



Tom Simril
Vice President
Catawba Nuclear Station

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RA-20-0065

10CFR 50.54(q)

February 20, 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 20-02

Enclosed for NRC Staff use is Revision 20-02 to the Catawba Nuclear Station Emergency Plan. This revision is effective as of January 30, 2020. All changes have been specifically highlighted (side-barred). Also enclosed, is the 50.54(q) evaluation for the revision.

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 20-02 to the Emergency Plan is provided as Attachment 1.

If there are any questions, please contact Staci White at 803-701-5191.

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 20-02

Catawba Nuclear Station
E-Plan Revision 20-02
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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
E-Plan Revision 20-02
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bxc (with attachments):

Electronic Licensing Library, EC2ZF
RGC Licensing File, CN01RC
S. White, CN01EP

bxc (w/o attachments):

North Carolina Municipal Power Agency Number 1

North Carolina Electric Membership Corporation

Piedmont Municipal Power Agency

M. Hare, CN01OR
S. Andrews, CN01RC
C. Moore, EC04C
CN-750.25, CN04DM

Catawba Nuclear Station
Attachment 1
Emergency Plan Revision 20-02
10CFR 50.54(q) Evaluation(s) and screen(s)



Duke Energy

ACTION REQUEST - 02299017

ASSIGNMENT NBR - 01

Action Request Assignment Details

AR NUMBER : 02299017

ASSIGNMENT NUMBER : 01

Type	: EP01	Due Date	: 01/23/2020	Pri Resp Fac	:
Status	: COMPLETE	Reschedule	: 1	Pri Resp Group	:
Assigned To	: STACI N WHITE			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

I have reviewed and approve the 50.54Q screen for EPA N 151.

Action Request Assignment Status History

<u>Updated Date</u>	<u>Updated By</u>	<u>Assgn Status</u>	<u>Assgn Due Date</u>
10/24/2019	I44004	INPROG	
10/24/2019	I44004		11/14/2019
10/24/2019	I44004	NTFY/ASG	
10/24/2019	I44004	ACC/ASG	
12/16/2019	I44004		01/23/2020
01/13/2020	I44004	AWAIT/C	
01/14/2020	MRCOYL1	ACC/ASG	
01/14/2020	I44004	AWAIT/C	
01/14/2020	MRCOYL1	ACC/ASG	
01/14/2020	I44004	AWAIT/C	
01/21/2020	MEHARE	ACC/ASG	
01/21/2020	I44004	AWAIT/C	
01/28/2020	MEHARE	ACC/ASG	
01/28/2020	I44004	AWAIT/C	
01/29/2020	MEHARE	COMPLETE	



Duke Energy

ACTION REQUEST - 02299017

ASSIGNMENT NBR - 01

Action Request Assignment Routing/Return Comments

Routing Comments from the X601 Panel

insert chart.

change numbers

additional changes need per mark up/discussion

Per our discussion - mark up provided.

Routing Comments from the X602 Panel

*** No Return Comments Found ***

Updated On

20200114

20200114

20200121

20200128

Updated On

Updated By

MRCOYL1

MRCOYL1

MEHARE

MEHARE

Updated By

Action Request Assignment Completion Approval

Route List : 001

Route List Initiator : I44004

<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	01/13/2020	1626	RETURNED	01/14/2020		1704	COYLE
MEHARE				A	01/14/2020	1802	RETURNED	01/21/2020		1318	HARE
MRCOYL1				A	01/14/2020	1758	APPROVED	01/14/2020		1802	COYLE
MEHARE				A	01/21/2020	1614	RETURNED	01/28/2020		1527	HARE
MRCOYL1				A	01/21/2020	1455	APPROVED	01/21/2020		1614	COYLE
MRCOYL1				A	01/14/2020	1753	RETURNED	01/14/2020		1756	COYLE
MEHARE				A	01/28/2020	1622	APPROVED	01/29/2020		1801	HARE
MRCOYL1				A	01/28/2020	1559	APPROVED	01/28/2020		1622	COYLE
I44004				I	01/28/2020	1559		01/28/2020		1559	WHITE

Action Request Assignment Cause/Action



Duke Energy

ACTION REQUEST - 02299017

ASSIGNMENT NBR - 01

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>
-----------------	---------------------------	---------------------------	-----------------	--------------	------------	----------------------------	--------------

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 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

ATTACHMENT 4

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

Screening and Evaluation Number		Applicable Sites	
E-Plan # <u>02299017</u>		BNP	<input type="checkbox"/>
		CNS	<input checked="" type="checkbox"/>
		CR3	<input type="checkbox"/>
		HNP	<input type="checkbox"/>
5AD # <u>02271764</u>		MNS	<input type="checkbox"/>
		ONS	<input type="checkbox"/>
		RNP	<input type="checkbox"/>
		GO	<input type="checkbox"/>
Document and Revision		Emergency Plan Section N, Exercises and Drills, 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 Section Reference	Current (Existing) Text	Proposed (Change) Text
1	N.1.b	The exercise will be initiated at various times of the day, but in every eight-calendar year exercise cycle, one exercise will begin between 6:00 P.M. and 4:00 A.M.	<deleted>
2	N.5	The verbal evaluations made during the critique and any follow-up written evaluation will be compiled using the Corrective Action Program (CAP).	Deficiencies identified during verbal evaluation are to be entered as condition reports in the Corrective Action Program (CAP) or work request for appropriate resolution.
3	N.2	PIP G-15-0258	AR# 01900418
4	N.2.b	AD-OP-ALL-0207 (Fire Brigade and HAZMAT Team Administrative Controls)	AD-OP-ALL-0207 (Fire Brigade Administrative Controls)
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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<< 10 CFR 50.54(q) Screening Evaluation Form >>

<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: AD-EP-ALL-0602, EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q), Section 3.0.6, defines editorial changes as "Correct procedures and references or annotations that are no longer applicable," and "Correct references to steps, pages, attachments, forms, documents, tables, exhibits."</p> <p>Change 3 reflects the change in identification of the condition report when the PIP system was converted to the CAS/NCR system. The PIP reference is no longer applicable.</p> <p>Change 4 corrects the reference to the procedure title.</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 align="center"><input checked="" type="radio"/></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"/>	

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 >>

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"/>
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"/>

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 >>

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.	●
14b	Drills, exercises, and training evolutions that provide performance opportunities to develop, maintain, and demonstrate key skills are assessed via a formal critique process in order to identify weaknesses.	●
14c	Identified weaknesses are corrected.	●
15	10 CFR 50.47(b) (15) Emergency Response Training	
15a	Training is provided to emergency responders.	<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.		●

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 >>

<p>Part V. Signatures:</p> <p>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.</p>		
Preparer Name (Print): Staci White	Preparer Signature: See CAS	Date: See CAS
Reviewer Name (Print): Michael 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. 		<p>•</p> <p>•</p> <p>•</p>

QA RECORD

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



Duke Energy

ACTION REQUEST - 02299017

ASSIGNMENT NBR - 06

Action Request Assignment Details

AR NUMBER : 02299017

ASSIGNMENT NUMBER : 06

Type	: EP02	Due Date	: 01/23/2020	Pri Resp Fac	:
Status	: COMPLETE	Reschedule	: 1	Pri Resp Group	:
Assigned To	: STACI N WHITE			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

50.45(q) evaluation

Action Request Assignment Completion Notes

I have reviewed and approve the 50.54Q Eval for EPA N 151.

Action Request Assignment Status History

<u>Updated Date</u>	<u>Updated By</u>	<u>Assgn Status</u>	<u>Assgn Due Date</u>
12/18/2019	I44004	INPROG	01/15/2020
12/18/2019	I44004	ACC/ASG	
01/13/2020	I44004	AWAIT/C	
01/14/2020	MRCOYL1	ACC/ASG	
01/14/2020	I44004	AWAIT/C	
01/21/2020	MEHARE	ACC/ASG	
01/21/2020	MEHARE		01/23/2020
01/21/2020	I44004	AWAIT/C	
01/21/2020	MRCOYL1	ACC/ASG	
01/21/2020	I44004	AWAIT/C	
01/28/2020	MEHARE	ACC/ASG	
01/28/2020	I44004	AWAIT/C	
01/29/2020	MEHARE	COMPLETE	

Action Request Assignment Routing/Return Comments



Duke Energy

ACTION REQUEST - 02299017

ASSIGNMENT NBR - 06

Routing Comments from the X601 Panel

insert chart
additional changes need per mark up/discussion
s on commitments
Per our discussion - mark up provided.

Updated On

20200114

20200121

20200121

20200128

Updated By

MRCOYL1

MEHARE

MRCOYL1

MEHARE

Routing Comments from the X602 Panel

*** No Return Comments Found ***

Updated On

Updated By

Action Request Assignment Completion Approval

Route List : 001

Route List Initiator : I44004

<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	01/14/2020	1752	APPROVED	01/14/2020	1801		COYLE
MRCOYL1				A	01/13/2020	1624	RETURNED	01/14/2020	1705		COYLE
MEHARE				A	01/14/2020	1801	RETURNED	01/21/2020	1319		HARE
MEHARE				A	01/28/2020	1715	APPROVED	01/29/2020	1802		HARE
MRCOYL1				A	01/28/2020	1605	APPROVED	01/28/2020	1715		COYLE
MRCOYL1				A	01/21/2020	1626	APPROVED	01/21/2020	1628		COYLE
MEHARE				A	01/21/2020	1628	RETURNED	01/28/2020	1527		HARE
MRCOYL1				A	01/21/2020	1457	RETURNED	01/21/2020	1624		COYLE
I44004				I	01/28/2020	1605		01/28/2020	1605		WHITE

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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Duke Energy

ACTION REQUEST - 02299017

ASSIGNMENT NBR - 06

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

ATTACHMENT 5

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

Screening and Evaluation Number		Applicable Sites	
EREG #: _____ 02299017 _____		BNP	<input type="checkbox"/>
		CNS	<input checked="" type="checkbox"/>
		CR3	<input type="checkbox"/>
		HNP	<input type="checkbox"/>
5AD #: _____ 02271764 _____		MNS	<input type="checkbox"/>
		ONS	<input type="checkbox"/>
		RNP	<input type="checkbox"/>
		GO	<input type="checkbox"/>
Document and Revision		Emergency Plan Section N, Exercises and Drills, Rev 151	
Part I. Description of Proposed Change:			
#	E-Plan Section Reference	Current (Existing) Text	Proposed (Change) Text
1	N.1.b	The exercise will be initiated at various times of the day, but in every eight-calendar year exercise cycle, one exercise will begin between 6:00 P.M. and 4:00 A.M.	<deleted>
2	N.5	The verbal evaluations made during the critique and any follow-up written evaluation will be compiled using the Corrective Action Program (CAP).	Deficiencies identified during verbal evaluation are to be entered as condition reports in the Corrective Action Program (CAP) or work request for appropriate resolution.
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:

CNS Emergency Plan, Rev 2, dated January 1983, does not address Section N.1.b, Exercise Scenario Response, stating, "See Crisis Management Plan Section N.1.a/N.1.b" and section N.5 states, "See Crisis Management Plan Section N.5"

CNS Emergency Plan, Section N.1.b, Rev 150 states, "The exercise will be initiated at various times of the day, but in every eight calendar year exercise cycle, one exercise will begin between 6:00 P.M. and 4:00 A.M". Section N.5 states, "The verbal evaluations made during the critique and any follow-up written evaluation will be compiled using the Corrective Action Program (CAP)."

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):

Change 1:

With the removal of the statement, "The exercise will be initiated at various times of the day, but in every eight calendar year exercise cycle, one exercise will begin between 6:00 P.M. and 4:00 A.M.," the CNS Emergency Plan continues to comply with regulation and commitments because NSIR/DPR-ISG-01, Interim Staff Guidance Emergency Planning for Nuclear Power Plants, Rev 0, (November 2011) states,

"Revised Evaluation Criterion N.1.b applies to licensee, State and local organizations. Because FEMA no longer requires offsite organizations to participate in off-hours or unannounced exercises, the portion of Evaluation Criterion N.1.b. regarding these types of exercises was relocated to new Evaluation Criterion N.1.c applicable to licensees only. The timeframe for conducting off-hours or exercises was also modified to align with Supplement 1 to NUREG-0654 as shown below:

N.1.c Provisions must be made to start a drill or exercise between 6:00 p.m. and 4:00 a.m. at least once in every eight-year exercise cycle. Some drills or exercises should be unannounced.

CNS Emergency Plan section N.2, Drills, indicates that drills will be conducted in accordance with PD-EP-ALL-0800, Drills and Exercises; AD-EP-ALL-0801, Design and Development of Drills and Exercises; AD-EP-ALL-0802, Conducting Drills and Exercises; and AD-EP-ALL-0803, Evaluation and Critique of Drills and Exercises.

AD-EP-ALL-0801, Design and Development of Drills and Exercises, Attachment 11, Augmentation Drills, section 1.2, includes the direction for a drill beginning after 6:00 PM and before 4:00 AM, Monday through Thursday. Compliance with the guidance in the ISG is maintained.

Change 2:

Change 2 was initiated to clarify that only deficiencies should be entered into the corrective action program (CAP) or as work requests. Documentation of the Drill/Exercise Critique Report, described as "verbal evaluations" and "follow-up written evaluation" is not an appropriate use of CAP. Drill/Exercise records packages are maintained per AD-EP-ALL-0803, Evaluation and Critique of Drills and Exercises, section 5.4. CNS maintains all original drill/exercise records as hard copies.

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):

Changes 1 and 2 impact Emergency Planning Standard 10 CFR 50.47(b)(14).

The regulation at 10 CFR 50.47(b)(14) states the following:

"Periodic exercises are (will be) conducted to evaluate major portions of emergency response capabilities, periodic drills are (will be) conducted to develop and maintain key skills, and deficiencies identified as a result of exercises or drills are (will be) corrected."

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

- (1) A drill and exercise program (including radiological, medical, health physics, or other program areas) is established.
- (2) Drills, exercises, and training evolutions that provide performance opportunities to develop, maintain, and demonstrate key skills, are assessed via a formal critique process to identify weaknesses.
- (3) Identified weaknesses are corrected.

Program elements are contained in Section II.N of NUREG-0654

Section II.N.1.c, "Provisions must be made to start a drill or exercise between 6:00 p.m. and 4:00 a.m. at least once in every eight-year exercise cycle. Some drills or exercises should be unannounced. "

Section II.N.5, "Each organization shall establish means for evaluating observer and participant comments on areas needing improvement, including emergency plan procedural changes, and for assigning responsibility for implementing corrective actions. Each organization shall establish management control used to ensure that corrective actions are implemented."

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

Changes 1 and 2 continue to support the establishment of a drill and exercise program, including conducting unannounced off-hours drills, and the appropriate use of the Corrective Action Program and other record retention methods. Drills/exercises continue to provide performance opportunities to develop, maintain and demonstrate key skills, and drills/exercises are assessed via a formal critique process. The Corrective Action Program continues to be the method by which identified deficiencies are corrected and documented.

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="radio"/>	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="radio"/>	No <input type="checkbox"/>
3	Does the proposed change maintain the current Emergency Action Level (EAL) scheme?	Yes <input checked="" type="radio"/>	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="radio"/>	
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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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): Staci White	Preparer Signature: See CAS	Date: See CAS
Reviewer Name (Print): Michael 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 (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. 		

QA RECORD

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



Duke Energy

ACTION REQUEST - 02299040

ASSIGNMENT NBR - 01

Action Request Assignment Details

AR NUMBER : 02299040

ASSIGNMENT NUMBER : 01

Type	: EP01	Due Date	: 01/30/2020	Pri Resp Fac	:
Status	: COMPLETE	Reschedule	: 1	Pri Resp Group	:
Assigned To	: STACI N WHITE			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

I have reviewed and approve the 50.54Q screen for EPA O 145.

Action Request Assignment Status History

<u>Updated Date</u>	<u>Updated By</u>	<u>Assgn Status</u>	<u>Assgn Due Date</u>
10/24/2019	I44004	INPROG	
10/24/2019	I44004		11/14/2019
10/24/2019	I44004	NTFY/ASG	
10/24/2019	I44004	ACC/ASG	
12/16/2019	I44004	AWAIT/C	
12/16/2019	MRCOYL1	ACC/ASG	
12/16/2019	I44004		01/30/2020
12/18/2019	I44004	AWAIT/C	
01/28/2020	MEHARE	ACC/ASG	
01/28/2020	I44004	AWAIT/C	
01/29/2020	MEHARE	COMPLETE	

Action Request Assignment Routing/Return Comments

Routing Comments from the X601 Panel

empty
Per our discussion - mark up provided.

Updated On

20191216
20200128

Updated By

MRCOYL1
MEHARE



Duke Energy

ACTION REQUEST - 02299040

ASSIGNMENT NBR - 01

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 : I44004

<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>
MEHARE		A	01/28/2020	1606	APPROVED	01/29/2020 1804	HARE
MRCOYL1		A	01/28/2020	1542	APPROVED	01/28/2020 1606	COYLE
MRCOYL1		A	12/18/2019	0912	APPROVED	12/23/2019 1035	COYLE
MRCOYL1		A	12/16/2019	1955	RETURNED	12/16/2019 1956	COYLE
MEHARE		A	12/23/2019	1035	RETURNED	01/28/2020 1528	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>
-----------------	-----------------	-----------------	-----------------	--------------	------------	------------------	--------------

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 CIs</u>	<u>Description</u>
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Action Request Assignment Appendices

[APPENDIX 1](#)



Duke Energy

ACTION REQUEST - 02299040

ASSIGNMENT NBR - 01

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>02299040</u>		BNP	<input type="checkbox"/>
		CNS	<input checked="" type="checkbox"/>
		CR3	<input type="checkbox"/>
		HNP	<input type="checkbox"/>
5AD #: <u>02299037</u>		MNS	<input type="checkbox"/>
		ONS	<input type="checkbox"/>
		RNP	<input type="checkbox"/>
		GO	<input type="checkbox"/>
Document and Revision	EMERGENCY PLAN SECTION O, REV 145 (DRR 2253080)		
Part I. Description of Activity Being Reviewed (event or action, or series of actions that may result in a change to the emergency plan or affect the implementation of the emergency plan): Section O.2.d changed from, "A practice drill session may be held to allow the individuals to perform their assigned functions (See PT/0/B/4600/006 Emergency Exercises and Drills). The drill instructor may make on the spot corrections and/or demonstration of the proper performance. to "A practice drill session may be held to allow the individuals to perform their assigned functions. The drill instructor may make on the spot corrections and/or demonstration of the proper performance."			
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.
Bounding document attached (optional)		<input 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 >>

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: Removal of "(See PT/0/B/4600/006 Emergency Exercises and Drills)" is editorial per AD-EP-ALL-0602, step 3.0.g, "Correct references or annotations that are no longer applicable." PT/0/B/4600/006 was superseded on 12/18/2017 by the AD-EP-ALL-0800 series of procedures. (AR 2169971)		Yes 10 CFR 50.54(q) Effectiveness Evaluation is not required. Enter justification and complete Attachment 4, Part V.	<input checked="checked" type="radio"/>	No or Partially Continue to Attachment 4, Part IV and address non editorial changes	<input type="checkbox"/>
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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<< 10 CFR 50.54(q) Screening Evaluation Form >>

Part IV. Emergency Planning Element and Function Screen (cont.)		
6	10 CFR 50.47(b)(6) Emergency Communications	
6a	Systems are established for prompt communication among principal emergency response organizations.	<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
	Rev. 6

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

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. 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): Staci White	Preparer Signature: See CAS	Date: See CAS
Reviewer Name (Print): Michael 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. 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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<< 10 CFR 50.54(q) Screening Evaluation Form >>

QA RECORD

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

**Catawba Nuclear Station
Attachment 2
Emergency Plan Revision 20-02
Plan Update Instructions**

Replace Revision 20-01 Coversheet with Revision 20-02 Coversheet

List of Effective Pages (LOEP)

Replace all pages of this section

Tab N – Exercise and Drills

Replace all pages of this section

Tab O – Radiological Emergency Response Training

Replace all pages of this section

**Catawba Nuclear Station
Attachment 3
Emergency Plan
Emergency Plan Revision 20-02**

LIST OF EFFECTIVE PAGES (LOEP)

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LIST OF EFFECTIVE PAGES (LOEP)

EMERGENCY PLAN SECTION	PAGE NUMBER	REVISION NUMBER	DATE
Emergency Plan Approval Cover Sheet		16-1	March 2016
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
List of Figures, Tables and Attachments			
	7	16-1	March 2016
	8	16-1	March 2016
	9	16-1	March 2016
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
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	September 2017
Section B			
	B-1	167	September 2019
	B-2	167	September 2019
	B-3	167	September 2019
	B-4	167	September 2019
	B-5	167	September 2019
	B-6	167	September 2019
	B-7	167	September 2019
	B-8	167	September 2019
	B-9	167	September 2019
	B-10	167	September 2019
	B-11	167	September 2019
	B-12	167	September 2019
	B-13	167	September 2019
	B-14	167	September 2019
	B-15	167	September 2019
Section C			
	C-1	16-1	March 2016
	C-2	16-1	March 2016
Section D			
	1-258 (all pages)	SUP	December 2019
Section E			
	E-1	150	December 2019
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	E-3	150	December 2019
	E-4	150	December 2019
	E-5	150	December 2019
	E-6	150	December 2019
	E-7	150	December 2019
	E-8	150	December 2019
	E-9	150	December 2019
	E-10	150	December 2019
Section F			
	F-1	16-1	March 2016
	F-2	16-1	March 2016
	F-3	16-1	March 2016
	F-4	16-1	March 2016
	F-5	16-1	March 2016
	F-6	16-1	March 2016
	F-7	16-1	March 2016
Section G			
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	G-2	161	February 2019
	G-3	161	February 2019
Section H			
	H-1	150	October 2019
	H-2	150	October 2019
	H-3	150	October 2019
	H-4	150	October 2019
	H-5	150	October 2019
	H-6	150	October 2019
	H-7	150	October 2019
	H-8	150	October 2019
	H-9	150	October 2019
	H-10	150	October 2019
	H-11	150	October 2019
	H-12	150	October 2019
	H-13	150	October 2019
	H-14	150	October 2019
Section I			
	I-1	148	December 2019
	I-2	148	December 2019
	I-3	148	December 2019
	I-4	148	December 2019
Section J			
	J-1	148	December 2019
	J-2	148	December 2019
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	J-4	148	December 2019
	J-5	148	December 2019
	J-6	148	December 2019
	J-7	148	December 2019

LIST OF EFFECTIVE PAGES (LOEP)

EMERGENCY PLAN SECTION	PAGE NUMBER	REVISION NUMBER	DATE
	J-8	148	December 2019
	J-9	148	December 2019
Section K			
	K-1	144	September 2017
	K-2	144	September 2017
	K-3	144	September 2017
	K-4	144	September 2017
Section L			
	L-1	11-1	May 2011
	L-2	11-1	May 2011
Section M			
	M-1	162	October 2019
	M-2	162	October 2019
	M-3	162	October 2019
	M-4	162	October 2019
	M-5	162	October 2019
Section N			
	N-1	151	January 2020
	N-2	151	January 2020
	N-3	151	January 2020
Section O			
	O-1	145	January 2020
	O-2	145	January 2020
Section P			
	P-1	150	December 2019
	P-2	150	December 2019
	P-3	150	December 2019
	P-4	150	December 2019
	P-5	150	December 2019
	P-6	150	December 2019
	P-7	150	December 2019
Section Q			
	Q-1	154	November 2019
Appendix 1			
	Q-1.1	154	November 2019
	Q-1.2	154	November 2019
	Q-1.3	154	November 2019
	Q-1.4	154	November 2019
	Q-1.5	154	November 2019
	Q-1.6	154	November 2019
	Q-1.7	154	November 2019
	Q-1.8	154	November 2019
	Q-1.9	154	November 2019
Section Q, Appendix 2			
	Q-2.1	154	November 2019
	Q-2.2	154	November 2019
	Q-2.3	154	November 2019
	Q-2.4	154	November 2019
	Q-2.5	154	November 2019
Appendix 3			
	Q-3.1	154	November 2019
	Q-3.2	154	November 2019

LIST OF EFFECTIVE PAGES (LOEP)

EMERGENCY PLAN SECTION	PAGE NUMBER	REVISION NUMBER	DATE
	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

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Catawba Nuclear Station
Emergency Plan
Section N - Exercises and Drills

N. EXERCISES AND DRILLS

N.1.a Exercises

Catawba Nuclear Station will conduct emergency exercises in accordance with requirements of 10CFR50, Appendix E.

The Emergency Operations Facility will participate in all exercises involving full participation by the affected state or local governments

N.1.b Exercise Scenario Response

The exercises will be designed to test the integrated capability of those involved and a major portion of the basic elements existing within the plans and organizations. The scenario for these exercises will be varied from exercise to exercise such that all major elements of the plans and organizations will be tested within an eight-year exercise cycle.

N.2 Drills

Catawba Nuclear Station will conduct drills in accordance with requirements of 10CFR50, Appendix E. Drills shall be conducted to test, develop and maintain skills in a particular operation. Drills may be a component of an exercise. Drills will be conducted and evaluated by a designated drill director. Drills will be held in accordance with PD-EP-ALL-0800, Drills and Exercises, AD-EP-ALL-0801, Design and Development of Drills and Exercises, AD-EP-ALL-0802, Conducting Drills and Exercises and AD-EP-ALL-0803, Evaluation and Critique of Drills and Exercises. (AR#01900418)

N.2.a Communications

1. Monthly Checks are conducted with the states of North and South Carolina and with York, Mecklenburg and Gaston Counties.
2. Monthly Checks are conducted with the NRC Headquarters from the Control Room, TSC, and EOF. Also monthly calls to the NRC Region II Operations

Center and National Weather Service will be made to ensure accessibility.

3. Quarterly Checks with Federal emergency response organizations are considered complete with the monthly call to the NRC. The states in the ingestion pathway are contacted in the monthly call to North & South Carolina.
4. Annual Communications Checks are performed between the Control Room, the TSC, and the EOF; North and South Carolina EOCs; York, Mecklenburg, and Gaston County EOCs and the field monitoring team.
5. Annual Checks are conducted with Federal emergency response organizations, Dept. of Energy's Savannah River Plant and REAC/TS in Oak Ridge, Tenn. See PT/0/B/4600/005C, Annual Communications Verification.

- N.2.b Fire drills shall be conducted in accordance with AD-TQ-ALL-0086 (Fire Brigade and HAZMAT Training), AD-OP-ALL-0207 (Fire Brigade Administrative Controls) and AD-EG-ALL-1531 (Selection, Care and Maintenance of Firefighting Ensembles).
- N.2.c Medical emergency drills involving a simulated contaminated and injured individual which contains provisions for participation by the local ambulance service shall be conducted annually. The off-site portion of the medical drill may be performed as part of the required exercise.
- N.2.d Station environs and radiological monitoring drills (on-site and off-site) shall be conducted annually. These drills shall include collection and analysis of all sample media (e.g. water, vegetation, soil and air).

N.2.e Radiation Protection drills shall be conducted semi-annually which involve response to and analysis of, simulated elevated airborne and liquid samples and direct radiation measurements in the environment. Analysis of samples may be simulated in Radiation Protection drills.

- NOTES:
1. Due to ALARA considerations actual elevated samples will not be used in drills.
 2. Radiation Protection and Chemistry personnel perform analyses of similar nature routinely and therefore are not required to perform the analysis for drills.

N.3 Exercise and Drill Execution

The Emergency Preparedness Group is responsible for the overall development and direction of the exercise. An Exercise Director and a key group of controllers will develop the exercise scenario, exercise messages, and simulated data for the station and off-site areas. The Exercise Director will, for each exercise, develop an exercise plan. This plan will include objectives of the exercise and evaluation criteria, the date, time, place, and participating organizations, the exercise scenario, a narrative summary of the event including such things as emergency classification at various times in the simulated accident, off-site assistance, some detail on plant conditions, and a description of the arrangements for official observers.

N.4 Exercise Critique

A critique will be held following each exercise. The critique will be a closed session between Duke and the Nuclear Regulatory Commission. During the critique, the Manager, Nuclear Support Services, the Exercise Director, the NRC and other official observers from state, federal or local governments will make preliminary evaluations of on-site and corporate emergency response.

Critiques are held after each drill. Drill critiques are open to all drill participants, drill evaluators and drill observers.

N.5 Critique Action Items

Deficiencies identified during verbal evaluation are to be entered as condition reports in the Corrective Action Program (CAP) or work request for appropriate resolution. CAP will also be used to assign corrective actions and expected completion dates to the appropriate groups. The Manager, Nuclear Support Services, acting under the authority of the Site Vice President will ensure resolution of each item.

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Section O - Radiological Emergency Response Training

O. RADIOLOGICAL EMERGENCY RESPONSE TRAINING

O.1 Off-site Support Agency Training

- O.1.a. Emergency response training is provided to those Off-site Support Agencies that may be called upon to provide assistance in the event of an emergency at Catawba Nuclear Station. Off-Site Support Agencies receive training and retraining per EP Group Manual Guideline 5.4.1. Training objectives and lesson plans are maintained in the site training files. This training is given by site/corporate personnel and documented on Duke Energy forms per AD-EP-ALL-0500, Emergency Response Training.
- O.1.b. A separate training session is offered annually to state and local government emergency planning officials responsible for emergency plans within the plume exposure EPZ.

O.2 Emergency Organization Training

- O.2.a. The training program for members of the Emergency Organization is outlined in AD-EP-ALL-0500. Training objectives and lesson plans are maintained in the site training files. Prior to inclusion in the Emergency Organization, all individuals must satisfy training requirements for his/her position as outlined in AD-EP-ALL-0500.
- O.2.b. Members of the Catawba Security Organization receive training as specified in the Duke Energy Nuclear Security and Contingency Plan.
- O.2.c. Fire Brigade personnel are trained per AD-TQ-ALL-0086, Fire Brigade and Hazmat Training.
- O.2.d. A practice drill session may be held to allow the individuals to perform their assigned functions. The drill instructor may make on the spot corrections and/or demonstration of the proper performance.

O.3 First Aid Training

First Responder training is given to the Medical Emergency Response Team (MERT) members per AD-SY-ALL-0280, Medical Emergency Response Team (MERT) and Technical Rescue Training.

O.4 Training For Radiological Emergency Response Personnel

Training requirements for the following groups are described in EP Group Manual 5.4.1 and AD-EP-ALL-0500. Training objectives and lesson plans are maintained in training files.

- a. Directors and Coordinators of Response Organizations
- b. Personnel Responsible for Radiological Assessment
- c. Radiological Monitoring Teams
- d. Police, Security and Fire Fighting Personnel
- e. Repair and Recovery Teams
- f. First Aid and Rescue Personnel
- g. Site Services Support Personnel
- h. Medical Support Personnel
- i. All Emergency Response Organization Personnel
- j. Personnel Responsible for Transmission of Emergency Information and Instructions
- k. Personnel Responsible for Data Coordination

O.5 Retraining of Radiological Emergency Response Personnel

Initial and retraining requirements for each Emergency Response Organization position are defined in AD-EP-ALL-0500.