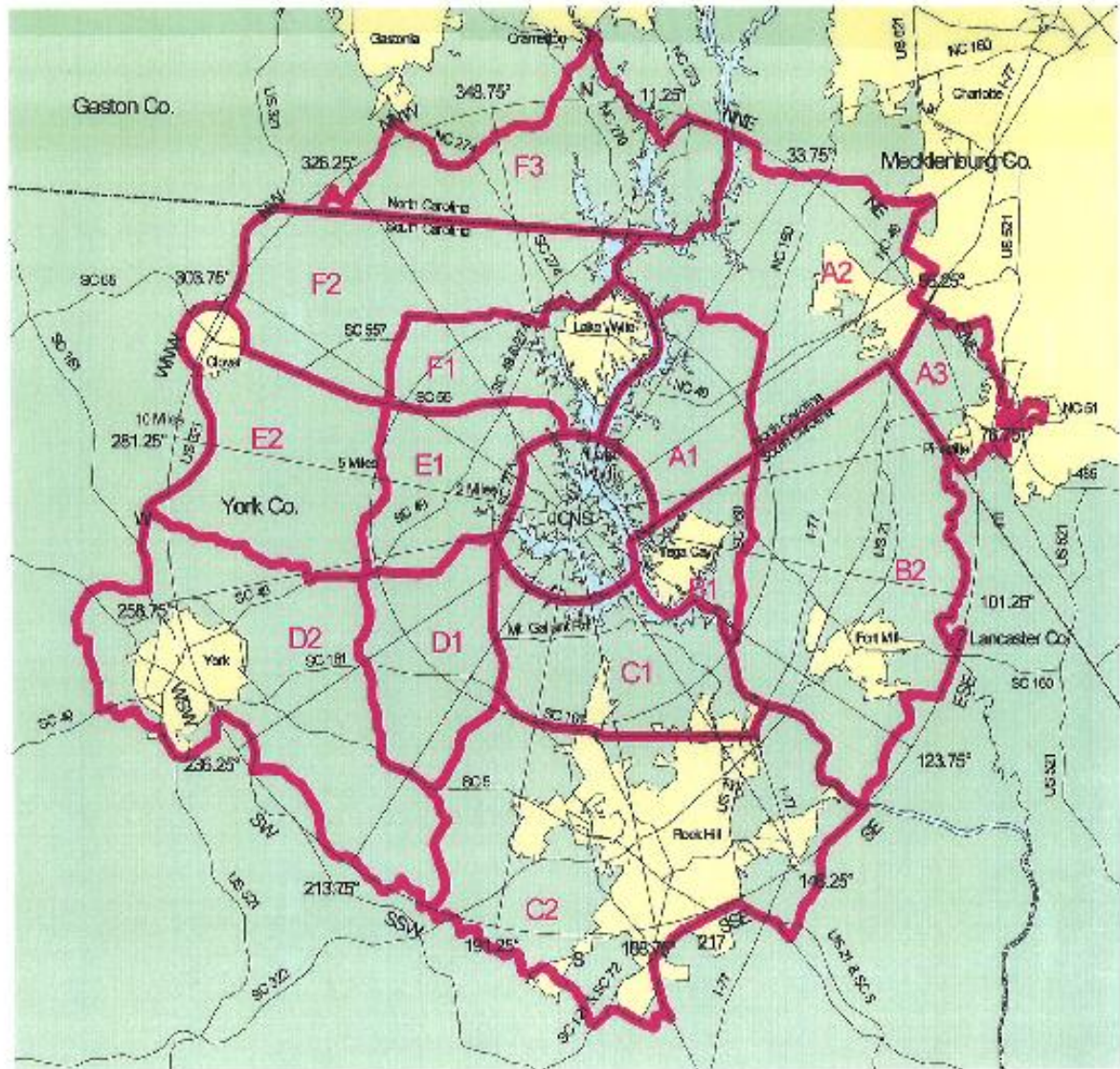
The size of the ingestion exposure EPZ (about 50 miles in radius, which also includes the 10-mile radius plume exposure EPZ [Refer to Figure i-2]) was selected because:

- a. the downwind range within which contamination will generally not exceed the Protective Action Guides is limited to about 50 miles from a power plant because of wind shifts during the release and travel periods;
- b. there may be conversion of atmospheric iodine (i.e., iodine suspended in the atmosphere for long time periods) to chemical forms which do not readily enter the ingestion pathway;
- c. much of any particulate materials in a radioactive plume would have been deposited on the ground within about 50 miles from the facility; and
- d. the likelihood of exceeding ingestion pathway protective action guide levels at 50 miles is comparable to the likelihood of exceeding plume exposure pathway protective action guide levels at 10 miles.

The NRC has concluded that it would be unlikely that any protective actions for the plume exposure pathway would be required beyond the plume exposure EPZ. Also, the plume exposure EPZ is of sufficient size for actions within this zone to provide for substantial reduction in early severe health effects (injuries or deaths) in the event of a worst case core melt accident.

DUKE ENERGY
CATAWBA NUCLEAR STATION
FIGURE i-1

10 MILE EPZ



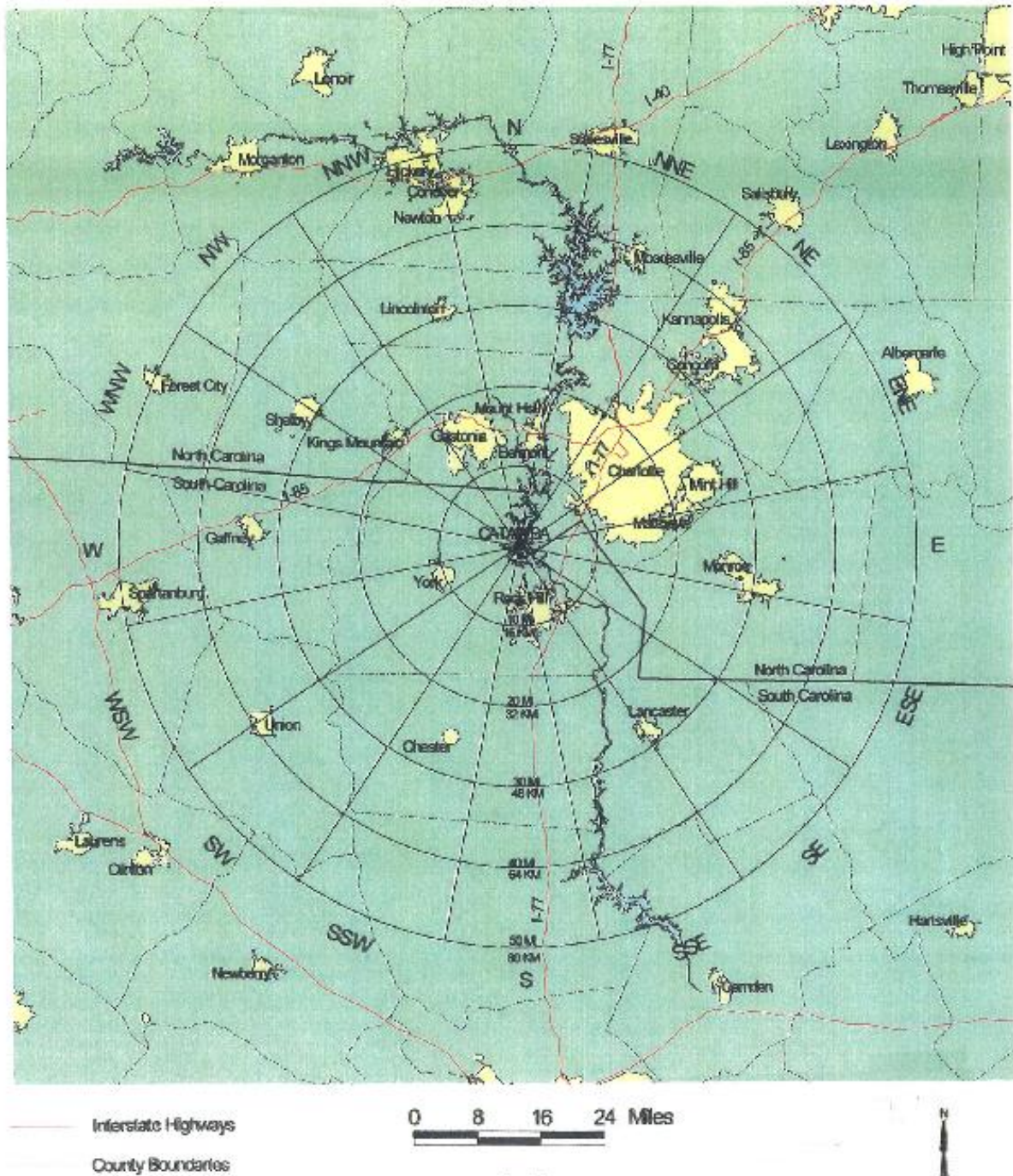
Zone or EPZ Boundary
and Zone Numbers

0 2 4 6 Miles



DUKE ENERGY
CATAWBA NUCLEAR STATION
FIGURE I-2

50 MILE EPZ



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Catawba Nuclear Station
Emergency Plan
Section A - Assignment of Responsibility

A. Assignment of Responsibility

Planning Objective

To assure that State, Local, Federal, private sector, Duke Energy Corporate and Catawba Nuclear Station organizations that are part of the overall response organization within the Catawba Emergency Planning Zone are identified.

A.1.a Organization

The principal organizations that are part of the overall response organization within the Catawba Emergency Planning Zone are listed below:

Federal

NRC (Nuclear Regulatory Commission)
FEMA (Federal Emergency Management Agency)
DOE (Department of Energy)

NOTE: NRC, FEMA, and DOE will coordinate response of other Federal Agencies per the Federal Radiological Emergency Response Plan (FRERP).

South Carolina State

S.C. Emergency Management Division of the S.C. Adjutant General's Office (Note 1)
S.C. Department of Health and Environmental Control, Bureau of Radiological Health

North Carolina State

N.C. Department of Crime Control and Public Safety, Division of Emergency Management (Note 1)
N.C. Department of Environment, Health and Natural Resources, Division of Radiation Protection

Local Government

The county governments and municipal governments (within the counties) to include the emergency service departments and other agencies interrelated to these local governments within the 10-mile EPZ (plume exposure pathway) of Catawba Nuclear Station are:

York
Gaston
Mecklenburg

The county governments (and municipal governments within the counties) to include the emergency service departments and other agencies interrelated to these local governments within a 50-mile EPZ (ingestion exposure pathway) of Catawba Nuclear Station are:

South Carolina (Note 2)

Cherokee	Lancaster
Chester	Newberry
Chesterfield	Spartanburg
Fairfield	Union
Kershaw	York

North Carolina (Note 2)

Anson	Cleveland	Mecklenburg	Union
Burke	Gaston	Rowan	
Cabarrus	Iredell	Rutherford	
Catawba	Lincoln	Stanley	

Note 1: This agency has the principal state responsibility for emergency response.

Note 2: Agreement letters with these agencies are not a part of the Catawba Nuclear Station Emergency Plan unless specifically noted in A-3.

Private Sector

The principal organizations in the private sector that are part of the overall response organization for the EPZ are:

Westinghouse
 AT & T
 The Independent Telephone Companies
 Radio and Television Stations
 Bethel Volunteer Fire Department
 Various vendors such as GTS and Bartlett
 Atrium Health's Carolinas Medical Center
 Member's Southeastern Electric Exchange
 The Salvation Army
 The American Red Cross
 Piedmont Medical Center (Rock Hill, SC)

Non-Government Organizations

INPO (Institute of Nuclear Power Operations), risk management companies and the ANI (American Nuclear Insurers)

A.1.b Concept of Operations

All emergencies or accident situations at the station are handled initially by the Shift Manager. When an abnormal situation occurs, the Shift Manager is able, utilizing station operating and emergency procedures and from background, training and experience, to determine if the abnormal situation is an emergency condition. During the course of the emergency condition and as response personnel are notified, and emergency centers are staffed (OSC, TSC, EOF), the Shift Manager is the person in charge, and assumes the functions of the Emergency Coordinator until the arrival of the Station Manager/designee. When the Station Manager/designee arrives and relieves the Shift Manager of the Emergency Coordinator function, he/she becomes the person in charge or the decision-maker. When the Emergency Operations Facility (EOF) is activated and operational, the EOF Director at the EOF is responsible for company emergency response.

The Control Room at the station is the initial center for coordination of emergency response for all emergency conditions. For emergencies classified as Alert, Site Area Emergency and General Emergency, the Emergency Coordinator shall activate the Emergency Response Organization.

The TSC acts in support of the command and control function of the Control Room and provides an area for other station personnel who have expertise in all areas of plant operation to support the emergency response. This facility is equipped with communication equipment, Operator Aid Computer (OAC) terminals, line printers, off-site and on-site computer access, plant drawings, procedures and other materials and equipment to support its function. Personnel in the TSC will be able to assess the accident condition and make responsible recommendations to the Control Room, the EOF and off-site agencies as necessary to provide for the safety of plant personnel and members of the general public. After the EOF is operational and activated, it will assume many of the functions of the TSC and will rely on the TSC as a vital link to the station. The TSC will provide the EOF with up-to-date plant parameters, which will allow this facility to perform its assigned tasks.

The responsibility of the Control Room, TSC and EOF for the various emergency response functions is further detailed in Figure A-1.

A.1.c Block Diagram of Organization Interrelationships

See Table B-1a and B1b and Figures B-1, B-2, B-3, B-4, B-5a and B-5b.

A.1.d Key Decision-Making

During the course of any emergency condition at Catawba, several persons have the potential to be "in charge" or to be the "Key Decision Maker". Prior to TSC activation and arrival of the Station Manager/designee, the Shift Manager assumes the functions of the Emergency Coordinator at the Station and is in charge. When the Station Manager/designee arrives on-site and assumes the Emergency Coordinator function, he/she becomes the person in charge of emergency response and becomes the key decision-maker. After EOF is operational and activated, the EOF Director is responsible for company emergency response.

A.1.e 24 Hour Emergency Response

The Catawba Station emergency response organization beginning with the Control Room through the TSC is capable of responding to an emergency 24 hours per day, 7 days per week. Section E.2 describes the notification scheme within the station emergency response organization.

A.2.a Responsibility For and Functions of State and Local Government Emergency Response Organization

(See State and County Plans)

A.2.b Legal Basis For Authority

(See State and County Plans)

A.3 Agreement Letters For Emergency Response Support from Off-site Agencies

Section Q, Appendix 5 contains letters of agreement with the following organizations:

Piedmont Medical Center
Atrium Health's Carolinas Medical Center
York County Emergency Management
Bethel Volunteer Fire Department
Charlotte-Mecklenburg Emergency Management Office
Gaston County Emergency Management
North Carolina Division of Emergency Management
South Carolina Emergency Management Division
York County Sheriff

1. Duke Energy has established numerous support agreements and contracts with organizations that may be required to provide assistance in the event of an emergency.
2. All agreements or contracts are reviewed annually to assure each contributes the desired support to the Emergency Preparedness Program.
3. Letters of Agreement and Contracts, including the review frequency, will be documented according to the site's protocol.

A.4 Individual Responsible for Continuity of Resources

The emergency response organization is capable of continuous (24 hours/day) operation for an extended period of time. The EOF Director is the individual responsible for assuring continuity of resources within the emergency response organization.

FIGURE A-1

RESPONSIBILITY FOR EMERGENCY RESPONSE FUNCTIONS

<u>Emergency Response Functions</u>	<u>Emergency Class</u>			
	<u>Unusual Event</u>	<u>Alert</u>	<u>Site Area Emergency</u>	<u>General Emergency</u>
Supervision of reactor operations and manipulation of controls	CR	CR	CR	CR
Management of plant operations	CR (TSC)	TSC	TSC	TSC
Technical support to reactor operations	CR (TSC)	TSC	TSC	TSC
Management of corporate emergency response resources	CR (TSC) (EOF)	EOF	EOF	EOF
Radiological effluent and environs monitoring, assessment and dose projection	CR (TSC) (EOF)	EOF	EOF	EOF
Inform state and local emergency response organizations and make recommendations for public protective actions	CR (TSC) (EOF)	EOF	EOF	EOF
Management of recovery operations	CR (TSC) (EOF)	TSC/EOF	TSC/EOF	TSC/EOF
Technical support of recovery operations	CR (TSC) (EOF)	TSC/EOF	TSC/EOF	TSC/EOF

NOTE: (TSC) (EOF) indicates that activation of these facilities or the performance of this function is optional for the indicated emergency class.

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Catawba Nuclear Station
Emergency Plan
Section J - Protective Response

J. PROTECTIVE RESPONSE

To assure that a range of protective actions is available for the plume exposure pathway for emergency workers and the public. Guidelines for protective actions during an emergency, consistent with Federal guidance, are developed and in place and protective actions for the ingestion exposure pathway appropriate to the locale have been developed.

To protect onsite personnel during hostile action and ensure the continued ability to safely shutdown the reactor and perform the functions of the emergency plan a range of protective actions are in place.

J.1. On-site Alerting and Notification

a-d

The means and time required to warn, alert and/or notify employees not having emergency assignments (non-essential), visitors, contractor and construction personnel and other individuals who may be on or passing through the owner-controlled area are described in Emergency Response Procedure RP/0/A/5000/010, Conducting a Site Assembly/Evacuation.

Methods to notify and alert onsite personnel (essential and non-essential) during hostile action activities are described in RP/0/B/5000/026, Site Response to Security Events, AP/0/A/5500/046, Hostile Aircraft Activity and RP/0/A/5000/010, Conducting a Site Assembly or Preparing the Site for an Evacuation.

J.2 Evacuation Routes and Transportation

The Operations Shift Manager/Emergency Coordinator or designee uses station and local area maps, information available from meteorological tower instrument readouts and current radiological data for determining the evacuation route. Provisions for evacuation of on-site individuals include evacuation by private automobile. Personnel would then drive along Concord Road (SR 1132) west (which is not in one of the prevailing wind directions) to SC Highway 274. Personnel would then drive either South approximately 11 miles and assemble at the Duke Energy, York Operations Center or North approximately 10 miles to the Duke Energy, Allen Plant. The relocation site will have decontamination and contamination control capability and equipment in the event it is needed. Evacuation by automobile requires 15 to 30 minutes depending on which Relocation Site is chosen. High traffic density is not considered in estimating evacuation times due to the relatively untraveled area selected for the site (UFSAR Section 2.2.2.1).

J.3 Personnel Monitoring

Radiation Protection emergency personnel survey teams equipped with portable monitoring instruments will monitor employees, visitors, construction workers and vehicles for contamination at the Relocation Sites. Monitoring will be performed in accordance with procedure HP/0/B/1009/005 Personnel/Vehicle Monitoring for Emergency Conditions.

J.4 Site Evacuation Procedures - Decontamination/Non-Essential Personnel Criteria

Non-essential personnel may be evacuated from the plant site in the event of a Site Area Emergency and will be evacuated in the event of a General Emergency. Provisions are made for the decontamination of vehicles and personnel at an off-site location if the situation should warrant.

All members of the general public who are on-site must be evacuated if there is a possibility they may exceed either of the following limits:

External Radiation Level = 2 mrems/hr

Airborne Radioactivity = 1 times DAC for an unrestricted area

During hostile threat conditions expedited relocation of personnel to locations away from the hazards area are performed in accordance with RP/0/B/5000/026, Site Response to Security Events, AP/0/A/5500/046, Hostile Aircraft Activity and RP/0/A/5000/010, Conducting a Site Assembly or Preparing the Site for an Evacuation.

J.5 Personnel Accountability

Within thirty minutes of a Site Assembly, all persons within the Protected Area of Catawba Nuclear Station can be accounted for and any person(s) determined to be missing, will be identified by name. RP/0/A/5000/010 provides for the accounting of personnel (on site) continuously thereafter.

During hostile threat conditions personnel accountability is performed in accordance with RP/0/A/5000/010, Conducting a Site Assembly or Preparing the Site for an Evacuation.

J.6 Protective Measures - Breathing Apparatus, Protective Clothing, KI

Protective equipment and supplies will be distributed (as needed) to personnel remaining or arriving on site during the emergency to minimize the effects of radiological exposures or contamination. Protective measures to be utilized are as follows:

- Protective measures will be utilized to minimize the ingestion and/or inhalation of radionuclides and to maintain internal exposure below the limits specified in 10CFR20, Appendix B.
- Engineering (ventilation) controls are utilized in the TSC and Control Room to control concentrations of radioactive material in air. Otherwise, when not practical to apply process or other engineering controls to limit intakes of radioactive material in air, one or more of the following protective measures will be utilized:
 - Control of access
 - Limitation of exposure times
 - Use of individual respiratory protection equipment. Specific positions within the TSC and OSC are required to be respirator qualified. These positions are:

TSC - Operations Manager, Assistant Operations Manager, Engineering Manager, Mechanical Engineer, Electrical Engineer and Reactor Engineer
OSC - All positions except the OSC Log Keeper

- Self-contained breathing apparatus will be used in areas that are deficient in oxygen or when fighting fires. Respiratory protective equipment will be issued by Radiation Protection or Safety and Health Services. SCBA's are available with other firefighting equipment for use by the station fire brigade.
- Individual Thyroid Protection - Protective measures will be utilized to minimize the ingestion and/or inhalation of radioactive iodine. However, if an unplanned incident involves the accidental or potential ingestion or inhalation of radioactive iodine, Potassium Iodide Tablets (KI) are available for distribution by AD-EP-ALL-0204 (Distribution of Potassium Iodide Tablets in the Event of a Radioiodine Release).
- Use of Protective Clothing - Protective clothing will be issued when contamination levels exceed 1000 dpm/100 cm² beta-gamma and 20 dpm/100 cm² alpha of smearable contamination. Protective clothing items are located in the Change Rooms inside the Radiation Control Area, available for emergency use. Special fire-fighting protective clothing and equipment is available in designated station supply storage areas for use by fire brigade personnel.

J.7 Protective Action Recommendations

The Emergency Coordinator (Operations Shift Manager or Station Manager) or the EOF Director shall be responsible for contacting the state and/or local governments to give prompt notification for implementing protective measures within the plume exposure pathway.

Protective Action Guides are adopted from EPA 400-R-92-001. A flowchart to aid the Emergency Coordinator in making Protective Action Recommendations is also shown in AD-EP-ALL-0109, Off Site Protective Actions Recommendations.

As described in section B.4, the Emergency Coordinator and the EOF Director are responsible for making protective action recommendations. Prior to activation/operation of the EOF, the Emergency Coordinator will be responsible for making these recommendations. After activation of the EOF, the EOF Director assumes this responsibility. Protective action recommendations will be provided to the off-site authorities (states and counties) who are responsible for implementing public protective actions. Refer to AD-EP-ALL-0202, Emergency Response Offsite Dose Assessment, for protective action recommendations concerning the use of KI by the public. The pre-established warning message format (Figure E-1) will be used in transmitting the recommendations.

The mechanism for making dose projections upon EOF activation is as follows:

The Radiological Assessment Manager is responsible for making dose projections on a periodic basis. These calculations will use existing plant procedures to calculate projected dose to the population-at-risk for either potential or actual release conditions. For conditions in which a release has not occurred but fuel damage has taken place and radiation levels in the containment building atmosphere are significant, a scoping analysis will be performed to determine what recommendations would be made if containment integrity were lost at that time. The analysis will be based upon a design leak rate and upon a projected penetration failure indicated by a hole size of certain diameter. This analysis will include the use of actual containment pressure, realistic meteorology, and actual source term. A Total Effective Dose Equivalent (TEDE) and Committed Dose Equivalent (CDE) thyroid will be calculated at various distances from the plant (site boundary, 2 miles, 5 miles, 10 miles and beyond, if needed). These dose projections are compared to the Protective Action Guides in Procedure AD-EP-ALL-0202, which are derived from the "Manual of Protective Action Guides and Protective Actions for Nuclear Incidents" (EPA 400-R-92-001). Based on these comparisons, protective action recommendations are developed by the Radiological Assessment Manager. If these recommendations involve sheltering, evacuation of the public around the plant or the administration of KI to the public, the Radiological Assessment Manager informs the EOF Director of the situation and recommendations for protective actions.

If dose projections show that PAGs have been exceeded at 10 miles, the dose assessment code and in-field measurements, when available, shall be used to calculate doses at various distances downwind to determine how far from the site PAG levels are exceeded. The Radiological Assessment Manager shall forward the results to the EOF Director who will communicate this information to the off-site authorities.

J.8 Evacuation Time Estimates

A description of the methods and assumptions used in developing the analysis of evacuation time estimates is included in the current Evacuation Time Estimate Study for the Catawba Nuclear Site. (CNS-ETE-12132012, Rev. 000, Part 1 of 2 and Part 2 of 2)

The "evacuation time" is the time between the start of the notification process and the moment the last evacuee crosses out of the area being evacuated. Thus, it includes notification time and time spent preparing to leave, not just travel time.

An updated ETE analysis will be submitted to the NRC under §50.4 no later than 365 days after CNS determination that the criteria for updating the ETE have been met and at least 180 days before using it to form protective action recommendations and providing it to State and local governmental authorities for use in developing offsite protective action strategies.

The criteria for determination that an updated ETE analysis have been met:

- a. The availability of the most recent decennial census data from the U.S. Census Bureau;

OR

- a. If at any time during the decennial period, the EPZ permanent resident population increases such that it causes the longest ETE value for the 2-mile zone or 5-mile zone, including all affected Emergency Response Planning Areas, or for the entire 10-mile EPZ to increase by 25 percent or 30 minutes, whichever is less, from the currently NRC approved or updated ETE.

During the years between decennial censuses CNS will estimate EPZ permanent resident population changes once a year, but no later than

365 days from the date of the previous estimate, using the most recent U.S. Census Bureau annual resident population estimate and State/local government population data, if available. CNS will maintain these estimates so that they are available for NRC inspection during the period between decennial censuses and shall submit these estimates to the NRC with any updated ETE analysis.

CNS' ETE analysis, using the 2010 decennial census data from the U. S. Census Bureau, was submitted to the NRC via §50.4 on December 13, 2012.

J.9 Implementing Protective Measures

If protective actions for any off-site location are deemed necessary, the emergency planning agency of the affected county, in conjunction with the appropriate State agencies (SC-Emergency Planning Division, NC-Department of Crime Control and Public Safety) has the legal authority and responsibility for initiating protective measures for the general public in the plume exposure pathway EPZ including evacuation of these areas. The decision to shelter the public as an alternative to evacuation will be made by the off-site agencies for special populations or when an impediment to evacuation exists. Sheltering in lieu of evacuation should also be considered during a short term release. A short term release is any release that can be accurately projected to be less than the affected protective action zone's evacuation time. An example would be a "puff release." In addition, sheltering may be appropriate (when available) for areas not designated for immediate evacuation because: 1) it positions the public to receive additional instructions; and 2) it may provide protection equal to or greater than evacuation. Public notification of the emergency, the resources used to determine if an evacuation is necessary, the evacuation routes, and the methods used for evacuating persons in the plume exposure pathway EPZ are outlined in the appropriate County and State emergency plans.

For hostile action events, a range of protective actions for onsite workers including evacuation of essential personnel from potential target buildings, timely relocation of non-essential site personnel, dispersal of critical personnel to safe locations, sheltering of personnel away from potential site targets and accountability of personnel after the attack are provided in Emergency Plan Implementing Procedures RP/0/B/5000/026, Site Response to Security Events, RP/0/A/5000/010, Conducting a Site Assembly or Preparing the Site for an Evacuation and AP/0/A/5500/046, Hostile Aircraft Activity.

J.9.a Carowinds: Special Consideration

Comprehensive plans provide for early notification to Carowinds of a radiological emergency at Catawba and for evacuation of Carowinds. The plans describe the responsibilities of the emergency response organizations of Mecklenburg and York Counties and provide for the coordination of their efforts among themselves and with Carowinds' officials. The plans provide for immediate notification of patrons and staff of Carowinds at the time of the precautionary closing of the park and of the cause of the emergency. Both states and counties located in the ten-mile EPZ agreed that the Charlotte-Mecklenburg Emergency Management Office (CMEMO) will perform the lead planning role regarding a recommended course of action for Carowinds theme park. Refer to Carowinds Standard Operating Procedure (SOP).

See County and State Plans for more detailed information.

J.10 Implementation of Protective Measures for Plume Exposure Pathway

J.10.a EPZ Maps

Figures i-1 and 2 describe the EPZ's, government jurisdictions, and evacuation zones for Catawba Nuclear Station. Evacuation routes are displayed in Figure J-3.

J.10.b EPZ - Population Distribution Map

See Appendix 4, Evacuation Time Estimates.

J.10.c EPZ - Population Alerting and Notification

As described in Appendix 3 of this plan, a system exists for alerting and notifying the population (resident and transient) within the EPZ areas. This system is activated by the county and state organization and includes the use of large fixed-site sirens and the Emergency Alert System. A back-up means of alerting and notification is described in the State and County Emergency Plans.

J.10.d EPZ - Protecting Immobile Persons

The state and county organization referenced in Section A of this plan have the capability to protect those persons whose mobility may be impaired. The State and County Plans provide for transportation from the person's location to a reception center or shelter.

J.10.e Use of Radioprotective Drugs For Persons in EPZ

See State and County plans.

J.10.f Conditions For Use of Radioprotective Drugs

See County and State Plans.

J.10.g State/County Relocation Plans

See County and State Plans.

J.10.h Relocation Center Locations

See County and State Plans.

J.10.i Evacuation Route - Traffic Capacities

See County and State Plans.

J.10.j Evacuated Area Access Control

See County and State Plans.

J.10.k Planning For Contingencies in Evacuation

See County and State Plans.

J.10.l State/County Evacuation Time Estimates

The estimates referenced in Appendix 4 are references in the County and State Plans.

J.10.m Bases For Protective Action Recommendations

AD-EP-ALL-0109, Off Site Protective Actions Recommendations, describes the considerations used by Duke management in developing protective action recommendations.

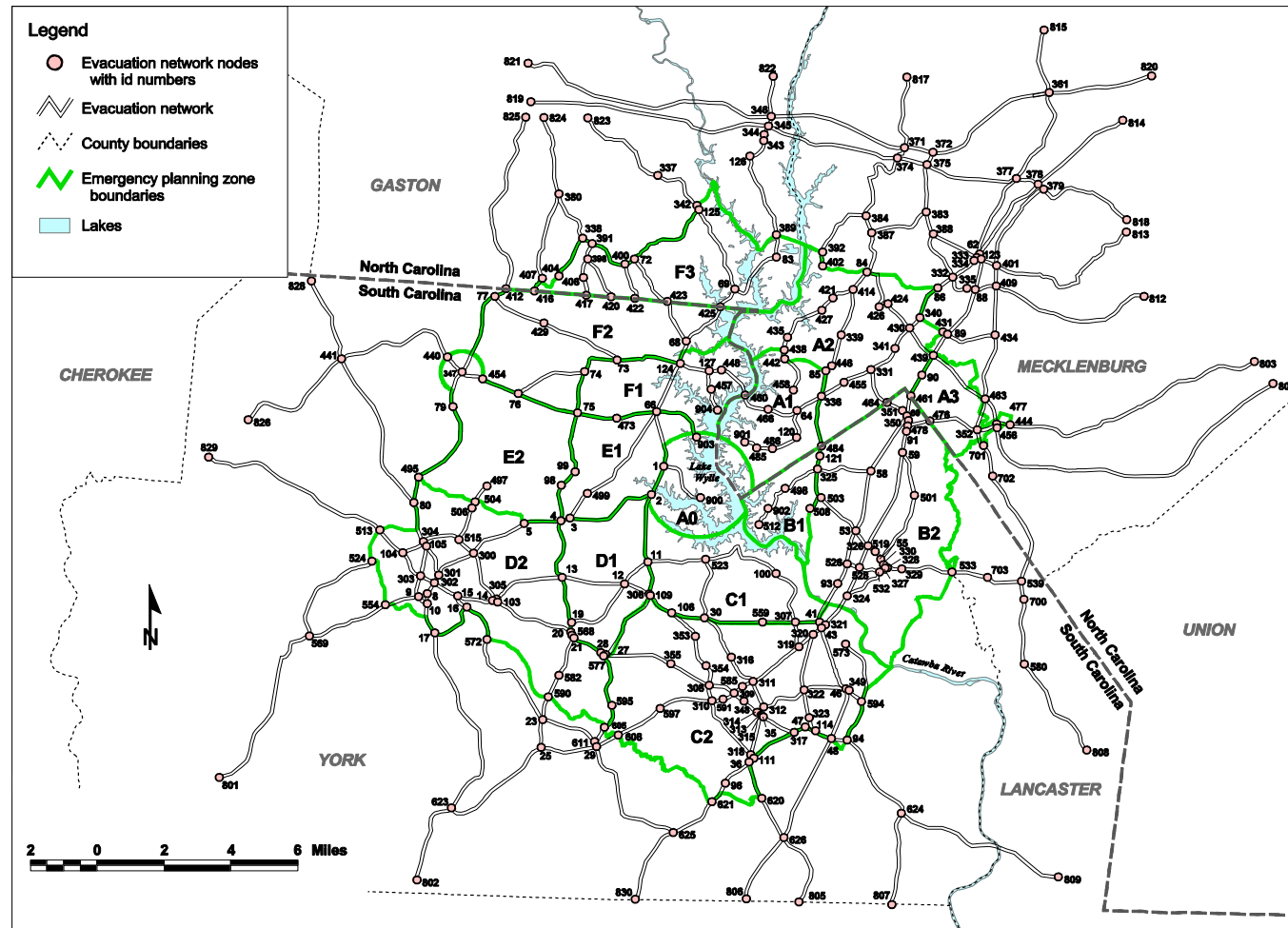
J.11 Ingestion Pathway Planning

See County and State Plans.

J.12 Relocation Center - Registering & Monitoring

See County and State Plans

DUKE ENERGY
CATAWBA NUCLEAR SITE
FIGURE J-3
Catawba Nuclear Station Evacuation Road Network and Nodes



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Catawba Nuclear Station
Emergency Plan
Section L - Medical and Public Health Support

L. MEDICAL AND PUBLIC HEALTH SUPPORT

L.1 Hospital and Medical Support

Hospitals -

Piedmont Medical Center; Rock Hill, SC - (Agreement #1, App. 5)
Atrium Health's Carolinas Medical Center - (Agreement #2, App. 5)

Ambulance Service

Piedmont Medical Center; Rock Hill, S.C. (Agreement #1 App. 5)

L.2 On-site First-Aid Capability

The on-site medical facilities include two First Aid areas and a bioassay facility. One First Aid facility, located outside of the protected area northwest of the Administration Building, is used for the treatment of persons injured in accidents or emergencies not involving radioactive contamination. This facility is equipped with a sink, a treatment chair, lavatory, and medical/first aid supplies. The second First Aid area, located in the Auxiliary Building, is used for treatment of persons injured in accidents or emergencies involving radiological contamination. This facility has a decontamination area with a shower, a treatment table and medical/first aid supplies.

The bioassay facility, located in the Administration Building, is used in emergencies to determine if personnel have inhaled or ingested radioactive materials, or if such materials have entered wounds or been absorbed through the skin. The bioassay facility is equipped with a shielded body-burden analyzer and a thyroid-burden analyzer; liquid scintillation counting capabilities for tritium analyses are available in the Radiation Protection area and laboratory in the Radiation Control Area.

L.3 Public, Private, Military Hospitals; Emergency Medical Facilities

See State of South Carolina and State of North Carolina FNF Plans.

L.4 Transport of Accident Victims

Catawba Nuclear Station has agreements with the Piedmont Medical Center to provide transportation for any medical emergency patient (may or may not be contaminated).

If contaminated, efforts will be made to decontaminate the victim before transportation as long as the decontamination does not obstruct the medical attention given the victim or cause an unnecessary delay in transporting. During transportation Radiation Protection department personnel may accompany the victim and prevent the further spread of contamination using procedure HP/0/B/1009/008, "Contamination Control of Injured Individuals."

Any item(s) found to be contaminated after the treatment of a contaminated patient at the Piedmont Medical Center or any other medical facility will be decontaminated or replaced by Duke Energy.

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CATAWBA NUCLEAR STATION

APPENDIX INDEX

Appendix 1	Definitions
Appendix 2	Meteorological System Description
Appendix 3	Alert and Notification System Description
Appendix 4	Evacuation Time Estimates
Appendix 5	Agreement Letters

APPENDIX 1

1.0 DEFINITIONS

AFFECTED PERSONS

Persons who have received radiation exposure or have been physically injured as a result of an accident to a degree requiring special attention as individuals, e.g., decontamination, first aid or medical services.

ALERT

Events are in process 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 limited to small fractions of the EPA protection action guideline exposure levels.

ALL (As relates to Operating Mode Applicability)

Modes 1,2,3,4,5,6 and No Mode (Defueled)

ANNUAL

For periodic emergency planning requirements, annual is defined as twelve months with a maximum interval of 456 days.

ASSESSMENT ACTION

Those actions taken during or after an accident to obtain and process information that is necessary to make decisions to implement specific emergency measures.

BIENNIAL

For periodic emergency planning requirements, biennial is defined as at least once every two years, with a maximum interval of 912 days. (Note that this does not apply to the scheduling of biennial exercises. An exercise can occur at any time during the second calendar year after the previous exercise.)

BOMB

Refers to an explosive device suspected of having sufficient force to damage plant systems or structures.

CARF

Containment Air Return Fan

CIVIL DISTURBANCE

A group of ten (10) or more people violently protesting station operations or activities at the site. A civil disturbance is considered to be violent when force has been used in an attempt to injure site personnel or damage plant property.

CORRECTIVE ACTIONS

Emergency measures taken to ameliorate or terminate an emergency situation at or near the source of the problem to prevent an uncontrolled release of radioactive material or to reduce the magnitude of the release, e.g., shutting down equipment, fire-fighting, repair and damage control.

CREDIBLE THREAT

A threat should be considered credible when:

- Physical evidence supporting the threat exists.
- Information independent (law enforcement) from the actual threat message exists that supports the threat.
- A specific group or organization claims responsibility for the threat.

DRILL

A drill is a supervised instruction period aimed at testing, developing, and maintaining skills in a particular operation.

EMERGENCY ACTION LEVELS (EALs)

A pre-determined, site-specific, observable threshold for a plant Initiating Condition that places the plant in a given emergency class. An EAL can be: an instrument reading; an equipment status indicator; a measurable parameter (onsite or offsite); a discrete, observable event; results of analyses; entry into specific emergency operating procedures; or another phenomenon which, if it occurs, indicates entry into a particular emergency class.

EMERGENCY OPERATIONS FACILITY (EOF)

The Emergency Operations Facility is the facility utilized for direction and control of all emergency and recovery activities with emphasis on the coordination of off-site activities such as dispatching mobile emergency monitoring teams, communications with local, state and federal agencies, and coordination of corporate and other outside support.

EMERGENCY PLANNING ZONE (EPZ)

The area for which planning is needed to assure that prompt and effective actions can be taken to protect the public in the event of an accident. The plume exposure EPZ is about 10 miles in radius and the ingestion exposure EPZ is about 50 miles in radius.

EMERGENCY RELEASE

Any unplanned, quantifiable radiological release to the environment during an emergency event. The release does not have to be related to a declared emergency.

EPA PAG

Environmental Protection Agency Protective Action Guidelines for exposure to a release of radioactive material.

EXCLUSION AREA

The nuclear station property, including the site, out to a radius of 2500 feet that meets the 10CFR100 definition.

EXPLOSION

A rapid, violent unconfined combustion or a catastrophic failure of pressurized equipment (e.g., a steamline or feedwater line break) that imparts energy sufficient to potentially damage or creates shrapnel to actually damage permanent structures, systems or components. An electrical breaker flash that creates shrapnel and results in damage to other components beyond scorching should also be considered.

EXERCISE

An exercise is an event that tests the integrated capability and a major portion of the basic elements existing within emergency preparedness plans and organizations.

EXTORTION

An attempt to cause an action at the site by threat of force.

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 flames is preferred but is NOT required if large quantities of smoke and heat are observed. An electrical breaker flash that creates high temperatures for a short duration and merely localized scorching to that breaker and its compartment should not be considered a fire.

FRESHLY OFF-LOADED REACTOR CORE

The complete removal and relocation of all fuel assemblies from the reactor core and placed in the spent fuel pool. (Typical of a "No Mode" operation during a refuel outage that allows safety system maintenance to occur and results in maximum decay heat load in the spent fuel pool system.)

FUNCTIONAL

A component is fully capable of meeting its design function. It would be declared INOPERABLE if unable to meet Technical Specifications.

GENERAL EMERGENCY

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

HOSTAGE

A person or object held as leverage against the site to ensure demands will be met by the site.

HOSTILE ACTION

An act toward an NPP or its personnel that includes the use of violent force to destroy equipment, take **HOSTAGES**, and/or intimidates 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 the NPP. Non-terrorism-based EALs should be used to address such activities (e.g., 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

Mitigation actions have been ineffective, additional actions are not expected to be successful, and trended information indicates that the event or condition will occur. Where **IMMINENT** time frames are specified, they shall apply.

INGESTION EXPOSURE PATHWAY

The principle exposure from this pathway would be from ingestion of contaminated water or foods such as milk or fresh vegetables. The time of potential exposure could range in length from hours to months.

INOPERABLE

A component does not meet Technical Specifications. The component may be functional, capable of meeting its design.

INABILITY TO DIRECTLY MONITOR

Operational Aid Computer data points are unavailable or gauges/panel indications are not readily available to the operator.

INTRUSION

A person(s) present in a specified area without authorization. Discovery of a **BOMB** in a specified area is indication of **INTRUSION** into that area by a **HOSTILE FORCE**.

ISFSI

Independent Spent Fuel Storage Installation - Includes the components approved for loading and storage of spent fuel assemblies.

LOSS

A component is INOPERABLE and not FUNCTIONAL.

MONTHLY

For periodic emergency planning requirements, monthly is defined as once each month, with a maximum interval of 38 days.

NO MODE

Defueled.

OPERATIONAL SUPPORT CENTER (OSC)

In the event of an emergency, shift support personnel (e.g., auxiliary operators and technicians) other than those required and allowed in the control room shall report to this center for further orders and assignment.

OWNER CONTROLLED AREA (OCA)

Area outside the protected area fence that immediately surrounds the plant. Access to this area is generally restricted to those entering on official business.

PLUME EXPOSURE PATHWAY

The principle exposure sources from this pathway are (a) external exposure to gamma radiation from the plume and from deposited material and (b) inhalation exposure from the passing radioactive plume. The time of potential exposure could range from hours to days.

POPULATION-AT-RISK

Those persons for whom protective actions are being or would be taken.

PROJECTILE

An object directed toward an NPP that could cause concern for its continued operability, reliability or personnel safety.

PROLONGED

A duration beyond normal limits, defined as "greater than 15 minutes" or as determined by the judgment of the Emergency Coordinator.

PROTECTED AREA

Typically, the site specific area which normally encompasses all controlled areas within the security **PROTECTED AREA** fence.

PROTECTIVE ACTIONS

Those emergency measures taken after an uncontrolled release of radioactive materials has occurred for the purpose of preventing or minimizing radiological exposures to persons that would be likely to occur if the actions were not taken.

PROTECTIVE ACTION GUIDES (PAG)

Projected radiological dose or dose-commitment values to individuals in the general population that warrant protective action following a release of radioactive material. Protective actions would be warranted provided the reduction in individual dose expected to be achieved by carrying out the preventive action is not offset by excessive risks to individual safety in taking the protective action. The PAG does not include the dose that has unavoidably occurred prior to the assessment.

QUARTERLY

For periodic emergency planning requirements, quarterly is defined as once every three months, with a maximum interval of 112 days.

REACTOR COOLANT SYSTEM (RCS/NCS) LEAKAGE

RCS Operational Leakage as defined in the Technical Specification Basis B 3.4.13.

RECOVERY ACTIONS

Those actions taken after the emergency to restore affected property as nearly as practicable to its pre-emergency condition.

RUPTURED (As relates to Steam Generator)

Existence of primary to secondary leakage of a magnitude sufficient to require or cause a reactor trip and safety injection.

SABOTAGE

Deliberate damage, misalignment or misoperation of plant equipment with the intent to render the equipment unavailable. Equipment found tampered with or damaged due to malicious mischief may not meet the definition of **SABOTAGE** until this determination is made by security supervision.

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**.

SEMI-ANNUAL

For periodic emergency planning requirements, semi-annual is defined as once every 6 months, with a maximum interval of 228 days.

SIGNIFICANT PLANT TRANSIENT

An unplanned event involving one or more of the following: (1) Automatic turbine runback >25% thermal reactor power, (2) Electrical load rejection >25% full electrical load; (3) Reactor Trip, (4) Safety Injection, (5) Thermal power oscillations >10%.

SITE

That part of the nuclear station property consisting of the Reactor, Auxiliary, Turbine, Service Buildings and grounds, contained within the outer security area fence.

SITE AREA EMERGENCY

Events are in process 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 the equipment needed for the protection of the public. Any releases are not expected to result in exposure levels which exceed EPA Protective Action Guideline exposure levels beyond the site boundary.

SITE BOUNDARY

That area, including the protected area, in which Duke Energy has the authority to control all activities, including exclusion or removal of personnel and property.

SLC

Selected Licensee Commitments.

SUSTAINED

A duration of time long enough to confirm that the CSF is valid (not momentary).

TECHNICAL SUPPORT CENTER (TSC)

This on-site center is for use by plant management, technical and engineering support personnel. In an emergency, this center shall be used for assessment of plant status and potential off-site impact in support of the control room command and control function.

TERMINATION

Exiting the emergency condition.

TOTAL EFFECTIVE DOSE EQUIVALENT (TEDE)

The sum of external dose exposure to radioactive plume, to radionuclides deposited on the ground by the plume, and the internal exposure inhaled radionuclides deposited in the body.

TOXIC GAS

A gas that is dangerous to life or health by reason of inhalation or skin contact (e.g. chlorine).

UNCONTROLLED

Event is not the result of planned actions by the plant staff.

UNPLANNED

An event or action is UNPLANNED if it is not the expected result of normal operations, testing or maintenance. Events that result in corrective or mitigative actions being taken in accordance with abnormal or emergency procedures are UNPLANNED.

UNUSUAL EVENT

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

VIOLENT

Force has been used in an attempt to injure site personnel or damage plant property.

VISIBLE DAMAGE

Damage to equipment or structure that is readily observable without measurements, testing or analyses. Damage is sufficient to cause concern regarding the continued operability or reliability of affected structure, system, or component. Example damage: deformation due to heat or impact, denting, penetration, rupture, cracking, paint blistering.

VITAL AREA

Areas within the PROTECTED AREA that house equipment important for nuclear safety. Access to a VITAL AREA is allowed only if an individual has been authorized to be in that area per the security plant. Therefore, VITAL AREA is a security term.

WEEKLY

For periodic emergency planning requirements, weekly is defined as once every 7 days, with a maximum interval of 9 days.

APPENDIX 2
CATAWBA NUCLEAR STATION
METEOROLOGICAL PROGRAM

INTRODUCTION

In response to guidance provided by NUREG-0654, Revision 1 and supporting documents, Regulatory Guide 1.23, Proposed Revision 1, Regulatory Guide 1.111, Revision 1, and Regulatory Guide 1.109, Duke has reviewed the existing meteorological system at Catawba Nuclear Station and, based on that review, has developed a plan for upgrading the meteorology system.

The meteorological measurement program at Catawba Nuclear Station was originally designed to best describe the meteorological conditions on-site by taking into account source characteristics, terrain features and modeling needs. Duke has changed the meteorological system by upgrading the instrumentation and modifying the data transfer and access methodologies. The modifications include:

- 1) The meteorological microprocessor has been replaced with a digital data link connecting the instrumentation and the station.
- 2) The analog chart recorders have been replaced with a digital chart recorder.
- 3) The data is scanned and averaged by the station process monitoring computer and transferred to databases accessible by the ERO.

EFFLUENT DISPERSION MODEL

The Class A model has calculation capability that can produce initial transport and diffusion estimates for the plume exposure emergency planning zone within fifteen minutes following classification of an incident. The Class B model is a numerical model that represents actual spatial (space) and temporal (time) variations affecting plume distribution; it can provide estimates of deposition and relative concentration of radioactivity within the plume exposure and ingestion planning zones for the duration of the release. More detailed description can be found in INPO 86-008 Dose Assessment Manual.

The effluent dispersion model at Catawba uses a variable trajectory, puff advection dispersion model to simulate atmospheric transport and diffusion of radioisotopes from Catawba Nuclear Station. Plume trajectories are calculated using meteorological data obtained directly from the site meteorological tower. Puffs are transported by the horizontal wind field which varies with time. The diffusion (or spread) of each puff is based on a Gaussian distribution model. The dimensions of individual puffs, which compose the plume, are determined as a function of travel distance and atmospheric stability. Further, the initial dimensions of puffs are adjusted to account for building wake effects. Plume growth during changing atmospheric stability conditions is determined using a virtual source concept. Each puff is released at a rate which is based on current fifteen minute forecasted meteorology. The puff advection model is used for both the real-time and the forecast operating modes. In the real time mode, the model uses actual Operator Aid Computer (OAC) fifteen minute averaged data as it becomes available. For a forecast, the user is required to enter one time set of meteorological data representative of the entire period.

Radioisotopes released to atmosphere are assumed to be distributed in a Gaussian manner, subject to reflection in the vertical direction between the surface boundary and mixing layer lid (i.e., mixing height) above. The diffusion of release materials is expressed in terms of a normalized concentration χ/Q . Normalized concentrations are multiplied by a source strength Q to provide an estimate of cloud concentration $\chi(\text{Ci}/\text{m}^3)$. Puff depletion that takes in consideration the removal of iodines and

particulate from the plume as a result of dry and wet deposition; which is also calculated. Deposition fluxes are provided to assist in the identification of areas where relative high levels of surface contamination might be expected to occur. Diffusion and deposition for each puff are determined after each advection step. Modeled release from Catawba Nuclear Station is assumed to be at or below the containment structure; therefore, all releases are modeled as being emitted from ground-level sources. The model uses modified σ_y and σ_z diffusion parameters to account for building downwash effects on ground level releases. The model dispersion routines include the concept of a mixing height which recognizes that the atmosphere is heated from below as the earth absorbs the sun's ultraviolet radiation. The height above ground for this boundary, between lower unstable and upper stable air is known as the mixing height. The value for mixing height used in the model is based on seasonal afternoon mean at the site. Atmospheric stability is determined from the vertical temperature gradient (delta-temperature) for stability classification. At the end of each advection step, total dry and wet deposition from all puffs are calculated and accumulated at each model receptor location.

INSTRUMENTATION

Figure 2-1 shows the type and number of parameters measured at Catawba Nuclear Station. The meteorological conditions present at Catawba Nuclear Station warrant the use of the basic described meteorological variables. These include wind speed and wind direction measured at high and low levels, and delta-temperature. Ambient air temperature, dew point temperature and precipitation instrumentation are also provided but are not required as input for off-site dose assessment calculations.

DATA HANDLING

Meteorological data used for dose calculations are 15 minute running averages of the variables. The 15 minute running averages are determined by the Operator Aid Computer (OAC) which scans the variables each minute. The data is stored on databases that are accessed by the personnel performing the dose calculations. As a backup, the variables are also recorded each five seconds on a digital chart recorder located in the Control Room. These systems meet the accuracy and other specifications suggested in Regulatory Guide 1.23, Proposed Revision 1.

DOSE ASSESSMENT METHODOLOGY

The first radiological indication of a problem in a reactor building is through increased control room monitor readings from containment particulate and noble gas (EMF) skid package. It is assumed that the first monitor to indicate increase of containment activity is the noble gas monitor because it is a non-integrating, near instantaneous response to increased noble gas radioactivity in containment. Leak rate from containment to the annulus or bypass to the environment may be based on containment design basis leakage, or leakage may be a function of containment pressure and hole size. Unit vent release may be from several ventilation source intakes including annulus and Auxiliary Building ventilation systems. It is possible both Unit 1 and 2 vents could contribute to an off-site release because of shared ventilation. Each unit vent is monitored with particulate and noble gas (EMF) skid package with indication and detection as previously stated. There are four main steam lines per unit (A,B,C,D) with coded Safety Relief valves; Power Operated Relief Valve (PORV), atmospheric steam dump valves and each unit has an auxiliary feedwater pump turbine valve release path. Steamlines have monitors (EMFs) installed, including N^{16} detectors that may provide first indication of primary to secondary leakage. Steam generator tube leakage is monitored through the affected unit Condensate Steam Air Ejector Monitor. Steam Release (MSR) accumulator program on the Operator Aid Computer scans these valves and calculate pounds mass (lbm) released based on valves being read closed or not closed.

The model can be used to calculate Source Term release through up to five release pathways and has capability of maintaining an inventory of up to twenty-four radioisotopes for each selected accident type(s). The model assumes a release to include noble gases, iodines, and particulates unless release path grab sample is obtained and analyzed, and model direct entry of nuclides is selected for Source Term calculation. Dose calculation methods attempt to predict dose concentration at specific receptor locations downwind from the release point. The model provides dose calculations from plume exposure, inhalation and material deposited on the ground consistent with methods of the EPA-400-R-92-001 document, *Manual of Protective Action Guides and Protective Actions for Nuclear Incidents*. Using dose rate conversion factors, the model calculates a combined dose from external exposure from the plume with plume inhalation and four day external exposure from material deposited on the ground (the sum of which is referred to as the Total Effective Dose Equivalent [TEDE]), as well as the Committed Dose Equivalent to the Thyroid from inhalation of radioiodines (referred to as CDE). For the forecast period (expected release duration using a default of four hours), the TEDE and its separate components, and CDE Thyroid dose is calculated and then used to determine Protective Action Recommendations (PAR) consistent with Protective Action Guides (PAGs) given in EPA 400.

DETAILED DESCRIPTION OF SUBSYSTEMS

Sensors to Operator Aid Computer

Lightning protection is provided for all sensors and signal conditioning equipment; wind sensors are outfitted with heating jackets, when necessary, for protection against icing conditions. Signal conditioners are housed in an environmentally controlled building at the base of the microwave tower. Signals to the plant are converted from analog to digital and transmitted via a data link. For each variable, one channel transmits data to the OAC and another transmits to the chart recorder.

Operator Aid Computer (OAC) to Plant Databases

The Operator Aid Computer systems use process monitoring equipment. Each unit OAC is a backup for the other, capable of supplying the same required meteorological values. Meteorological data is received and transferred to the PI server for long-term data storage and retrieval. Plant data on the PI server is accessible to computers that are used for emergency effluent dispersion modeling and dose calculation. The data is also available to all personnel in the TSC, OSC, and EOF.

Digital Chart Recorder

Meteorological data is also received at the station, converted from digital to analog, and scanned every five seconds by a digital chart recorder located in the Control Room.

QUALITY ASSURANCE

Meteorological components have been designed, procured and installed as a non-safety related system. New equipment has been purchased from suppliers who have provided high quality, reliable products in the past. Surveillance during construction was provided as for any other non-safety system.

Maintenance, calibration and repair procedures are available at the site for inspection. Inventories of meteorological system spare parts, sensors and components are maintained in company files.

FIGURE 2-1

CATAWBA NUCLEAR STATION
METEOROLOGICAL PARAMETERS OF THE UPGRADED SYSTEM

Measurement System	60 m (upper level)	Upper wind speed and direction Upper RTD
	10 m (lower level)	Lower wind speed and direction Lower RTD

NOTE 1: ΔT is obtained by subtracting the lower RTD from the upper RTD.

NOTE 2: Ambient dry bulb temperature, dew point and precipitation parameters are provided but not required as input for off-site dose assessment calculations.

APPENDIX 3

DUKE ENERGY CATAWBA NUCLEAR STATION ALERT AND NOTIFICATION SYSTEM DESCRIPTION

GENERAL DESCRIPTION

The Alert and Notification System for Catawba Nuclear Station consists of an acoustic alerting signal and notification of the public by commercial broadcast (EAS - Emergency Alert System). The system is designed to meet the acceptance criteria of Section B of Appendix 3, NUREG-0654, FEMA-REP-1, Rev. 1.

An engineering study of the Catawba Nuclear Station Alerting System was prepared by Duke-Energy and was submitted February, 1983. This is an annotated version of the study.

The Emergency plans of Duke Energy, the States of North Carolina and South Carolina, and the counties of Mecklenburg, Gaston, and York include the organizations and individuals, by title, who will be responsible for decision-making as regards the alert and notification system. The county locations from which the sirens would be activated and, potentially, the request for an EAS message would come are manned 24 hours per day. Each organization's plan describes provisions for use of public communications media or other emergency instructions to members of the public. The plans of both states include a description of the information that would be communicated to the public under given circumstances.

A. Concept of Operations

A system of 89 fixed sirens is installed and operational in the 10 mile EPZ area around Catawba Nuclear Station. A backup means of alerting and notification is described in the State and County Plans. This backup method includes reverse 911 and area-wide emergency service vehicles traversing the area giving both an alerting signal and notification message.

Each county will control the activation of the sirens within its boundaries.

B. Criteria for Acceptance

The alert and notification system for the Catawba Nuclear Station provides an alerting signal and an informational or instructional message to the population (via the EAS) on an area-wide basis throughout the 10 mile EPZ within 15 minutes from the time the cognizant off-site agencies have determined the need for such alerting exists. The emergency plans of each state include evidence of EAS preparation for emergency situations and the means for activating the system.

C. Physical Implementation

1. The activation of this alert and notification system requires procedures and relationships between both Duke Energy and the off-site agencies that support Duke and Catawba Nuclear Station.

When an incident is determined to have reached the level requiring public protective actions, Duke contacts the cognizant off-site agency via the Duke Emergency Management Network (DEMNET) and provides its recommendations. This system is available for use 24 hours per day and links the Control Room, TSC, EOF, SERT headquarters, the county warning points/EOCs, and the state Warning Point/EOCs.

2. The alert and notification system has multipurpose use built into it. The sirens are capable of producing a three minute steady signal for the nuclear plant emergency, natural disasters or nuclear attack. Procedures exist at the counties to allow activation of the sirens.

The expected performance of the sirens used in this system is described in Figure 3-1. These sirens complement existing alerting systems. The ambient background sound level in the Catawba area is taken to be 50 db for areas of "less than 2000 persons/per square mile" and 60 db for areas above this density. On this basis, the siren coverages are designed to provide a signal 10db above the average daytime ambient background.

Furthermore, the sirens have been located to assure that the maximum sound levels received by any member of the public should be lower than 126 db.

The basis for our selection of the 60 db(c) and 70 db(c) criteria is documented as follows:

Location of heavy industry - There is limited "heavy industry" in the Catawba 10 mile EPZ as described in Chapter 2 of the Catawba Nuclear Station UFSAR.

Attenuation factors with distance - 10 db loss per distance doubled (See Figure 3-1)

Siren output db(c) at 100 ft. vs. assumed range and acoustic frequency spectra -
2001AC: 127 ± 1.0 db at 100 feet

Assumed ranges per Figure 3-1, 10 db loss column

Frequency Spectra:

2001AC: top frequency 705Hz

Map showing siren location - See Figure 3-2

Mounting height of sirens - 50 feet (approximate)

Special weather condition considerations (such as expected heavy snow) - None

The siren will produce a 3-minute steady signal and is capable of repetition.

Test	Required frequency
Silent Test	Every two weeks
Growl Test	Quarterly and after Preventive Maintenance is performed. See Notes 1 and 3 below
Full Cycle Test	Annually. See Note 2 below.

Notes

1. Full cycle tests fulfill/exceed the requirements for growl tests
2. Each site may elect to perform some method of feedback system verification during the full cycle test
3. For the FEMA CPG 1-17 growl test following PM, the siren chopper is sounded for a short period of time so that it never produces full sound output

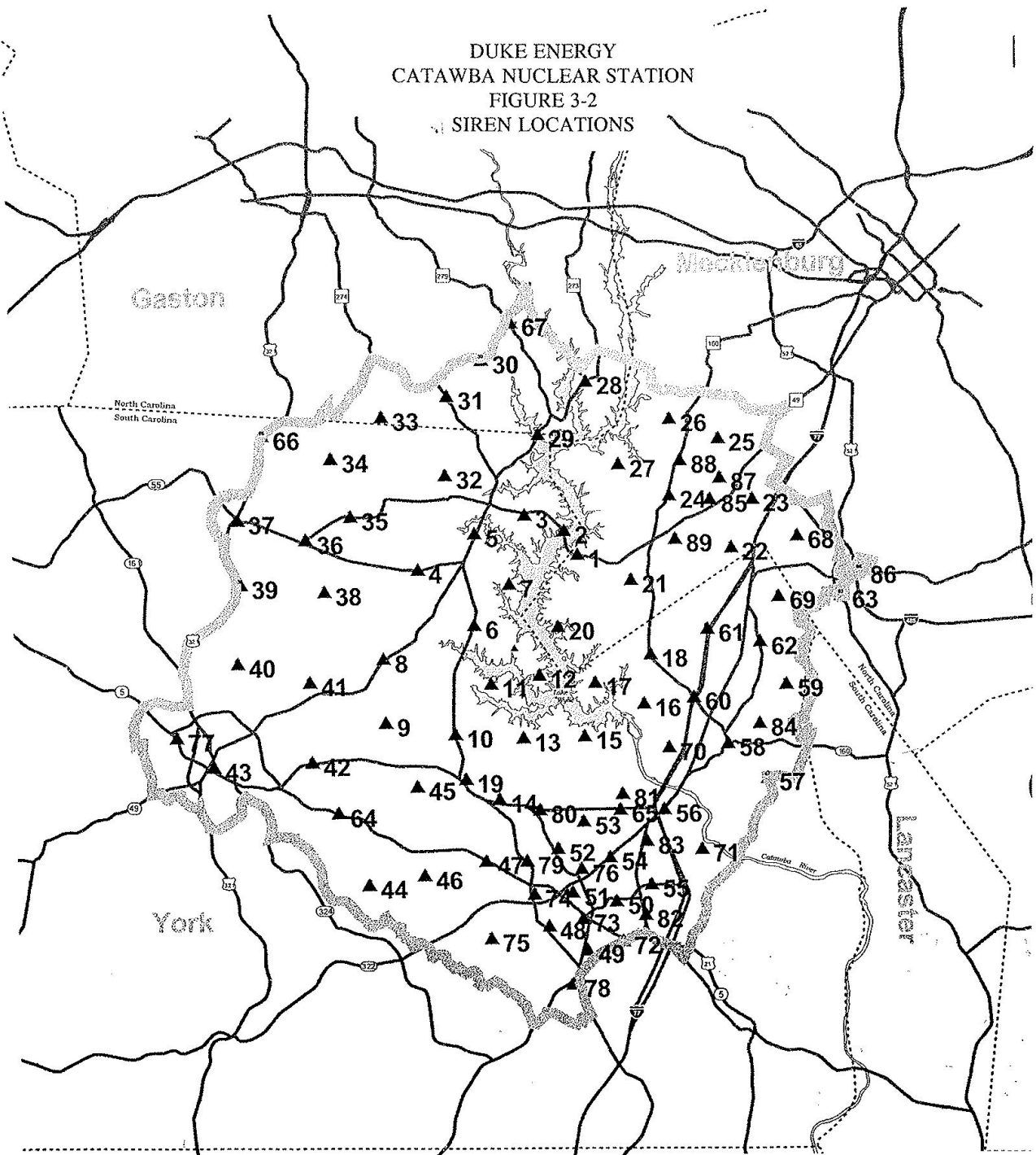
FIGURE 3-1

SIREN RANGE IN FEET

FIGURED AT 12 and 10 dB LOSS PER DISTANCE DOUBLED

Minimum Level Coverage in dB	2001 AC 126dB(C) Siren	
	12	10
85	1125	1830
80	1500	2600
75	2000	3680
73	2260	4210
70	2700	5200
68	3000	6000
65	3600	7400
60	4800	10400

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CATAWBA NUCLEAR STATION
FIGURE 3-2
SIREN LOCATIONS



EMERGENCY PLANNING ZONE (EPZ)
FOR THE CATAWBA NUCLEAR STATION

APPENDIX 4

DUKE ENERGY CATAWBA NUCLEAR STATION EVACUATION TIME ESTIMATES

The Evacuation Time Estimates (ETEs) for the Catawba Nuclear Station described in part J of this plan, dated December 2012, KLD Engineering, P.C. Report KLD TR-510, Catawba Nuclear Station, Development of Evacuation Time Estimates, Revision 1, was submitted under separate cover and is considered to be incorporated as part of this document by reference.

See the following:

- CNS-ETE-12132012, Rev. 000 (Part 1 of 2): PART 1 OF 2 - EVACUATION TIME ESTIMATES (ETE) REPORTS DATED 12/13/2012, REVISION 000 FOR CATAWBA NUCLEAR STATION.
- CNS-ETE-12132012, Rev. 000 (Part 2 of 2): PART 2 OF 2 - EVACUATION TIME ESTIMATES (ETE) REPORTS DATED 12/13/2012, REVISION 000 FOR CATAWBA NUCLEAR STATION.

The studies have been submitted for regulatory review and have been made available to site, state, and local planners for their use.

The evacuation study is available in the CNS Emergency Planning office for study and review.

APPENDIX 5

AGREEMENT LETTERS

This Appendix contains a list of written agreements between Duke Energy and other organizations that may be required to provide support to the Catawba Nuclear Station in the event of an onsite radiological emergency. The actual agreements are maintained on file by CNS Emergency Preparedness.

1. Piedmont Medical Center - Describes the arrangements between Piedmont Medical Center and Duke Energy Corporation relative to the medical care and treatment and to also have injured personnel that may also have radioactive contamination.
2. Carolinas Medical Center - Describes the arrangements between Carolinas Medical Center and Duke Energy Corporation relative to the medical care and treatment and to also have injured personnel that may also have radioactive contamination.
3. Bethel Volunteer Fire Department - Describes the type of assistance which the Bethel Volunteer Fire Department will provide to the Catawba Nuclear Station in the event of an emergency such as a radioactive release, hostile action, large scale fire, natural disaster (i.e. hurricane, tornado, earthquake, or flooding), or hazardous material issue.
4. Memorandum of Understanding between Duke Energy Carolinas, LLC and York County, South Carolina - Describes both emergency and non-emergency assistance by York County to support the Catawba Nuclear Station Emergency Plan.
5. Memorandum of Understanding between Duke Energy Carolinas, LLC and Mecklenburg County, North Carolina - Describes both emergency and non-emergency assistance by Mecklenburg County to support the Catawba Nuclear Station Emergency Plan.
6. Memorandum of Understanding between Duke Energy Carolinas, LLC and Gaston County, North Carolina - Describes both emergency and non-emergency assistance by Gaston County to support the Catawba Nuclear Station Emergency Plan.
7. Memorandum of Understanding among the State of North Carolina Department of Public Safety, North Carolina Emergency Management (NCEM), and Duke Energy Carolinas, LLC - Describes both emergency and non-emergency assistance by the State of North Carolina Department of Public Safety, North Carolina Emergency Management (NCEM), and the State of North Carolina Division of Health Service Regulation, Radiation Protection Section (RPS) to support the Catawba Nuclear Station Emergency Plan.
8. Memorandum of Understanding among the South Carolina Emergency Management Division, the South Carolina Department of Health and Environmental Control, and Duke Energy Carolinas, LLC - Describes both emergency and non-emergency assistance by the South Carolina Emergency Management Division, the Carolina Department of Health and Environmental Control to support the Catawba Nuclear Station Emergency Plan.
9. Deleted
10. Deleted
11. Deleted

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- 17. Alternate Site Agreement - Describes the terms and conditions of the agreement between the Catawba Nuclear Station and the McGuire Nuclear Station for using either facilities existing business unit space; in this case the Technical Support Center or Alternate Technical Support Center as an alternate site Emergency Operations Facility in the event of a service disruption and/or a disaster rendering the primary Emergency Operations Facility unavailable and relocation of the primary Emergency Operations Facility is necessary.
- 18. Deleted
- 19. Memorandum of Understanding between Nuclear Generation Department and the Distribution Maintenance and Construction-West Department Concerning Use of the York Operations Center as Catawba Nuclear Station's Evacuation/ Assembly/Staging Site - Provides an off-site location where personnel released from Catawba Nuclear Station can assemble, be monitored for radiation and, if necessary decontaminated.
- | 20. Deleted
- | 21. Deleted
- 22. York County Sherriff's Office to Support the Emergency Plan of the Catawba Nuclear Station - Provides for assistance to support the Catawba Nuclear Station's Emergency Plan, including assistance expected to be provided in the event of an emergency.

These agreements are verified current through annual recertification of the Catawba Emergency Plan. A copy of the annual recertification (including the agreements) is maintained on file by CNS Emergency Preparedness.