



Tom Simril
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CNS-16-069

10CFR50.54(q)

October 10, 2016

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

SUBJECT: Duke Energy Carolinas, LLC
Catawba Nuclear Station Units 1 and 2
Docket Nos.: 50-413 and 50-414
Emergency Plan, Revision 16-2

Enclosed for NRC staff use is Revision 16-2 to the Catawba Nuclear Station Emergency Plan. All changes have been specifically highlighted (side-barred). These revisions are effective on September 12, 2016.

These revisions are being submitted in accordance with 10CFR50.54 (q) and are not a reduction in the effectiveness of the Emergency Plan. The 10CFR50.54 (q) Evaluations are provided as Attachment 1.

By copy of this letter, two copies of this document are being provided to the NRC, Region II.

If there are any questions, please call Tom Arlow at (803) 701-4027.

Very truly yours,

Tom Simril
Vice President, Catawba Nuclear Station

Attachments: 1. 10CFR50.54 (q) Evaluation
 2. Plan Update Instructions
 3. Emergency Plan Revision 16-2

AX45
NRR

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Page Two

xc: (with attachments)

Catherine Haney, 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 Orenak
NRC Project Manager (CNS)
U.S. Nuclear Regulatory Commission
One White Flint North, Mail Stop O-8G9A
11555 Rockville Pike
Rockville, MD 20852-2738

Joseph D. Austin
Senior Resident Inspector (CNS)
U.S. Nuclear Regulatory Commission
Catawba Nuclear Site



Duke Energy
CN01VP 11 4800 Concord Road
York, SC 29745

October 10, 2016

MEMORANDUM

TO: All Holders of the Catawba Nuclear Station Emergency Plan

Subject: Catawba Nuclear Station Emergency Plan
Revision 16-2

Enclosed is Catawba Nuclear Station Emergency Plan Revision 16-2. Plan Update Instructions are provided for incorporating this revision into the Catawba Nuclear Station Emergency Plan.

If you have any questions, please call me at 803-701-4027.

Sincerely,

A handwritten signature in cursive script that reads 'Tom Arlow'.

Tom Arlow
Emergency Preparedness Manager
Catawba Nuclear Station

**Catawba Nuclear Station
Emergency Plan Revision 16-2
Attachment 1
10CFR50.54(q) Evaluation**

EMERGENCY PLAN CHANGE SCREENING AND
EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)

AD-EP-ALL-0602

Rev. 1

ATTACHMENT 4

Page 1 of 4

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

Screening and Evaluation Number		Applicable Sites	
EREG #: _____ 2057469 _____	BNP	<input type="checkbox"/>	
	CNS	<input checked="" type="checkbox"/>	
	CR3	<input type="checkbox"/>	
	HNP	<input type="checkbox"/>	
5AD #: _____ 2055367 _____	MNS	<input type="checkbox"/>	
	ONS	<input type="checkbox"/>	
	RNP	<input type="checkbox"/>	
	GO	<input type="checkbox"/>	
Document and Revision	Catawba Emergency Plan Section B, Revision 162 (PRR 2007289)		
<p>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):</p> <p>Section B.3 changed from:</p> <p>"B.3 Emergency Coordinator (Line of Succession)</p> <p>The Emergency Coordinator function as described above in paragraph B.2 will later be assumed by the EOF Director at the Emergency Operations Facility as this organization is staffed and ready to take over its functions."</p> <p>to</p> <p>"B.3 Emergency Coordinator (Line of Succession)</p> <p>The Emergency Coordinator functions as described above in paragraph B.2 will later be assumed by the TSC Emergency Coordinator and/or the EOF Director at the Emergency Operations Facility as these organizations are staffed and ready to take over its functions."</p>			
<p>Part II. Activity Previously Reviewed?</p> <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>Yes <input type="checkbox"/></p> <p>10 CFR 50.54(q) Effectiveness Evaluation is not required. Enter justification below and complete Attachment 4, Part V.</p>	<p>No <input checked="" type="checkbox"/></p> <p>Continue to Attachment 4 , 10 CFR 50.54(q) Screening Evaluation Form, Part III</p>
Bouding document attached (optional)		<input type="checkbox"/>	

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

Part III. Editorial Change		Yes	<input type="checkbox"/>	No	<input checked="" type="radio"/>
Is this activity an editorial or typographical change only, such as formatting, paragraph numbering, spelling, or punctuation that does not change intent?		10 CFR 50.54(q) Effectiveness Evaluation is not required. Enter justification and complete Attachment 4, Part V & VI.		Continue to Attachment 4, Part IV and address non editorial changes	
Justification:					
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="radio"/>
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 onshift emergency response responsibilities are staffed and assigned				<input type="checkbox"/>
2b	The process for timely augmentation of onshift staff is established and maintained.				<input checked="" type="radio"/>
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 initiating notification 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"/>

<< 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"/>
15	10 CFR 50.47(b)(15) Emergency Response Training	
15a	Training is provided to emergency responders.	<input type="checkbox"/>

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

Part IV. Emergency Planning Element and Function Screen (cont.)		
16	10 CFR 50.47(b)(16) Emergency Plan Maintenance	
16a	Responsibility for emergency plan development and review is established.	<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, a 10 CFR 50.54(q) Effectiveness Evaluation is not required, then complete Attachment 4, 10 CFR 50.54(q) Screening Evaluation Form, Part V. Go to Attachment 4, 10 CFR 50.54(q) Screening Evaluation Form, Part VI for instructions describing the NRC required 30 day submittal.		<input type="checkbox"/>
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. Shaded block requires final approval of Screen and Evaluation by EP CFAM.		●

Part V. Signatures:		
Preparer Name (Print): Staci Fischer	Preparer Signature: <i>Staci Fischer</i>	Date: 08/30/2016
Reviewer Name (Print): White, Jeffery M.	Reviewer Signature: (electronic signature attached)	Date: 8/30/2016
Approver (EP Manager) Name (Print): Arlow, Tom A.	Approver Signature: (electronic signature attached)	Date: 8/30/2016
Approver (CFAM, as required) Name (Print)	Approver Signature:	Date:

Part VI. NRC Emergency Plan and Implementing Procedure Submittal Actions	
Create two EREG General Assignments.	
● One for EP to provide the 10 CFR 50.54(q) summary of the analysis, or the completed 10 CFR 50.54(q), to Licensing.	●
● One for Licensing to submit the 10 CFR 50.54(q) information to the NRC within 30 days after the change is put in effect.	●



Duke Energy

ACTION REQUEST - 02057469

Action Request Assignment Attributes

Action Request Assignment Routing/Return Comments

Routing Comments from the X601 Panel

*** No Routing Comments Found ***

Updated On

Updated By

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

Passport	Fac	Group	/	Type	Send Date	Send Time	Action Taken	Action Date	/	Time	Last Name
I80034				A	08/30/2016	08:58	APPROVED	08/30/2016		09:05	WHITE
TAA7322				A	08/30/2016	09:05	APPROVED	08/30/2016		15:23	ARLOW
JBT7317				I	08/30/2016	08:58		09/13/2016		10:47	TEASDELL
I44004				I	08/30/2016	08:58		08/30/2016		08:58	FISCHER

Action Request Assignment Cause/Action

Action Request Assignment Reference Documents

Facility	Doc Type	Sub Type	Document	Sheet	Rev	Minor Rev	Title
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Action Request Assignment Reference Equipment

Facility	Unit	System	Equip Type	Equip Number	Equip Tag	Equip Status	Rev Rev	Rev Status
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EMERGENCY PLAN CHANGE SCREENING AND
EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)

AD-EP-ALL-0602

Rev. 1

ATTACHMENT 5

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

Screening and Evaluation Number		Applicable Sites	
EREG #: _____ 2057469 _____		BNP	<input type="checkbox"/>
		CNS	<input checked="" type="checkbox"/>
		CR3	<input type="checkbox"/>
		HNP	<input type="checkbox"/>
5AD #: _____ 2055367 _____		MNS	<input type="checkbox"/>
		ONS	<input type="checkbox"/>
		RNP	<input type="checkbox"/>
		GO	<input type="checkbox"/>
Document and Revision	Catawba Emergency Plan, Section B, revision 162 (PRR 2007289)		
<p>Part I. Description of Proposed Change:</p> <p>Section B.3 changed from:</p> <p>"B.3 Emergency Coordinator (Line of Succession)</p> <p>The Emergency Coordinator function as described above in paragraph B.2 will later be assumed by the EOF Director at the Emergency Operations Facility as this organization is staffed and ready to take over its functions."</p> <p>to</p> <p>"B.3 Emergency Coordinator (Line of Succession)</p> <p>The Emergency Coordinator functions as described above in paragraph B.2 will later be assumed by the TSC Emergency Coordinator and/or the EOF Director at the Emergency Operations Facility as these organizations are staffed and ready to take over its functions."</p>			
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"/>

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

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

Three licensing basis documents were reviewed for applicability, 1) the Catawba Emergency plan, Revision 2, as the original plan approved by the NRC, 2) the current Catawba Emergency plan, revision 148, and 3) "Duke Power Company Response to Supplement 1 to NUREG-0737, Emergency Response Capability for Catawba Nuclear Station, Volume 1."

Applicable sections of the Emergency Plan titled, "Catawba Nuclear Station Emergency Plan, revision 2 - January 1983:

Section A, Assignment of Responsibility, and section B, Onsite Emergency Organization.

Section A.1.b, Concept of Operations, states,

"All emergencies or accident situations at the station are handled initially by the Shift Supervisor. When an abnormal situation occurs, the Shift Supervisor 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 activated (O.S.C., T.S.C., C.M.C), the Shift Supervisor is the person in charge, and assumes the position of the Emergency Coordinator until the arrival of the Station Manager. When the Station Manager arrives and relieves the Shift Supervisor of the Emergency Coordinator function, he becomes the person in charge or the decision maker. When the Crisis Management center (CMC) is activated and operational, the Recovery Manager at the CMC is responsible for company emergency response. The Control Room at the station is the initial center for coordination of the emergency response for all emergency conditions. For emergencies classified as Alert, Site Emergency and General Emergency, the Emergency Coordinator shall activate the Technical Support Center (TSC) and the Crisis Management Center (CMC).

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 condition...

As the C.M.C. becomes operational, it will assume many of the functions of the T.S.C. and will rely on the T.S.C. as a vital link to the station. The T.S.C. will provide the C.M.C. with up-to-date plant parameters, which will allow this facility to perform its assigned tasks in accordance with the Crisis Management Plan."

Section A.1.d, Key Decision Making, states,

"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 the T.S.C. activation and arrival of the Station Manager, the Shift Supervisor becomes the Emergency Coordinator at the Station and is in charge. When the Station Manager arrives on-site and assumes the Emergency Coordinator positions, he becomes the person in charge of emergency response and becomes the key decision maker. After C.M.C. is activated and becomes operational, the Recovery Manager is responsible for company emergency response."

Section B.2, Station Emergency Coordinator, states,

"Initial activities at Catawba during any emergency condition are directed by the Shift Supervisor from the Control Room. The Shift Supervisor shall assume the functions of the Emergency Coordinator until the arrival of the Station Manager or his designee at which time the Station Manager will assume the responsibility of the Emergency Coordinator. The Emergency Coordinator will have the authority and responsibility to immediately and unilaterally initiate any emergency actions including:

- a. Provide protective action recommendations to authorities responsible for implementing off-site emergency measures. This authority shall not be delegated to other elements of the emergency organization.

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

Part II. Description and Review of Licensing Basis Affected by the Proposed Change (continued)

- b. Notification and activation of the Station, Corporate, County/City, South Carolina, North Carolina and the Nuclear Regulatory Commission emergency organizations having a response role.
- c. Continued assessment of actual or potential consequences both on-site and off-site throughout the evolution of the emergency condition.
- d. Effective implementation of emergency measures in the environs including protective actions for affected areas, implementation of emergency monitoring teams and facilities to evaluate the environmental consequences of the emergency condition, prompt notification and communications to off-site authorities.
- e. Continued maintenance of an adequate state of emergency preparedness until the emergency situation has been effectively managed and the station is returned to a normal or safe operating condition."

Section B.3, Station Emergency Coordinator (Line of Succession), states,

"The Emergency Coordinator function as described above in paragraph B.2 will later be assumed by the Recovery manager as the Crisis Management Center as this corporate organization is staffed and ready to take over its functions. This assumption of the Emergency Coordinator functions will take place for the Alert, Site Area Emergency and General Emergency categories."

Section B.4, Protective Action Recommendation, states,

"The functional responsibilities of the Emergency Coordinator as described in paragraph B.2. Protective Action recommendations to state and local authorities is initially vested with the Shift Supervisor/Emergency Coordinator. As the Crisis Management Center becomes operational, the Recovery Manager is the person who is responsible for making protective action recommendations."

The current revision of the Catawba Emergency Plan is revision 148. The following sections are affected by the change described in this evaluation:

Section A.1.b, Concept of Operations, states

"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. 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."

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

Part II. Description and Review of Licensing Basis Affected by the Proposed Change (continued)

Section A.1.d Key Decision-Making, states,

"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."

Section B.2 Emergency Coordinator, states,

"Initial activities at Catawba during any emergency condition are directed by the Operations Shift Manager from the Control Room. The Operations Shift Manager shall assume the functions of the Emergency Coordinator until the arrival of the Station Manager/designee at which time the Station Manager/designee will assume the functions of the Emergency Coordinator. The Emergency Coordinator will have the authority and the responsibility to immediately and unilaterally initiate any emergency actions including:

- a. Provide protective action recommendations to authorities responsible for implementing off-site emergency measures, implement event classification, notification, and event escalation/de-escalation/termination. THIS AUTHORITY SHALL NOT BE DELEGATED TO OTHER ELEMENTS OF THE EMERGENCY ORGANIZATION.
- b. Notification and activation of the Station, Corporate, County/City, South Carolina, North Carolina and the Nuclear Regulatory Commission emergency organizations having a response role.
- c. Continued assessment of actual or potential consequences both on- site and off-site throughout the evolution of the emergency condition.
- d. Effective implementation of emergency measures in the environs including protective actions for affected areas, implementation of emergency monitoring teams and facilities to evaluate the environmental consequences of the emergency condition, prompt notification and communications with off-site authorities.
- e. Continued maintenance of an adequate state of emergency preparedness until the emergency situation has been effectively managed and the station is returned to a normal or safe operating condition."

Section B.3 Emergency Coordinator (Line of Succession), states,

"The Emergency Coordinator function as described above in paragraph B.2 will later be assumed by the EOF Director at the Emergency Operations Facility as this organization is staffed and ready to take over its functions."

Section B.4 Functional Responsibilities of the Emergency Coordinator

"The functional responsibilities of the Emergency Coordinator are described in paragraph B.2. Protective Action recommendations to state and local authorities is initially vested with the Operations Shift Manager/ Emergency Coordinator. As the Emergency Operations Facility (EOF) becomes operational, the EOF Director is the person who is responsible for making protective action recommendations."

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

Part II. Description and Review of Licensing Basis Affected by the Proposed Change (continued)

Duke Power Company Response to Supplement 1 to NUREG-0737, Emergency Response Capability for Catawba Nuclear Station, Volume 1 does not contain applicable sections related to assignment of responsibility or augmentation of the onsite ERO.

RIS 2005-02, Revision 1, states that for the purposes of determining whether a change to a licensee's emergency plan constitutes a decrease in effectiveness, the licensee should use the last emergency plan reviewed and approved by the NRC. If the emergency plan change process has been properly implemented over the years, comparing a proposed emergency plan change to either the latest emergency plan reviewed and approved by the NRC or the emergency plan as changed by the licensee should result in the same decrease in effectiveness determination. The original Emergency Plan citations are listed to illustrate the differences between the last emergency plan reviewed and approved by NRC, revision 2, and the emergency plan as changed by the licensee, revision 148. Changes include variations in the titles of the ERO facilities and ERO positions. No significant changes that alter the intent of these sections have been made over the course of the 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 on 10 CFR 50.47(b) and the requirements in Appendix E to 10 CFR Part 50, then ensures the change is rejected, modified, or processed as an exemption request under 10 CFR 50.12, Specific Exceptions, rather than under 10 CFR 50.54(q):

The change related to the responsibility for classification affect **10 CFR 50.47(b)(1) and 10 CFR 50.47(b)(2)**

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."

10 CFR 50.47(b)(2), "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."

Appendix E to 10 CFR Part 50 Section IV.A (applicable excerpts only):

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. Specifically, the following shall be included:

1. A description of the normal plant operating organization.
2. A description of the onsite emergency response organization (ERO) with a detailed discussion of:
 - a. Authorities, responsibilities, and duties of the individual(s) who will take charge during an emergency;
 - b. Plant staff emergency assignments;
 - c. Authorities, responsibilities, and duties of an onsite emergency coordinator who shall be in charge of the exchange of information with offsite authorities responsible for coordinating and implementing offsite emergency measures.

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

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

3. A description, by position and function to be performed, of the licensee's headquarters personnel who will be sent to the plant site to augment the onsite emergency organization.

Conclusion

The changes related to the responsibility of classification continue to comply with Regulations and Commitments because the authorities, responsibilities and duties (Classification, Notification and Protective Action Recommendations) remain unambiguously defined as assigned to the Shift Manager, the TSC Emergency Coordinator, or the EOF Director, dependent upon which emergency facilities are activated/operational.

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

Part IV. Description of Emergency Plan PLANNING STANDARDS, FUNCTIONS AND PROGRAM ELEMENTS Affected by the Proposed Change (Address each function identified in Attachment 4, 10 CFR 50.54(q) Screening Evaluation Form, Part IV of associated Screen):

The change related to the responsibility for classification affect **10 CFR 50.47(b)(1)** and **10 CFR 50.47(b)(2)**

PLANNING STANDARDS

The regulation at 10 CFR 50.47(b)(1) states the following:

"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 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."

FUNCTIONS

Two emergency planning functions have been defined for 10 CFR 50.47(b)(1):

- (1) Responsibility for emergency response is assigned.
- (2) The response organization has the staff to respond and to augment staff on a continuing basis (i.e., 24/7 support) in accordance with the emergency plan.

Two emergency planning functions have been defined for 10 CFR 50.47(b)(2):

- (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.

Appendix E to 10 CFR Part 50 Section IV.A provides supporting requirements (applicable excerpts only):

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. Specifically, the following shall be included:

1. A description of the normal plant operating organization.
2. A description of the onsite emergency response organization (ERO) with a detailed discussion of:
 - c. Authorities, responsibilities, and duties of the individual(s) who will take charge during an emergency;
 - d. Plant staff emergency assignments;
 - c. Authorities, responsibilities, and duties of an onsite emergency coordinator who shall be in charge of the exchange of information with offsite authorities responsible for coordinating and implementing offsite emergency measures.
3. A description, by position and function to be performed, of the licensee's headquarters personnel who will be sent to the plant site to augment the onsite emergency organization.

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

Part IV. Description of Emergency Plan PLANNING STANDARDS, FUNCTIONS AND PROGRAM ELEMENTS Affected by the Proposed Change (Address each function identified in Attachment 4, 10 CFR 50.54(q) Screening Evaluation Form, Part IV of associated Screen) (continued):

PROGRAM ELEMENTS

Section II.A of NUREG-0654/FEMA-REP-1, Rev 1, contains the following informing criteria:

II, A. Assignment of Responsibility (Organization Control) (applicable excerpts only)

- 1a. 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.
- 1b. Each organization and sub-organization having an operational role shall specify its concept of operations, and its relationship to the total effort.

Section II.B of NUREG-0654/FEMA-REP-1, Rev 1, contains the following informing criteria:

II, B. Onsite Emergency Organization

1. Each licensee shall specify the onsite emergency organization of plant staff personnel for all shifts and its relation to the responsibilities and duties of the normal staff complement.
2. Each licensee shall designate an individual as emergency coordinator who shall be on shift at all times and who shall have the authority and responsibility to immediately and unilaterally initiate any emergency actions, including providing protective action recommendations to authorities responsible for implementing offsite emergency measures.
3. Each licensee shall identify a line of succession for the emergency coordinator position and identify the specific conditions for higher level utility officials assuming this function.
4. Each licensee shall establish the functional responsibilities assigned to the emergency coordinator and shall clearly specify which responsibilities may not be delegated to other elements of the emergency organization. Among the responsibilities which may not be delegated shall be the decision to notify and to recommend protective actions to authorities responsible for offsite emergency measures.

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

Two emergency planning functions have been defined for 10 CFR 50.47(b)(1):

- (1) Responsibility for emergency response is assigned.
- (2) The response organization has the staff to respond and to augment staff on a continuing basis (i.e., 24/7 support) in accordance with the emergency plan.

Two emergency planning functions have been defined for 10 CFR 50.47(b)(2):

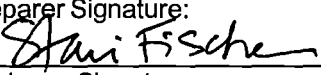
- (1) The process ensures that onshift emergency response responsibilities are staffed and assigned.
- (2) The process for timely augmentation of onshift staff is established and maintained

The change related to the responsibility of classification continues to comply with Emergency Plan Functions because the responsibilities (Classification, Notification and Protective Action Recommendations) remain unambiguously defined as assigned to the Shift Manager, the TSC Emergency Coordinator, or the EOF Director, dependent upon which emergency facilities are activated/operational.

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

Part VI. Evaluation Conclusion.			
Answer the following questions about the proposed change.			
1	Does the proposed change comply with 10 CFR 50.47(b) and 10 CFR 50 Appendix E?	Yes ●	No □
2	Does the proposed change maintain the effectiveness of the emergency plan (i.e., no reduction in effectiveness)?	Yes ●	No □
3	Does the proposed change maintain the current Emergency Action Level (EAL) scheme?	Yes ●	No □
4	Choose one of the following conclusions:		
a	The activity does continue to comply with the requirements of 10 CFR 50.47(b) and 10 CFR 50, Appendix E, and the activity does not constitute a reduction in effectiveness or change in the current Emergency Action Level (EAL) scheme. Therefore, the activity can be implemented without prior NRC approval.	●	
b	The activity does not continue to comply with the requirements of 10 CFR 50.47(b) or 10 CFR 50 Appendix E or the activity does constitute a reduction in effectiveness or EAL scheme change. Therefore, the activity cannot be implemented without prior NRC approval.	□	
Part VII. Disposition of Proposed Change Requiring Prior NRC Approval			
Will the proposed change determined to require prior NRC approval be either revised or rejected?		Yes □	No □
If No, then initiate a License Amendment Request in accordance 10 CFR 50.90 and AD-LS-ALL-0002, Regulatory Correspondence, and include the tracking number: _____.			

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

Part VIII. Signatures: EP CFAM Final Approval is required for changes affecting risk significant planning standard 10 CFR 50.47(b)(4).		
Preparer Name (Print): Staci Fischer	Preparer Signature: 	Date: 8/31/2016
Reviewer Name (Print): White, Jeffery M.	Reviewer Signature: (electronic signature attached)	Date: 8/31/2016
Approver (EP Manager) Name (Print): Arlow, Tom A.	Approver Signature: (electronic signature attached)	Date: 8/31/2016
Approver (CFAM, as required) Name (Print):	Approver Signature:	Date:
If the proposed activity is a change to the E-Plan or implementing procedures, then create two EREG General Assignments.		
• One for EP to provide the 10 CFR 50.54(q) summary of the analysis, or the completed 10 CFR 50.54(q), to Licensing.		•
• One for Licensing to submit the 10 CFR 50.54(q) information to the NRC within 30 days after the change is put in effect.		•

QA RECORD



Duke Energy

ACTION REQUEST - 02057469

Action Request Assignment Routing/Return Comments

Routing Comments from the X601 Panel
Section 5 changes

Updated On
20160830

Updated By
180034

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 : 144004

Passport	Fac	Group	/	Type	Send Date	Send Time	Action Taken	Action Date	/	Time	Last Name
180034				A	08/30/2016	14:17	APPROVED	08/30/2016		14:18	WHITE
180034				A	08/30/2016	12:42	RETURNED	08/30/2016		13:54	WHITE
TAA7322				A	08/30/2016	14:18	APPROVED	08/30/2016		15:23	ARLOW
JBT7317				I	08/30/2016	14:17		09/13/2016		10:47	TEASDELL
144004				I	08/30/2016	14:17		08/30/2016		14:17	FISCHER

Action Request Assignment Cause/Action

Action Request Assignment Reference Documents

Doc	Sub	Minor					
Facility	Type	Type	Document	Sheet	Rev	Rev	Title

Action Request Assignment Reference Equipment

Facility	Unit	System	Equip Type	Equip Number	Equip Tag	Equip Status	Rev	Rev Status
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Action Request Assignment Cross References

Ref Type	Ref Nbr	Ref Sub	RefNbr Type	Status	Limit AS CIs	Description
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<< 10 CFR 50.54(q) Screening Evaluation Form >>

Screening and Evaluation Number		Applicable Sites	
EREG #: _____ 2057467 _____		BNP	<input type="checkbox"/>
		CNS	<input checked="" type="checkbox"/>
		CR3	<input type="checkbox"/>
		HNP	<input type="checkbox"/>
5AD #: _____ 2053611 _____		MNS	<input type="checkbox"/>
		ONS	<input type="checkbox"/>
		RNP	<input type="checkbox"/>
		GO	<input type="checkbox"/>
Document and Revision	Catawba Emergency Plan, Section E, Revision 147 (PRR 2047642)		
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):			
Part I. Description of Proposed Change:			
Section E.2.a			
changed "Operations Shift Manager" to "Shift Manager"			
changed "Public Affairs" to "Corporate Communications"			
Section E.2.c, second NOTE			
changed "Operations Shift Manager" to "Shift Manager"			
Figure E-1			
Replaced the entirety of the figure with a new Emergency Notification Form (ENF).			
Line by Line review of the ENF changes:			
<ul style="list-style-type: none">Added a note above Line 1 that reads "Lines 1 - 6 are required for INITIAL Notifications"Line 1 - Added "Event" to the beginning of the Line. Changed "Actual Event" to "Actual Declaration"Added the option to select termination in Line 1Deleted the option to select "Initial" or "Follow-up"Old Line 3, new Line 2, "Site" revised to "Affected Site"New Line 4, removed "Based On." "EAL #" EAL Description remains in Line 4.Added "Termination Date and Time (mark "N/A" for EAL# &Description)" to Line 4.Old Line 6, new Line 5, changed "Emergency Release" to "Release to the Environment (caused by the emergency)"Added a note below Line 6, "Lines 7-11 are NOT required for INITIAL notifications. Lines 7-11 may be provided separately for follow-up notifications"Deleted Line 7, "Release Significance"Old Line 8, new Line 7, "Event Prognosis" revised to "Prognosis: Upgrade in classification or PAR changes is likely before the next follow- up notification DYes DNo"Old Line 11 "Affected Unit(s)" and old Line 12 "Unit Status", new Line 8, deleted the note "(Unaffected unit(s) Status not required for initial notifications)"			

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

- Old Line 14, new Line 10, "Release Characterization" revised to "Airborne Release Characterization"
- Deleted the following from old Line 14, "Other:" "Form: Airborne Start Time, Date, and Time, Stop Time and Date", as well as, "Liquid Start Time Date, and Stop Time, Date"
- Old Line 15 new Line 11, "Projection Parameters" revised to "Dose Projection"
- New Line 15, added the words "(ORO use Only)" to this Line

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

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

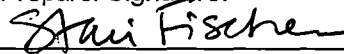
<< 10 CFR 50.54(q) Screening Evaluation Form >>

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.		
The following changes in position titles neither meet the definition of editorial, as described in AD-EP-ALL-0602, nor do these changes affect any of the planning standards listed below. The change in title from "Operations Shift Manager" to "Shift Manager" does not affect the responsibilities, qualifications or training, et al, for this position. This position remains as the on-shift Emergency Coordinator as described in the regulations and licensing basis. The change in title from "Public Affairs" to "Corporate Communications" is a similar change in title only, and does not affect responsibilities, qualifications or training, et al.		
Section E.2.a		
changed "Operations Shift Manager" to "Shift Manager"		
changed "Public Affairs" to "Corporate Communications"		
Section E.2.c, second NOTE		
changed "Operations Shift Manager" to "Shift Manager"		
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 onshift emergency response responsibilities are staffed and assigned	<input type="checkbox"/>
2b	The process for timely augmentation of onshift staff is established and maintained.	<input type="checkbox"/>
3	10 CFR 50.47(b)(3) Emergency Response Support and Resources	
3a	Arrangements for requesting and using off site assistance have been made.	<input type="checkbox"/>
3b	State and local staff can be accommodated at the EOF in accordance with the emergency plan. (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 initiating notification of the declared emergency within 15 minutes (60 minutes for CR3) after declaration of an emergency and providing follow-up notification.	<input checked="" 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"/>

<< 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"/>
15	10 CFR 50.47(b)(15) Emergency Response Training	
15a	Training is provided to emergency responders.	<input type="checkbox"/>

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

Part IV. Emergency Planning Element and Function Screen (cont.)		
16	10 CFR 50.47(b)(16) Emergency Plan Maintenance	
16a	Responsibility for emergency plan development and review is established.	<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, a 10 CFR 50.54(q) Effectiveness Evaluation is not required, then complete Attachment 4, 10 CFR 50.54(q) Screening Evaluation Form, Part V. Go to Attachment 4, 10 CFR 50.54(q) Screening Evaluation Form, Part VI for instructions describing the NRC required 30 day submittal.		<input type="checkbox"/>
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. Shaded block requires final approval of Screen and Evaluation by EP CFAM.		•
Part V. Signatures:		
Preparer Name (Print): Staci Fischer	Preparer Signature: 	Date: 08/31/2016
Reviewer Name (Print): White, Jeffery M.	Reviewer Signature: (electronic signature attached)	Date: 08/31/2016
Approver (EP Manager) Name (Print): Arlow, Tom A.	Approver Signature: (electronic signature attached)	Date: 08/31/2016
Approver (CFAM, as required) Name (Print)	Approver Signature:	Date:
Part VI. NRC Emergency Plan and Implementing Procedure Submittal Actions		
Create two EREG General Assignments.		
• One for EP to provide the 10 CFR 50.54(q) summary of the analysis, or the completed 10 CFR 50.54(q), to Licensing.		•
• One for Licensing to submit the 10 CFR 50.54(q) information to the NRC within 30 days after the change is put in effect.		•

QA RECORD



Duke Energy

ACTION REQUEST - 02057467

08/31/2016

TAA7322

COMPLETE

Action Request Assignment Attributes

Action Request Assignment Routing/Return Comments

Routing Comments from the X601 Panel

*** No Routing Comments Found ***

Updated On

Updated By

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

Passport	Fac	Group	/	Type	Send Date	Send Time	Action Taken	Action Date	/	Time	Last Name
I80034				A	08/31/2016	11:53	APPROVED	08/31/2016	13:18		WHITE
TAA7322				A	08/31/2016	13:18	APPROVED	08/31/2016	19:19		ARLOW
JBT7317				I	08/31/2016	11:53		09/13/2016	10:46		TEASDELL
I44004				I	08/31/2016	11:53		08/31/2016	11:53		FISCHER

Action Request Assignment Cause/Action

Action Request Assignment Reference Documents

Facility	Doc Type	Sub Type	Document	Sheet	Rev	Minor Rev	Title
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Action Request Assignment Reference Equipment

Facility	Unit	System	Equip Type	Equip Number	Equip Tag	Equip Status	Rev	Rev Status
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<< 10 CFR 50.54(q) Effectiveness Evaluation Form >>

Screening and Evaluation Number		Applicable Sites	
EREG #: 2057467		BNP	<input type="checkbox"/>
		CNS	<input checked="" type="checkbox"/>
		CR3	<input type="checkbox"/>
		HNP	<input type="checkbox"/>
5AD #: 20553611		MNS	<input type="checkbox"/>
		ONS	<input type="checkbox"/>
		RNP	<input type="checkbox"/>
		GO	<input type="checkbox"/>
Document and Revision	Catawba Emergency Plan, Section E, revision 147 (PRR 2047642)		
Part I. Description of Proposed Change:			
<p>Figure E-1</p> <p>Replaced the entirety of the figure with a new Emergency Notification Form (ENF).</p> <p>Line by Line review of the ENF changes:</p> <ul style="list-style-type: none">• Added a note above Line 1 that reads "Lines 1 - 6 are required for INITIAL Notifications"• Line 1 - Added "Event" to the beginning of the Line. Changed "Actual Event" to "Actual Declaration"• Added the option to select termination in Line 1• Deleted the option to select "Initial" or "Follow-up"• Old Line 3, new Line 2. "Site" revised to "Affected Site"• New Line 4. Removed "Based On." "EAL #" EAL Description remains in Line 4.• Added "Termination Date and Time (mark "N/A" for EAL# &Description)" to Line 4.• Old Line 6 new Line 5. Changed "Emergency Release" to "Release to the Environment (caused by the emergency)"• Added a note below Line 6: "Lines 7-11 are NOT required for INITIAL notifications. Lines 7-11 may be provided separately for follow-up notifications"• Deleted Line 7 "Release Significance"• Old Line 8, new Line 7 "Event Prognosis" revised to "Prognosis: Upgrade in classification or PAR changes is likely before the next follow- up notification DYes DNo".• Old Line 11 "Affected Unit(s)" and old Line 12 "Unit Status", new Line 8, deleted the note "(Unaffected unit(s) Status not required for initial notifications)".• Old Line 14, new Line 10, "Release Characterization" revised to "Airborne Release Characterization"• Deleted the following from old Line 14 - "Other:" "Form: Airborne Start Time, Date, and Time, Stop Time and Date", as well as, "Liquid Start Time Date, and Stop Time, Date".• Old Line 15 new Line 11, "Projection Parameters" revised to "Dose Projection"• New Line 15 added the words "(ORO use Only)" to this Line			
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"/>

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

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

Three licensing basis documents were reviewed for applicability, 1) the Catawba Emergency plan, Revision 2, as the original plan approved by the NRC, 2) the current Catawba Emergency plan, revision 148, and 3) "Duke Power Company Response to Supplement 1 to NUREG-0737, Emergency Response Capability for Catawba Nuclear Station, Volume 1."

Applicable sections of the Emergency Plan titled, "Catawba Nuclear Station Emergency Plan", revision 2 - January 1983:

Section E, Notification Methodology

Section E.2.a., Notification of Unusual Event, states,

"The Emergency Coordinator will assure prompt notification of State and Local offsite authorities (State and all County Warning Points, or Emergency Operations Centers if established), the NRC Operations Center via the Emergency Notification System, the Senior Station NRC representative and the Construction Project Manager of the Unusual Event and the reason for the emergency for any initiating condition or implementation of any emergency procedure listed in Figure D-1.

NOTE: Notification format and message authentication technique to offsite authorities shall be in accordance with the appropriate emergency procedure (See Figure E-1)"

Section E.2.b., Alert, states,

"The Emergency Coordinator will assure prompt notification of State and Local offsite authorities (State and all County Warning Points, or Emergency Operations Centers if established), the NRC Operations Center via the Emergency Notification System, the Senior Station NRC representative and the Construction Project Manager of the Alert and the reason for the emergency for any initiating condition or implementation of any emergency procedure listed in Figure D-2.

NOTE: Notification format and message authentication technique to offsite authorities shall be in accordance with the appropriate emergency procedure (See Figure E-1)"

Section E.2.c., Site Area Emergency, states,

"The Emergency Coordinator will assure prompt notification of State and Local offsite authorities (State and all County Warning Points, or Emergency Operations Centers if established), the NRC Operations Center via the Emergency Notification System, the Senior Station NRC representative and the Construction Project Manager of the Site Area Emergency and the reason for the emergency for any initiating condition or implementation of any emergency procedure listed in Figure D-3.

NOTE: Notification format and message authentication technique to offsite authorities shall be in accordance with the appropriate emergency procedure (See Figure E-1)"

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

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

Section E.2.c., General Emergency, states,

"The Emergency Coordinator will assure prompt notification of State and Local offsite authorities (State and all County Warning Points, or Emergency Operations Centers if established), the NRC Operations Center via the Emergency Notification System, the Senior Station NRC representative and the Construction Project Manager of the General Emergency and the reason for the emergency for any initiating condition or implementation of any emergency procedure listed in Figure D-4.

NOTE: Notification format and message authentication technique to offsite authorities shall be in accordance with the appropriate emergency procedure (See Figure E-1)"

Section E.3, Emergency Message Format (Initial), states,

"Figure E-1, Warning Message: Nuclear Facility to State/Local Government contains information about the class of emergency, whether a release is taking place, the potentially affected areas and whether protective actions may be necessary."

Section E.4, Emergency message Format (Follow- Up), states,

"Figure E-1, Warning Message: Nuclear Facility to State/Local Government contains provisions for follow-up information if it is known and appropriate."

Figure E-1 is the initial and followup warning message form.

The current revision of the Catawba Emergency Plan is revision 148. The following sections are affected by the change described in this evaluation:

Section E, Notification Methodology

Section E.2.a, Notification of Unusual Event,

Section E.2.b, Alert,

Section E.2.c, Site Area Emergency, and

Section E.2.d, General Emergency,

all sections contain:

"The Operations Shift Manager shall assure prompt notification of Federal, State and Local off-site authorities:

1. North Carolina Warning Point (Raleigh, NC)
2. South Carolina Warning Point (Columbia, SC)
3. York County Warning Point (Rock Hill, SC)
4. Gaston County Warning Point (Gastonia, NC)
5. Mecklenburg County Warning Point (Charlotte, NC)
6. NRC Operations Center (Rockville, MD)

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

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

Notification format and message authentication technique to off-site authorities shall be in accordance with applicable Catawba Nuclear Station Emergency Response Procedures."

Section E.3 Emergency Message Format (Initial)

Figure E-1, Emergency Notification contains information about the class of emergency, whether a release is taking place, the potentially affected areas and whether protective actions may be necessary.

Section E.4 Emergency Message Format (Follow-Up)

Figure E-1, Emergency Notification contains provisions for follow-up information if it is known and appropriate.

Figure E-1 is the Nuclear Power Plant Emergency Notification Form.

"Duke Power Company Response to Supplement 1 to NUREG-0737, Emergency Response Capability for Catawba Nuclear Station, Volume 1," does not contain applicable sections related to the format of the emergency notification.

RIS 2005-02, Revision 1, states that for the purposes of determining whether a change to a licensee's emergency plan constitutes a decrease in effectiveness, the licensee should use the last emergency plan reviewed and approved by the NRC. If the emergency plan change process has been properly implemented over the years, comparing a proposed emergency plan change to either the latest emergency plan reviewed and approved by the NRC or the emergency plan as changed by the licensee should result in the same decrease in effectiveness determination. The original Emergency Plan citations are listed to illustrate the differences between the last emergency plan reviewed and approved by NRC, revision 2, and the emergency plan as changed by the licensee, revision 148. No significant changes that alter the intent of these sections have been made over the course of the 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 on 10 CFR 50.47(b) and the requirements in Appendix E to 10 CFR Part 50, then ensures the change is rejected, modified, or processed as an exemption request under 10 CFR 50.12, Specific Exceptions, rather than under 10 CFR 50.54(q):

The change to the notification methodology affects **10 CFR 50.47(b)(5)**

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."

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

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

IV.D.1. of Appendix E to 10 CFR Part 50 provides supporting requirements (applicable excerpts only):

D. Notification Procedures

1. Administrative and physical means for notifying local, State, and Federal officials and agencies and agreements reached with these officials and agencies for the prompt notification of the public and for public evacuation or other protective measures, should they become necessary, shall be described. This description shall include identification of the appropriate officials, by title and agency, of the State and local government agencies within the EPZs.

Line-by-line explanations of the ENF changes are described below:

- *Added a note above line 1 that reads "Lines 1 - 6 are required for INITIAL Notifications"*
Clarifies that those lines are used and required for initial notifications. Subsequently, lines 7-12, are completed (as applicable) in follow-up messages.
- *Line 1 - Added "Event" to the beginning of the Line. Changed "Actual Event" to "Actual Declaration"*
"Declaration" is consistent with emergency classification and does not convey the meaning of other events that do not require classification.
- *Added the option to select termination in line 1*
Easily distinguishes the type of notification is being sent.
- *Deleted the options to select "Initial" or "Follow-up"*
It is now understood, and agreed upon, by the states and counties that Initial forms will have lines 1-6 completed and Follow-up messages will supply additional information in lines 7-11, as applicable.
- *Old Line 3, new Line 2. "Site" revised to "Affected Site"*
Added the word "Affected" for additional clarification.
- *New line 4. Removed the words "Based On" "EAL #" EAL Description remains in Line 4*
Revised for clarification.
- *Added "Termination Date and Time (mark "N/A" for EAL# &Description)" to Line 4.*
Clarifies that the EAL information is not needed for termination messages.
- *Old line 6, new line 5. "Emergency Release" revised to "Release to the Environment (caused by the emergency)"*
This additional wording was made at the request of the offsite response organizations to provide additional clarification of a release.

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

- *Added a note below line 6 that reads "Lines 7-11 are NOT required for INITIAL notifications. Lines 7-11 may be provided separately for follow-up notifications"*

This note clarifies that Initial notification form lines 7-11 will be left blank. However, lines 7-11 will be provided on follow-up notifications as applicable to the emergency declared, or could be provided by other means (e.g. WebEOC) if agreed upon by all agencies.
- *Deleted line 7 "Release Significance"*

Actual dose projections will be provided for any release to the environment attributable to the event on follow-up notifications. If Release to the Environment is marked for an initial, it is understood that the release is under evaluation. Removing "Under and above normal operating limits" and providing the actual dose projection information will eliminate confusion and other questions as to the sites operating limits.
- *Old Line 8 ", new line 7 "Event Prognosis revised to Prognosis: Upgrade in classification or PAR changes is likely before the next follow- up notification ☐Yes ☐No"*

Provides clarification on the prognosis of the declaration.
- *Old Line 11 "Affected Unit(s)" and old Line 12 "Unit Status", new line 8, deleted the note "(Unaffected unit(s) Status not required for initial notifications)"*

Unit status for all units will be provided on follow-up notifications. Affected Unit(s) by the declared emergency will be marked with a "Yes" in the check box provided in follow-up messages.
- *Old Line 14 new line 10, "Release Characterization", revised to "Airborne Release Characterization"*

Clarifies that the release information provided will be those releases that are airborne releases and not liquid. The purpose of the Emergency Release information on the Emergency Notification Form is to provide source term information used by Duke Energy for dose assessment, provide information on the release magnitude and support the development of Protective Action Recommendations (PARs) by Duke Energy and Protective Action Decisions (PADs) by the offsite response organizations. Per Federal Guidance in EPA-400-R-92-001, *Manual of Protective Action Guides and Protective Actions for Nuclear Incidents*, Protective Actions Guides for the early phase are focused on protecting the public from an airborne release of radioactive materials. During the early phase of an incident, doses may accrue from both airborne and from deposited radioactive materials. The focus is external dose from direct exposure to airborne and deposited materials, and committed dose to internal organs from the inhalation of radioactive material. Protective Actions for food and water are considered Intermediate Phase, not Early Phase, actions. EPA-400-R-92-001 did not include Intermediate Phase Protective Action Guides for water as these were still being developed by EPA. Liquid releases will be reported in the remarks section of the form (new line 12) only if the liquid release extends beyond the site boundary.

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

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

- Deleted the following from old line 14 - "Other:" "Form: Airborne Start Time, Date, and Time, Stop Time and Date", as well as, "Liquid Start Time Date, and Stop Time, Date"
The "other" selection was not used, and there were no instructions for its use, therefore removed from the form. Start and stop times of releases are no longer used in the new methodology of dose projection. The new methodology is a snap shot of protected dose from current conditions and is independent of what has happened previously in a release.
- Old line 15 "Projection Parameters", new line 11, revised to read "Dose Projection"
Update the title.
- New line 15 added the words "(ORO use Only)" to this line.
This line is only for use by the OROs when the form is received.

Conclusion

The changes described above provide clarification of the information provided to the offsite response organizations. These changes were discussed, negotiated and agreed to by the State and Local OROs.

The ENF, as revised, continues to comply with 10 CFR 50.47(b)(5), as the content of the initial and followup notification forms remain established, and continues to comply with 10 CFR 50 Appendix E, as administrative means for notifying local, State, and Federal officials and agencies remain described.

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

Part IV. Description of Emergency Plan PLANNING STANDARDS, FUNCTIONS AND PROGRAM ELEMENTS Affected by the Proposed Change (Address each function identified in Attachment 4, 10 CFR 50.54(q) Screening Evaluation Form, Part IV of associated Screen):

The changes related to the responsibility for classification affect **10 CFR 50.47(b)(5)**

PLANNING STANDARDS

The regulation at 10 CFR 50.47(b)(5) states the following:

"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."

Appendix E to 10 CFR Part 50 Section IV.D provides supporting requirements (applicable excerpts only):

D. Notification Procedures

1. Administrative and physical means for notifying local, State, and Federal officials and agencies and agreements reached with these officials and agencies for the prompt notification of the public and for public evacuation or other protective measures, should they become necessary, shall be described. This description shall include identification of the appropriate officials, by title and agency, of the State and local government agencies within the EPZs.

FUNCTIONS

Three emergency planning functions have been defined for 10 CFR 50.47(b)(5):

- (1) Procedures for notification of State and local governmental agencies are capable of alerting them of the declared emergency within 15 minutes after declaration of an emergency and providing follow-up notifications.
- (2) Administrative and physical means have been established for alerting and providing prompt instructions to the public within the plume exposure pathway.
- (3) 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 FEMA-approved ANS design report and supporting FEMA approval letter.

PROGRAM ELEMENTS

Section II.E of NUREG-0654/FEMA-REP-1, Rev 1, contains the following informing criteria:

II. E. Notification Methods and Procedures

3. The licensee in conjunction with State and local organizations shall establish the contents of the initial emergency messages to be sent from the plant. These measures shall contain information about the class of emergency, whether a release is taking place, potentially affected population and areas, and whether protective measures may be necessary.

4. Each licensee shall make provisions for follow-up messages from the facility to offsite authorities which shall contain the following information if it is known and appropriate:

4.a. location of incident and name and telephone number (or communications channel identification) of caller;

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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):

- 4.b. date/time of incident;
- 4.c. class of emergency;
- 4.d. type of actual or projected release (airborne, waterborne, surface spill), and estimated duration/impact times;
- 4.e. estimate of quantity of radioactive material released or being released and the points and height of releases;
- 4.f. chemical and physical form of released material, including estimates of the relative quantities and concentration of noble gases, iodines and particulates;
- 4. g. meteorological conditions at appropriate levels (wind speed, direction (to and from), indicator of stability, precipitation, if any);
- 4. h. actual or projected dose rates at site boundary; projected integrated dose at site boundary;
- 4.i. projected dose rates and integrated dose at the projected peak and at 2, 5 and 10 miles, including sector(s) affected;
- 4. j. estimate of any surface radioactive contamination in-plant, onsite or offsite;
- 4. k. licensee emergency response actions underway;
- 4. l. recommended emergency actions, including protective measures;
- 4.m. request for any needed onsite support by offsite organizations; and
- 4. n. prognosis for worsening or termination of event based on plant information.

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

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

The changes to the ENF were established in conjunction with the States and Local Offsite Response Organizations (OROs). Duke Energy requested concurrence from the OROs in a letter dated April 4, 2016. Concurrences from the OROs supporting Catawba Nuclear Station were received on the following dates: Gaston County, 4/11/16; Charlotte Fire Department/Mecklenburg County, 4/15/16; York County, 4/18/15; State of North Carolina, 4/28/16; State of South Carolina, 4/11/16.

Three emergency planning functions have been defined for 10 CFR 50.47(b)(5):

- (1) Procedures for notification of State and local governmental agencies are capable of alerting them of the declared emergency within 15 minutes after declaration of an emergency and providing follow-up notifications.
- (2) *Administrative and physical means have been established for alerting and providing prompt instructions to the public within the plume exposure pathway.*
- (3) *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 FEMA-approved ANS design report and supporting FEMA approval letter.*

Only the first emergency plan function listed is affected by changing the ENF. The ENF continues to comply with the first 10 CFR 50.47(b)(5) Emergency Planning Function listed above, as the procedures for notification of State and local governmental agencies remain capable of alerting them of the declared emergency within 15 minutes after declaration of an emergency and providing follow-up notifications.

In addition, all of the Emergency Planning Elements listed in NUREG-0654, Section E.3 and E.4 are included in the revised ENF.

Initial messages continue to contain information about the class of emergency, whether a release is taking place, potentially affected population and areas, and whether protective measures may be necessary.

Follow-up messages contain: affected site, unit, and unit status, and name and telephone number (or communications channel identification) of caller; date/time of incident; class of emergency, emergency action level and description; whether a release is occurring or has occurred; airborne release estimated duration; estimate of quantity of radioactive material released or being released and the height of releases; estimates of the relative quantities and concentration of noble gases, iodines and particulates; meteorological conditions (wind speed, direction (from), stability class, and precipitation); projected dose rates at site boundary, 2, 5 and 10 miles; licensee emergency response actions underway; recommended protective measures; and prognosis for worsening of event.

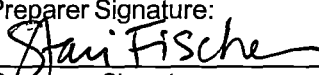
<< 10 CFR 50.54(q) Effectiveness Evaluation Form >>

Part VI. Evaluation Conclusion.			
Answer the following questions about the proposed change.			
1	Does the proposed change comply with 10 CFR 50.47(b) and 10 CFR 50 Appendix E?	Yes ●	No □
2	Does the proposed change maintain the effectiveness of the emergency plan (i.e., no reduction in effectiveness)?	Yes ●	No □
3	Does the proposed change maintain the current Emergency Action Level (EAL) scheme?	Yes ●	No □
4	Choose one of the following conclusions:		
a	The activity does continue to comply with the requirements of 10 CFR 50.47(b) and 10 CFR 50, Appendix E, and the activity does not constitute a reduction in effectiveness or change in the current Emergency Action Level (EAL) scheme. Therefore, the activity can be implemented without prior NRC approval.	●	
b	The activity does not continue to comply with the requirements of 10 CFR 50.47(b) or 10 CFR 50 Appendix E or the activity does constitute a reduction in effectiveness or EAL scheme change. Therefore, the activity cannot be implemented without prior NRC approval.	□	
Part VII. Disposition of Proposed Change Requiring Prior NRC Approval			
Will the proposed change determined to require prior NRC approval be either revised or rejected?		Yes □	No □
If No, then initiate a License Amendment Request in accordance 10 CFR 50.90 and AD-LS-ALL-0002, Regulatory Correspondence, and include the tracking number:_____.			

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
	Rev. 1

ATTACHMENT 5
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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).		
Preparer Name (Print): Staci Fischer	Preparer Signature: 	Date: 08/31/2016
Reviewer Name (Print): White, Jeffery M.	Reviewer Signature: (electronic signature attached)	Date: 08/31/2016
Approver (EP Manager) Name (Print): Arlow, Tom A.	Approver Signature: (electronic signature attached)	Date: 08/31/2016
Approver (CFAM, as required) Name (Print):	Approver Signature:	Date:
If the proposed activity is a change to the E-Plan or implementing procedures, 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. 		<div>●</div> <div>●</div>

QA RECORD



Duke Energy

ACTION REQUEST - 02057467

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

Passport	Fac	Group	/	Type	Send Date	Send Time	Action Taken	Action Date	/	Time	Last Name
I80034				A	08/31/2016	11:58	APPROVED	08/31/2016	13:20		WHITE
TAA7322				A	08/31/2016	13:20	APPROVED	08/31/2016	19:21		ARLOW
JBT7317				I	08/31/2016	11:58		09/13/2016	10:46		TEASDELL
I44004				I	08/31/2016	11:58		08/31/2016	11:58		FISCHER

Action Request Assignment Cause/Action

Action Request Assignment Reference Documents

Facility	Doc Type	Sub Type	Document	Sheet	Rev	Minor Rev	Title
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Action Request Assignment Reference Equipment

Facility	Unit	System	Equip Type	Equip Number	Equip Tag	Equip Status	Rev	Rev Status
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Action Request Assignment Cross References

Ref Type	Ref Nbr	Ref Sub	Ref Nbr Type	Status	Limit AS CIs	Description
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Action Request Assignment Appendices

APPENDIX 1

**Catawba Nuclear Station
Emergency Plan Revision 16-2
Attachment 2
Plan Update Instructions**

Replace Revision 146 Cover Sheet with Revision 16-2 Cover Sheet

List of Effective Pages (LOEP)

Replace entire LOEP

Table of Contents

Replace all pages of this section.

List of Figures

Replace all pages of this section.

Introduction

Replace all pages of this section.

Tab B- Site Emergency Organization

Replace all pages of this section

Tab E - Notification Methodology

Replace all pages of this section

**Catawba Nuclear Station
Emergency Plan Revision 16-2
Attachment 3
Emergency Plan Revision 16-2**

LIST OF EFFECTIVE PAGES (LOEP)

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LIST OF EFFECTIVE PAGES (LOEP)

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DUKE ENERGY CORPORATION
CATAWBA NUCLEAR STATION
EMERGENCY PLAN

REVISION 16-2

October 2016

APPROVED:

Tom Simril
Site Vice President
Catawba Nuclear Station

Date Approved

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).

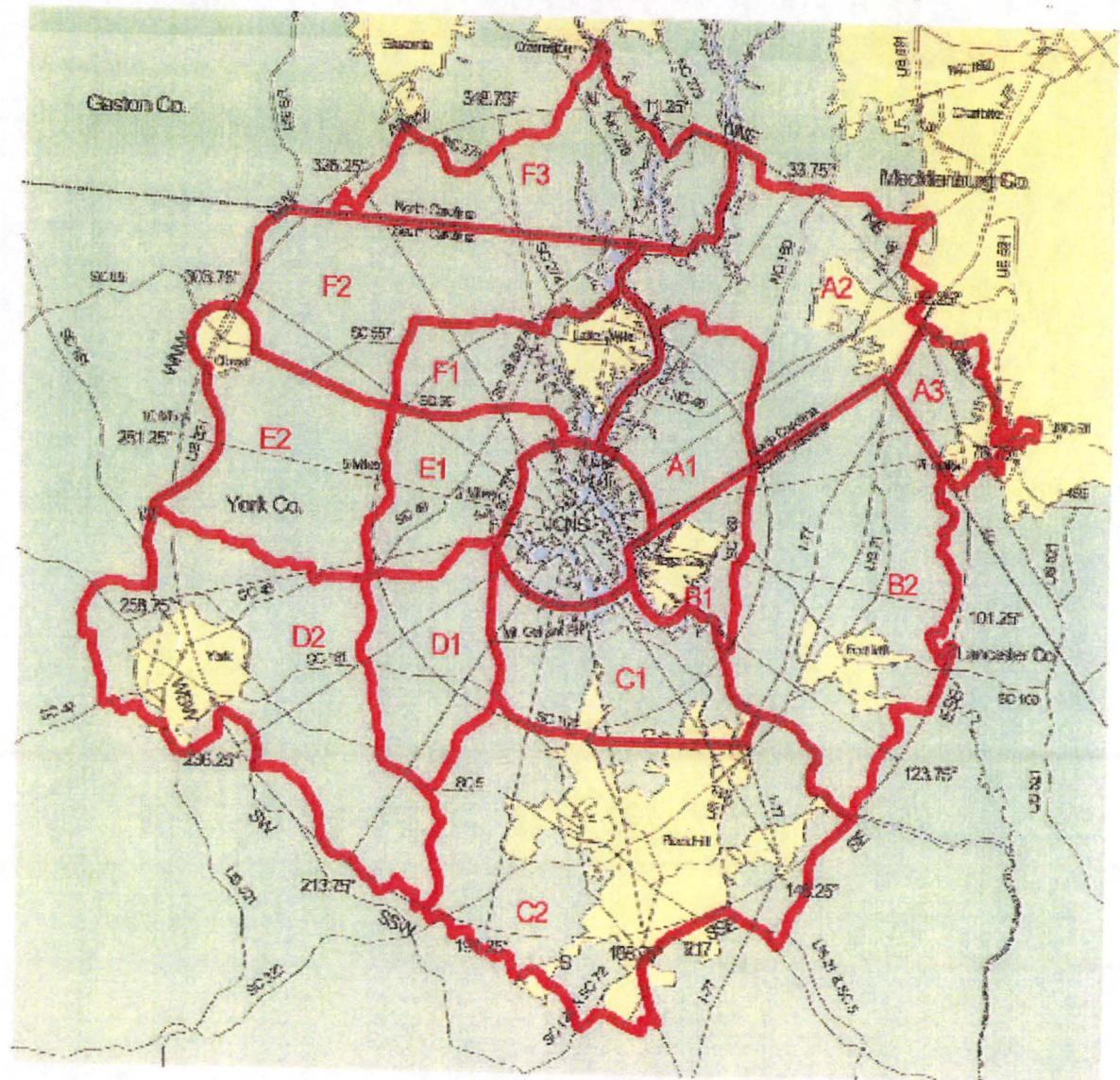
The size of the ingestion exposure EPZ (about 50 miles in radius, which also includes the 10-mile radius plume exposure EPZ [Refer to Figure i-2]) was selected because:

- 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.

DURIE ENERGY
CALAWBA NUCLEAR STATION
FIGURE 1-1

10 MILE EPZ



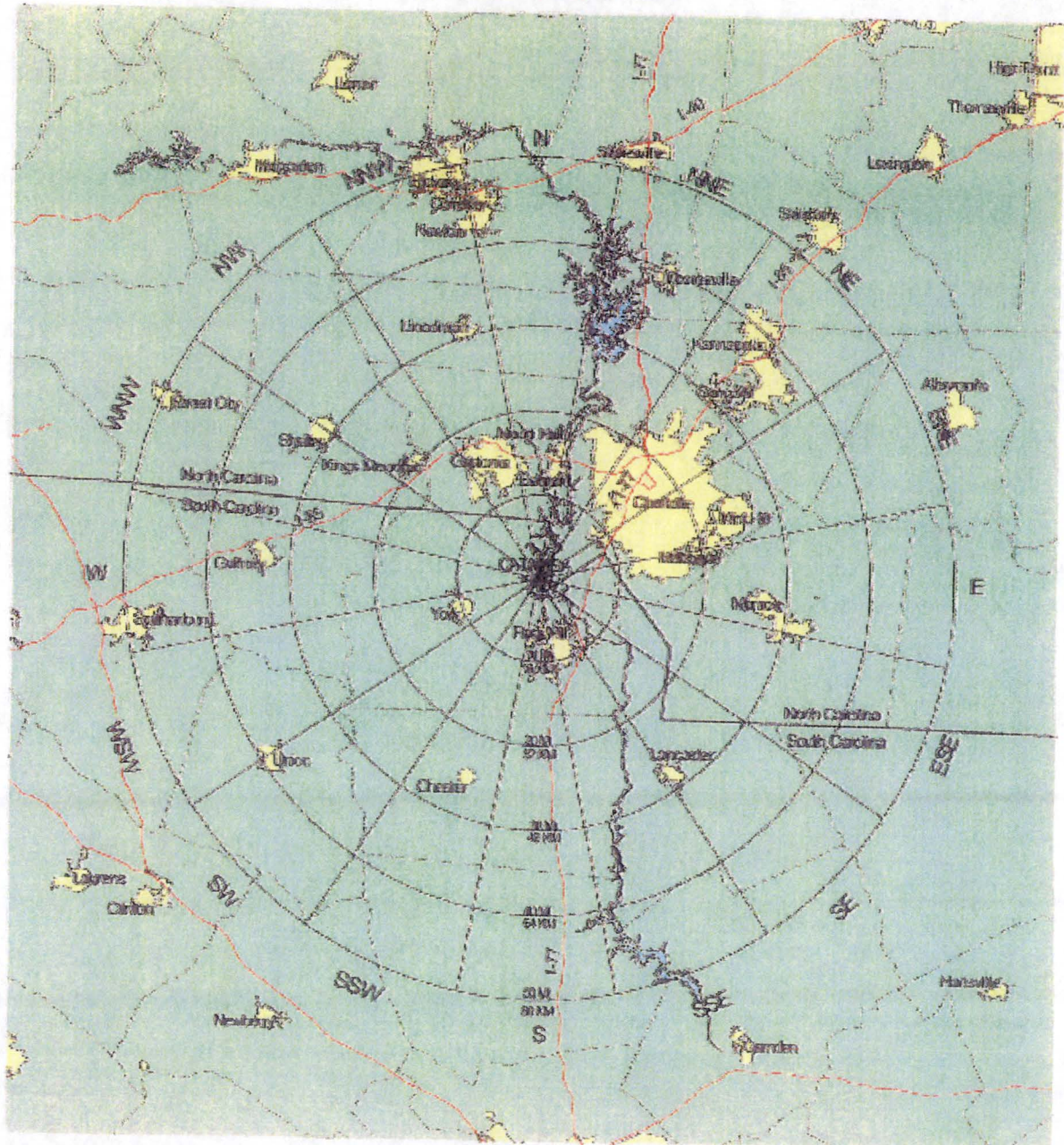
— Zone or EPZ Boundary and Zone Numbers

0 2 4 6 Miles



DUKE ENERGY
 CALAWHA NUCLEAR STATION
 FIGURE 1-2

50 MILE EPZ



Interstate Highways
 County Boundaries

0 8 16 24 Miles



Catawba Nuclear Station
Emergency Plan
Section B - Site Emergency Organization

B. Site Emergency Organization

B.1 Plant Staff Under Emergency Conditions

Figure B-2 shows the emergency organization of plant staff personnel for all shifts. The relationship of these personnel to their normal responsibilities and duties is unchanged during an emergency condition.

B.2 Emergency Coordinator

Initial activities at Catawba during any emergency condition are directed by the Operations Shift Manager from the Control Room. The Operations Shift Manager shall assume the functions of the Emergency Coordinator until the arrival of the Station Manager/designee at which time the Station Manager/designee will assume the functions of the Emergency Coordinator. The Emergency Coordinator will have the authority and the responsibility to immediately and unilaterally initiate any emergency actions including:

- a. Provide protective action recommendations to authorities responsible for implementing off-site emergency measures, implement event classification, notification, and event escalation/de-escalation/termination. THIS AUTHORITY SHALL NOT BE DELEGATED TO OTHER ELEMENTS OF THE EMERGENCY ORGANIZATION.
- b. Notification and activation of the Station, Corporate, County/City, South Carolina, North Carolina and the Nuclear Regulatory Commission emergency organizations having a response role.
- c. Continued assessment of actual or potential consequences both on- site and off-site throughout the evolution of the emergency condition.
- d. Effective implementation of emergency measures in the environs including protective actions for affected areas, implementation of emergency monitoring teams and facilities to evaluate the environmental consequences of the emergency condition, prompt notification and communications with off-site authorities.
- e. Continued maintenance of an adequate state of emergency preparedness until the emergency situation has been effectively managed and the station is returned to a normal or safe operating condition.

B.3 Emergency Coordinator (Line of Succession)

The Emergency Coordinator functions as described above in paragraph B.2 will later be assumed by the TSC Emergency Coordinator and/or the EOF Director at the Emergency Operations Facility as these organizations are staffed and ready to take over its functions.

This assumption of the Emergency Coordinator functions will take place for the Alert, Site Area Emergency and General Emergency categories.

B.4 Functional Responsibilities of the Emergency Coordinator

The functional responsibilities of the Emergency Coordinator are described in paragraph B.2. Protective Action recommendations to state and local authorities is initially vested with the Operations Shift Manager/ Emergency Coordinator. As the Emergency Operations Facility (EOF) becomes operational, the EOF Director is the person who is responsible for making protective action recommendations.

B.5 Minimum Staffing Requirements

The positions, title and major tasks to be performed by the persons assigned to the functional areas of emergency activity at the station are described in Emergency Plan Implementing Procedures. These assignments shall cover the emergency functions in Figure B-1 (a and b). The minimum on-shift staffing reflective of two units in operation is as indicated in Figure B-1a. The capability to augment on-shift resources after declaration of an emergency is as indicated in Figure B-1b. The functional tasks to be performed by persons assigned to the areas of emergency activity are as designated in Emergency Plan Implementing Procedures.

A detailed analysis demonstrating that on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in Figure B-1a. See CNS-OSSA-12212012 Rev: 0.

B.6 Site Functional Area Interfaces

Figures B-4 and B-5 describe and specify the interfaces between and among the functional areas of emergency activity, licensee headquarters support, local services support, and state/local government response organizations. Figure B-4 is for use prior to activation of the EOF. Figure B-5 is for use after the EOF is established.

B.7 Augmented Support of Site Emergency Organization

Upon declaration of an Alert, Site Area Emergency or General Emergency, the EOF organization will be alerted and personnel will report to the EOF as soon as possible. The EOF organization is described in Emergency Plan Implementing Procedures. The Public Affairs organization is described in the implementing procedure for JIC activation. Refer to Section G for the Public Affairs function. Figure B-3 shows the minimum staff required to declare the EOF operational. The EOF will be staffed using 75 minutes as a goal for the minimum staff to be in place and operational.

In addition to the minimum staff shown in Figure B-3, other personnel are expected to report to the EOF to augment the minimum staff. This augmentation would occur gradually and would range from a few minutes to a few hours depending on the proximity of the personnel to the EOF.

The organization identified in this section is capable of continuous (24 hours) operations for a protracted period. The individual responsible for assuring continuity of resources is the EOF Director. Each group's operational plan is specified in the Emergency Plan or Emergency Plan Implementing Procedures.

B.8 Contractor, Private, and Government Organizations

The Institute of Nuclear Power Operations (INPO) serves as a clearinghouse for industry wide support during an emergency. When notified of an emergency situation at a nuclear plant, INPO will provide emergency response as requested.

INPO will be able to provide the following emergency support functions:

- a. Assistance to the affected utility in locating sources of emergency manpower and equipment.
- b. Analysis of the operational aspects of the incident.
- c. Dissemination to member utilities of information concerning the incident.
- d. Organization of industry experts who could advise on technical matters.

If requested, one or more suitably qualified members of the INPO staff will report to the EOF Director and will assist in coordinating INPO's response to the emergency.

The State of South Carolina

The response provided by the State of South Carolina to an emergency developing at Oconee or Catawba is described in the South Carolina Operational Radiological Emergency Response Plan. The principal state agency for mobilization of state resources to cope with an emergency is the Emergency Preparedness Division under the office of the Adjutant General. This agency is supported by the Bureau of Radiological Health, which provides radiological assessment and protection functions, and by other state agencies.

For a Catawba emergency, the State of South Carolina would operate out of the State Emergency Operations Center (SEOC) in West Columbia, South Carolina.

The State of North Carolina

The response by the State of North Carolina to an emergency development is described in the North Carolina Emergency Response Plan in Support of Catawba Nuclear Site.

The principal state agency for mobilization of State resources to cope with an emergency is the Division of Emergency Management. This agency is supported by the Division of Radiation Protection for radiological assessment and protection functions, and by other State agencies.

The state organization, when it is mobilized as the State Emergency Response Team (SERT), becomes the primary response authority. For an emergency at Catawba, the SERT organization is established in the Emergency Operations Center in Raleigh, N.C.

Nuclear Regulatory Commission

The response provided by the NRC to an emergency developing at a Duke nuclear station is described in the NRC Region II Emergency Plan. The representative of the NRC who would provide input to the EOF Director is the Region II Regional Administrator/ designee. A workspace and a telephone have been provided in the EOF for this NRC representative.

The role of the NRC in an emergency situation is to provide oversight and recommendations on licensee actions.

County Governments

In an emergency situation at a nuclear station, county governments are immediately notified of the accident. They have the primary responsibility for the protection of the citizens within the county boundaries. The principal Duke Energy contact with county government is through the Emergency Preparedness Director or designee. This contact will be maintained by the TSC until relieved by EOF Off-Site Agency Communicators.

It is recognized that the county council, the chief executive of the county, and mayors of local communities have responsibilities in an emergency situation as well. The Government Agency Liaison on the staff of the Public Information Manager serves as the primary Duke Energy contact with these people.

Risk Management Companies

Risk management companies will be notified of emergency conditions by the EOF staff. Risk Management companies would set up claims payments and other such capabilities at facilities appropriate to the emergency.

Contractors

The contractor who may be requested to respond is Westinghouse. Westinghouse will operate from Pittsburgh, Pennsylvania, with a small contingent at the plant.

B.9 Local Agency Support Services

State, local and county agencies responsible for public health and safety work through the Emergency Preparedness Agency's Emergency Operations Center in the affected county until the State Emergency Response Team establishes its headquarters; Mecklenburg and Gaston counties, North Carolina; York Municipal-County Emergency Preparedness Agency, York County, South Carolina. The EOF coordinates with the agencies necessary to support the emergency condition. Agencies that have agreed to provide support, as necessary to Catawba Nuclear Station and surrounding areas, are listed below: (Agreement Letters in Appendix 5)

B.9.a Law Enforcement, Emergency Traffic Control, Related Police Matters

1. York County Sheriff's Department (York, SC)
2. South Carolina Highway Patrol (SC Highway Patrol, Dist. 4, Chester, SC)

B.9.b Early Warning or Evacuation of the Populace

1. York County Emergency Management (Rock Hill, SC)
2. Gaston County Emergency Management (Gastonia, NC)
3. Charlotte-Mecklenburg Emergency Management Office (Charlotte, NC)
4. South Carolina Emergency Management Division (Columbia, SC)
5. North Carolina Department of Department of Public Safety

B.9.c Radiological Emergency Monitoring Assistance

1. US/DOE Radiological Assistance Team, Savannah River Operations Office (Aiken, SC)
2. South Carolina Department of Health and Environmental Control, Bureau of Radiological Health, (Columbia, SC)
3. North Carolina Department of Environment, Health and Natural Resources, Division of Radiation Protection (Raleigh, NC)
4. Civil Air Patrol, North Carolina Wing (Charlotte, NC)

B.9.d Hospitals, Medical Support

1. Piedmont Medical Center (Rock Hill, SC)
2. Carolinas Medical Center (Charlotte, NC)
3. Carolinas Emergency Medicine Specialists, P.A. (Rock Hill, SC)
4. REACTS Facility, DOE (Oak Ridge, TN)

B.9.e Ambulance Service

1. Piedmont Medical Center (Rock Hill, SC)

B.9.f Fire-Fighting

1. Bethel Volunteer Fire Department (Clover, SC)

B.9.g Public Health and Safety, Evaluation of the Radiological Situation.

1. York County Health Department (Rock Hill, SC)
2. South Carolina Department of Health and Environmental Control, Bureau of Radiological Health (Columbia, SC)
3. North Carolina Department of Environment, Health and Natural Resources, Division of Radiation Protection (Raleigh, NC)

B.9.h Local, State and Federal Support Responsibilities

Agreements have been made with local, state and federal agencies to provide fire protection, medical support, ambulance and rescue service, and Hostile Action response. Implementation of the emergency plans of the Emergency Preparedness Agencies of three adjacent counties will provide assistance and logistics support if evacuation of portions of the ten mile EPZ becomes necessary. The emergency plans of the Emergency Preparedness Agencies in York County where the station is located, and in Mecklenburg and Gaston Counties, North Carolina, as they relate to the protection of the public who may be affected by an emergency at Catawba, all address the following aspects:

1. Notification of their own personnel and other agencies involved, including the Sheriff's Department, the Highway Patrol, police, rescue squads, fire departments and the Red Cross.
2. Law enforcement and traffic control.
3. Notification or warning of persons in affected areas
4. Evacuation, as necessary, to designated schools or other public buildings out of the affected area, where shelter, food, overnight accommodations, communications, medical care, etc. would be made available.
5. Assistance and cooperation with related agencies in other counties, Duke Energy, and other state and federal agencies.

FIGURE B-1a
CATAWBA NUCLEAR STATION
MINIMUM ON-SHIFT ERO STAFFING REQUIREMENTS FOR EMERGENCIES

Functional Area	Major Tasks	Emergency Positions	Shift Staffing
1. Plant Operations and Assessment of Operational Aspects (a)	--	Unit Supervisor (SRO) CR Supervisor (SRO) Control Room Operator (RO) Auxiliary Operator (AO)	1 1 3 3
2. Emergency Direction and Control	Command and Control	Operations Shift Manager	1
3. Notification & Communication	Licensee	Operator (SRO/RO/NLO)	1 ^(b)
	Local/ State	Operator (SRO/RO/NLO)	1 ^(b)
	Federal	Operator (SRO/RO/NLO)	1 ^(b)
4. Radiological Assessment	Dose Assessment	RP Qualified Individual	1
	In-plant Surveys	RP Qualified Individual	1
	Onsite Surveys	RP Qualified Individual	1
	Chemistry	Chemistry Technician	1
5. Plant System Engineering, Repair, and Corrective Actions	Tech Support – OPs – Core Damage	Shift Technical Advisor	1
		Shift Technical Advisor	1 ^(b)
	Repair and Corrective Actions	Mechanical Maintenance IAE Maintenance	1 2
6. In-Plant PAs	Radiation Protection (such as access control, job coverage and personnel monitoring)	RP Qualified Individual	2 ^(b)
7. Fire Fighting (c)	--	Fire Brigade Lead (RO/SRO/NLO) Fire Brigade Member (NLO) Fire Brigade Member (SPOC)	1 2 2 ^(b)
8. 1 st Aid and Rescue	--	MERT (d)	2
9. Site Access Control and Accountability	Security & Accountability	SAS Operator Security Personnel	1 (e)
Minimum # of Personnel:			23

(a) The Control Room staff complement is reflective of 2 Units in operation in accordance with §50.54(m).

(b) May be performed by an individual filling another position provided they are qualified to do the collateral function.

(c) The Fire Brigade requirement of five members is met by using three personnel from Operations (including the Fire Brigade Leader) and two personnel from SPOC (SLC 16.13-1).

(d) The Medical Emergency Response Team (MERT) can be filled by any qualified technician.

(e) Per Duke Energy CNS Security Plan.

FIGURE B-1b
CATAWBA NUCLEAR STATION
MINIMUM AUGMENTED ERO STAFFING REQUIREMENTS FOR EMERGENCIES
PAGE 1 of 2

Major Functional Area	Major Task	Position, Title or Expertise	Capability for Additions	
			45 Min.	75 Min.
Emergency Direction and Control (Emergency Coordinator)		TSC Emergency Coordinator		1
Notification/Communication	Notify Company Personnel, State, County, Federal Agencies and Maintain Communication	Off-Site Agency Communicator		2
Emergency Operations Facility (EOF) Radiological Accident Assessment and Support	EOF Director	Senior Manager		1
	Dose Assessment	Radiological Assessment Manager		1
	Plant Status	Accident Assessment Manager		1***
	Access Control	Electronic Card Reader		#
	Communications	Off-Site Agency Communicators		2
	Off-Site Surveys	FMT Members (2 Teams)		4*****
Radiological Support and Protective Actions	RP Coverage for Repair/ Corrective Actions, Access Control, Search & Rescue, Radiochemistry, Contaminated Injury Medical Response, Personnel Monitoring, Dosimetry, Firefighting	RP Qualified Individuals		6
	Out of Plant Surveys		1	1
	In-Plant Surveys		1	1
	Dose Assessment	Off-Site Dose Assessor		1 (TSC)
	Radwaste Operations	Radwaste Operator		1
Plant System Engineering, Repair and Corrective Actions	Technical Support	Core/Thermal Hydraulics		1***
		Electrical		1
		Mechanical		1
	Repair and Corrective Actions	Mechanical Maint. Tech.		1
		IAE Technician		2
Firefighting		Fire Brigade		****
Rescue Operations and First Aid		MERT		****

FIGURE B-1b
CATAWBA NUCLEAR STATION
MINIMUM AUGMENTED ERO STAFFING REQUIREMENTS FOR EMERGENCIES
PAGE 2 of 2

The 75 minute clock begins at the time of the initial Emergency Classification. The TSC/OSC are required to be activated within the same time. The EOF must be operational within 75 minutes of the Emergency Declaration. All facilities are required to be activated at an Alert or Higher Classification.

*** The TSC Reactor Engineer and the Accident Assessment Manager in the EOF will provide additional support in the area of core thermal hydraulics within 75 minutes.

**** Augmentation in these areas is provided by local support. The local support agencies respond in accordance with existing letters of agreement. Response is expected to occur similar to any other industrial facility.

***** The Field Monitoring Teams will initially report to the Operations Support Center (OSC). If needed, the Field Monitoring Teams will be dispatched from the Operations Support Center (OSC). Once the Emergency Operations Facility (EOF) Field Monitoring Coordinator is ready he/she will assume control of the Field Monitoring Teams. An FMT consists of one RP qualified individual and one vehicle driver

An electronic card reader in conjunction with a posted building security officer fulfills the function for controlling access to the EOF during emergencies.

FIGURE B-2
CATAWBA NUCLEAR STATION
SITE EMERGENCY ORGANIZATION

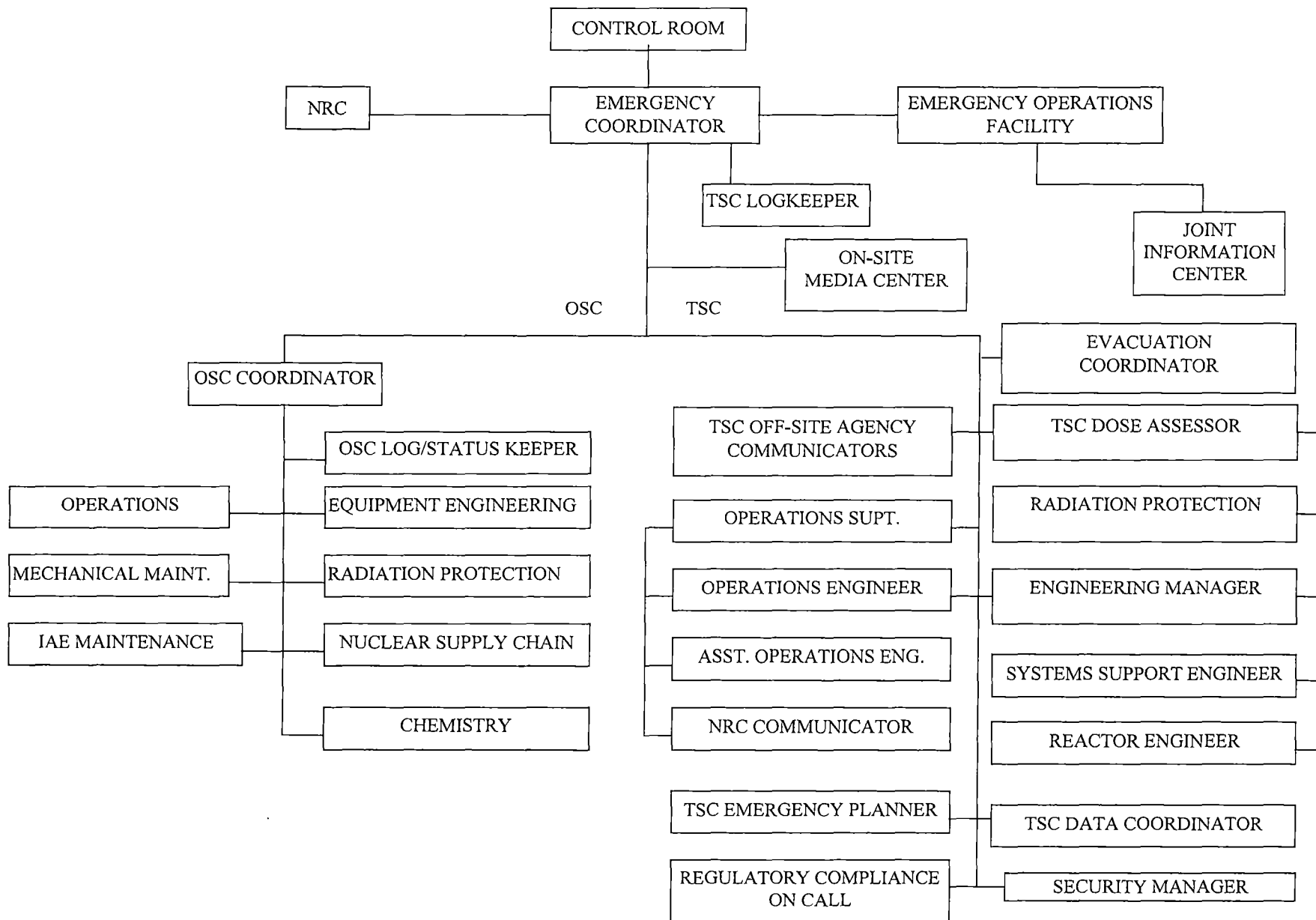


FIGURE B-3
CATAWBA NUCLEAR STATION
EOF ORGANIZATION - MINIMUM STAFFING REQUIREMENTS

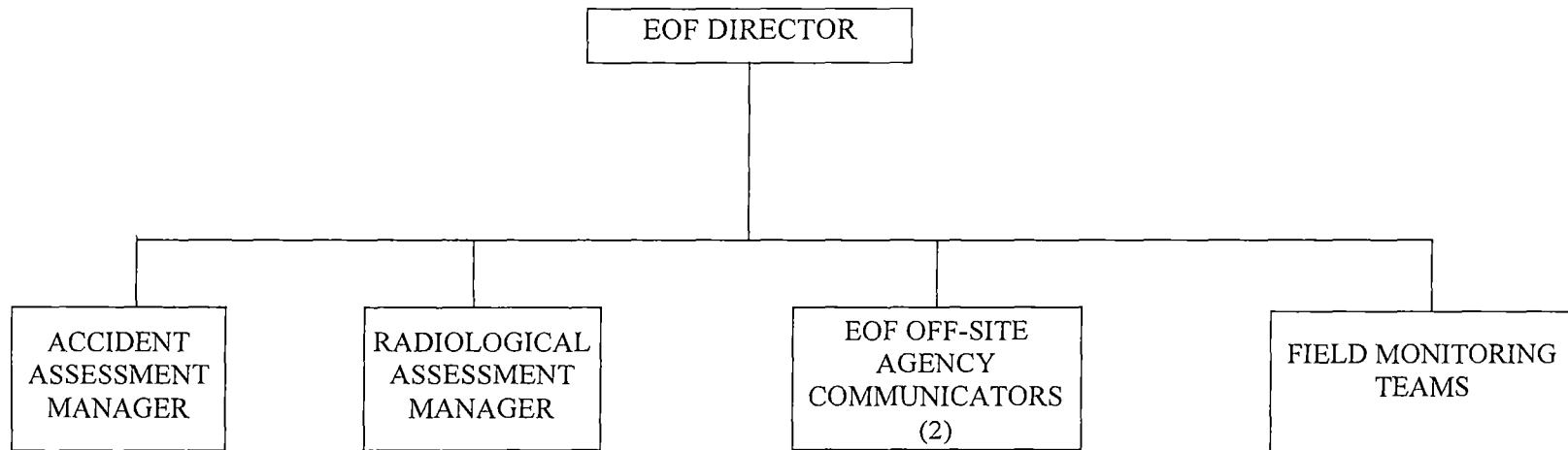
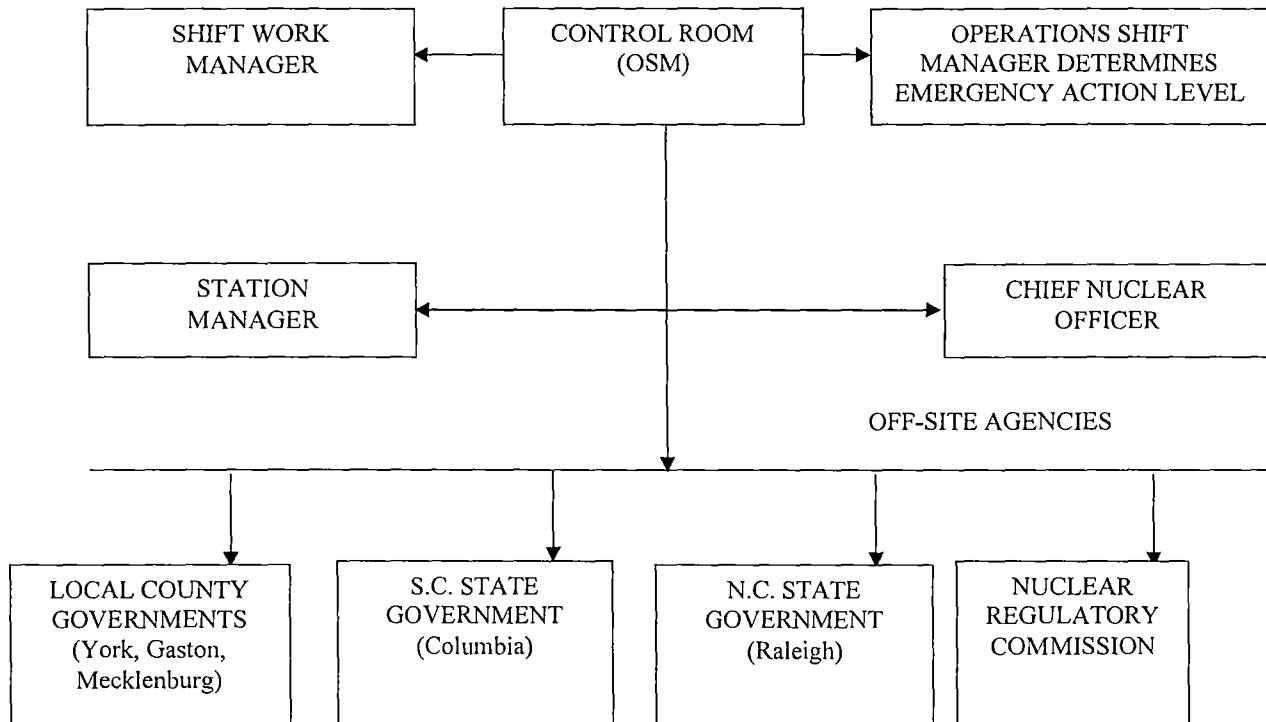
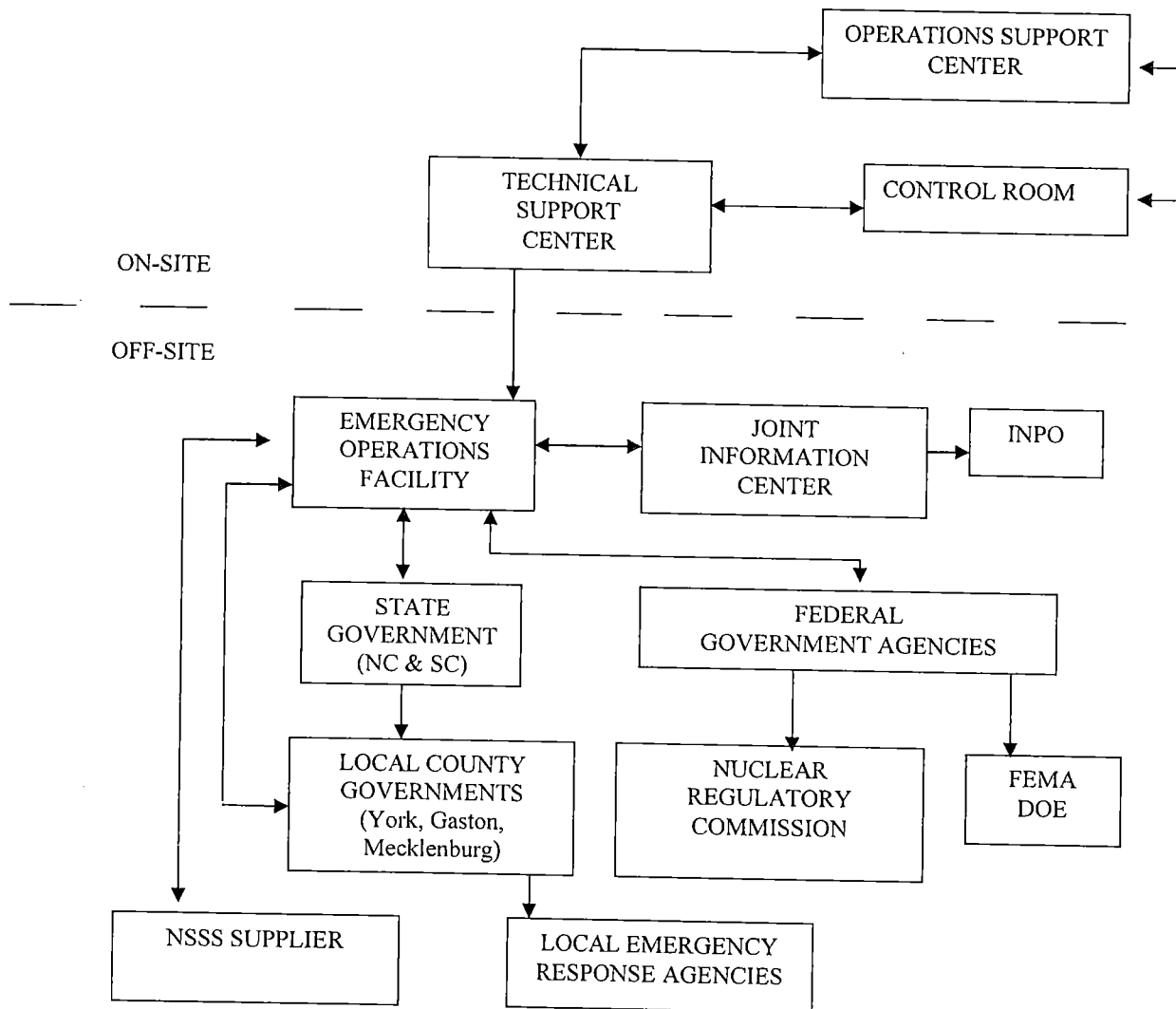


FIGURE B-4
CATAWBA NUCLEAR STATION
INTER-RELATIONSHIPS OF RESPONSE ORGANIZATIONS
UNUSUAL EVENT*



* DOES NOT REQUIRE ACTIVATION OF ANY EMERGENCY RESPONSE ORGANIZATION

FIGURE B-5
 CATAWBA NUCLEAR STATION
 INTER-RELATIONSHIPS OF RESPONSE ORGANIZATIONS
ALERT
SITE AREA EMERGENCY
GENERAL EMERGENCY



Catawba Nuclear Station
Emergency Plan
Section E - Notification Methodology

E. Notification Methodology

E.1 Notification of Response Organization

This section identifies specific emergency responses and related criteria that specify when these measures are to be implemented. Emergency measures discussed in this section include notification of and activation of the emergency organization; assessment actions; corrective and protective actions.

E.2 Activation of Emergency Organization

This section describes the necessary communication steps to be taken to alert or activate emergency personnel for each class of emergency listed in Section D. The notification format and message authentication technique to off-site authorities shall be in accordance with Catawba Emergency Response Procedures RP/0/A/5000/006A, Notifications to States and Counties from the Control Room, RP/0/A/5000/006B, Notifications to States and Counties from the Technical Support Center, and SR/0/A/2000/004, Notifications to States and Counties from the Emergency Operations Center.

E.2.a. Notification of Unusual Event

The Shift Manager on duty is to be notified immediately of all initiating conditions indicative of an "Unusual Event" in process or that has occurred which indicates a potential degradation in the level of safety of the plant. (See Section D for examples of initiating conditions in this classification.)

NOTE: This emergency classification is further defined in Catawba Nuclear Station Emergency Response Procedure RP/0/A/5000/001, Classification of Emergency.

The Shift Manager assumes the functions of the Emergency Coordinator and shall ensure that all actions required by any initiating Emergency Procedure have been performed and that all actions necessary for the protection of persons and property are being taken.

The Shift Manager shall assure notification of:

1. Station Manager
2. Site Vice President
3. Chief Nuclear Officer

for any initiating condition in this classification listed in Section D.

The Shift Manager shall assure prompt notification of Federal, State and Local off-site authorities:

1. North Carolina Warning Point (Raleigh, NC)
2. South Carolina Warning Point (Columbia, SC)
3. York County Warning Point (Rock Hill, SC)
4. Gaston County Warning Point (Gastonia, NC)
5. Mecklenburg County Warning Point (Charlotte, NC)
6. NRC Operations Center (Rockville, MD)

Notification format and message authentication technique to off-site authorities shall be in accordance with applicable Catawba Nuclear Station Emergency Response Procedures.

The Shift Manager shall augment on-shift resources to assess and respond to the emergency situation as needed to ensure the protection of persons and property.

The Shift Manager will assess the emergency condition and determine the need to remain in a Notification of Unusual Event, escalate to a more severe class or close out the emergency.

The Emergency Preparedness Manager or designee will close out the Emergency with verbal summary to off-site authorities, notified above, followed by an LER or written summary within 30 days.

The actions required for this emergency class are performed by station personnel. Outside organizations (NRC, state and local officials) are notified of the event for information. Unless deemed necessary by the Emergency Coordinator, the Emergency Response Organization is not activated for this emergency class.

If an Unusual Event occurs, a station representative calls the NRC, the State, appropriate local officials, Corporate Communications, and others as applicable. The Corporate Communications representative notifies media representatives and public officials per established public information procedures.

E.2.b Alert

The Shift Manager on duty is to be notified immediately of all initiating conditions indicative of an "Alert" classification in process or that 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. (See Section D for examples of initiating conditions in this classification.)

NOTE: This Emergency Classification is further defined in Catawba Nuclear Station Emergency Response Procedure, RP/0/A/5000/001, Classification of Emergency.

The Shift Manager shall ensure that all actions required by any initiating Emergency Procedure have been performed and that all actions necessary for the protection of persons and property are being taken.

NOTE: The Shift Manager assumes the function of the Emergency Coordinator until the arrival of the Station Manager or designee at which time the Station Manager or designee assumes the responsibility of the Emergency Coordinator.

The Shift Manager shall assure notification and activation of the Emergency Response Organization for any initiating condition in this classification listed in Section D.

The Emergency Response Organization personnel will be notified by text and/or voice message upon the initial emergency declaration via a mass communication system using AD-EP-ALL-0301 (Activation of the Emergency Response Organization Notification System [ERONS]). Redundant notification is provided by the on-site public address system, Nuclear Callout System and/or an automated telephone system which will allow timely alerting of Emergency Response Organization personnel.

The Emergency Coordinator shall assure prompt notification of Federal, State and Local off-site authorities:

1. North Carolina Warning Point (Raleigh, NC)
2. South Carolina Warning Point (Columbia, SC)
3. York County Warning Point (Rock Hill, SC)
4. Gaston County Warning Point (Gastonia, NC)
5. Mecklenburg County Warning Point (Charlotte, NC)
6. NRC Operations Center (Rockville, MD)

Notification format and message authentication technique to off-site authorities shall be in accordance with applicable Catawba Nuclear Station Emergency Response Procedures.

The Emergency Coordinator shall augment on-site resources by notification and activation of the Emergency Response Organization in accordance with RP/0/A/5000/003, Alert.

The Emergency Coordinator in the Technical Support Center will assess and respond to the emergency by:

1. Dispatching on-site monitoring teams with associated communication equipment in accordance with Catawba Nuclear Station Radiation Protection procedures.
2. Providing periodic plant status updates to off-site authorities (at least every hour or as agreed otherwise).
3. Providing periodic meteorological assessments to off-site authorities and, if any releases are occurring, dose estimates for actual releases.

NOTE: These functions will be provided through the EOF when operational.

The Emergency Coordinator will assess the emergency condition and determine the need to remain in an Alert status, escalate to a more severe class, reduce the emergency class or close out the emergency.

The EOF Director or designee, will close out the emergency with a verbal summary to off-site authorities followed by an LER or written summary within 30 days.

E.2.c. Site Area Emergency

The Shift Manager on duty is to be notified immediately of all initiating conditions indicative of a "Site Area Emergency" in process or which have occurred which involve actual or likely major failures of plant functions needed for protection of the public or hostile action that results in intentional damage or malicious acts; (1) toward site personnel or equipment that could lead to the likely failure of or; (2) that prevent effective access to equipment needed for the protection of the public. (See Section D for examples of initiating conditions in this classification.)

NOTE: This Emergency Classification is further defined in Catawba Nuclear Station Emergency Response Procedure RP/0/A/5000/001, Classification of Emergency.

The Shift Manager shall ensure that all actions required by the initiating Emergency Procedure have been performed and that all actions necessary for the protection of persons and property are being taken.

NOTE: The Shift Manager assumes the function of the Emergency Coordinator until the arrival of the Station Manager or designee at which time the Station Manager or designee assumes the responsibility of the Emergency Coordinator.

The Shift Manager shall assure notification and activation of the Emergency Response Organization for any initiating condition in this classification listed in Section D.

The Emergency Coordinator shall assure prompt notification of Federal, State and Local off-site authorities:

1. North Carolina Warning Point (Raleigh, NC)
2. South Carolina Warning Point (Columbia, SC)
3. York County Warning Point (Rock Hill, SC)
4. Gaston County Warning Point (Gastonia, NC)
5. Mecklenburg County Warning Point (Charlotte, NC)
6. NRC Operations Center (Rockville, MD)

Notification format and message authentication technique to off-site authorities shall be in accordance with applicable Catawba Nuclear Station Emergency Response Procedures.

The Emergency Coordinator shall augment on-site resources by notification and activation of the Emergency Response Organization in accordance with RP/0/A/5000/004, Site Area Emergency.

The Emergency Response Organization personnel will be notified by text and/or voice message upon the initial emergency declaration via a mass communication system using AD-EP-ALL-0301 (Activation of the Emergency Response Organization Notification System [ERONS]). Redundant notification is provided by the on-site public address system, Nuclear Callout System and/or an automated telephone system which will allow timely alerting of Emergency Response Organization personnel.

The Emergency Coordinator may order the evacuation of non-essential station personnel to an Evacuation-Relocation Site if the emergency situation warrants.

The Emergency Coordinator in the Technical Support Center will assess and respond to the emergency by:

1. Dispatching the On-site and Off-site Monitoring Teams with associated communications.
2. Providing meteorological and dose estimate information to off-site authorities for actual releases via a dedicated individual or automated data transmission.
3. Providing release and dose projections based on available plant condition information and foreseeable contingencies to off-site authorities.
4. Providing a dedicated individual for plant status updates to off-site authorities.
5. Providing technical staff on-site available for consultation with the NRC and State on a periodic basis.

NOTE: These functions will be provided through the EOF when it is operational.

The Emergency Coordinator will assure notification of all Catawba Nuclear Station management not notified thus far for those initiating conditions or implementation of any Emergency Procedure affecting these personnel in accordance with Catawba Nuclear Station Emergency Response Procedure RP/0/A/5000/004, Site Area Emergency.

The Emergency Coordinator, in coordination with the EOF Director, will assess the emergency condition and determine the need to remain in Site Area Emergency, escalate to a more severe class, reduce the emergency class or close out the emergency.

The EOF Director will close out or recommend reduction of the emergency class by briefing the off-site authorities at the EOF or by phone if necessary, followed by an LER or written summary within thirty days.

E.2.d General Emergency

The Shift Manager on duty is to be notified immediately of all initiating conditions indicative of a "General Emergency" in process or which 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. (See Section D for examples of initiating conditions in this classification.)

NOTE: This emergency classification is further defined in Catawba Nuclear Station Emergency Response Procedure, RP/0/A/5000/001, Classification of Emergency.

The Shift Manager shall ensure that all actions required by the initiating Emergency Procedure have been performed and that all actions necessary for the protection of persons and property are being taken.

NOTE: The Shift Manager assumes the function of the Emergency Coordinator until the arrival of the Station Manager or designee at which time the Station Manager or designee assumes the responsibility of the Emergency Coordinator.

The Shift Manager shall assure notification and activation of the Emergency Response Organization for any initiating condition in this classification listed in Section D.

The Emergency Coordinator shall assure prompt notification of Federal, State and Local off-site authorities:

1. North Carolina Warning Point (Raleigh, NC)
2. South Carolina Warning Point (Columbia, SC)
3. York County Warning Point (Rock Hill, SC)
4. Gaston County Warning Point (Gastonia, NC)
5. Mecklenburg County Warning Point (Charlotte, NC)
6. NRC Operations Center (Rockville, MD)

Notification format and message authentication technique to off-site authorities shall be in accordance with applicable Catawba Nuclear Station Emergency Response Procedures.

The Emergency Coordinator shall augment on-site resources by notification and activation of the Emergency Response Organization in accordance with RP/0/A/5000/005, General Emergency.

The Emergency Response Organization personnel will be notified by text and/or voice message upon the initial emergency declaration via a mass communication system using AD-EP-ALL-0301 (Activation of the Emergency Response Organization Notification System [ERONS]). Redundant notification is provided by the on-site public address system, Nuclear Callout System and/or an automated telephone system which will allow timely alerting of Emergency Response Organization personnel.

The Emergency Coordinator shall order the evacuation of all non-essential station personnel to an Evacuation-Relocation Site.

The Emergency Coordinator, in the Technical Support Center, will assess and respond to the emergency by:

1. Dispatching the On-Site and Off-Site Monitoring Teams with associated communications.
2. Providing meteorological and dose estimate information to off-site authorities for actual releases via a dedicated individual or automated data transmission.
3. Providing release and dose projections based on available plant condition information and foreseeable contingencies to off-site authorities.
4. Providing a dedicated individual for plant status updates to off-site authorities and periodic press briefings.
5. Providing technical staff on-site available for consultation with the NRC and State on a periodic basis.

NOTE: These functions will be provided through the EOF when it is operational.

The Emergency Coordinator will assure notification of all Catawba Nuclear Station Management not notified thus far for those initiating conditions or implementation of any Emergency Procedure affecting these personnel in accordance with Catawba Nuclear Station Emergency Response Procedure RP/0/A/5000/005, General Emergency.

The Emergency Coordinator shall make a recommendation to the off-site authorities to evacuate and/or shelter affected zones in accordance with RP/0/A/5000/005, General Emergency.

The Emergency Coordinator, in coordination with the EOF Director and Off-Site Agencies, will assess the emergency condition and determine the need to remain in a General Emergency or terminate the emergency and enter into Recovery.

The EOF Director will terminate the emergency class and recommend entry into recovery by briefing the off-site authorities at the Emergency Operations Facility, or by phone if necessary, followed by an LER or written summary within thirty days.

E.3 Emergency Message Format (Initial)

Figure E-1, Emergency Notification contains information about the class of emergency, whether a release is taking place, the potentially affected areas and whether protective actions may be necessary.

E.4 Emergency Message Format (Follow-Up)

Figure E-1, Emergency Notification contains provisions for follow-up information if it is known and appropriate.

E.5 State and Local Organizations-Disseminating Public Information

State and Local plans provide for disseminating information in Initial and Follow-up Messages to the public. (See state and local plans).

E.6 Alert and Notification System

The Alert and Notification System for Catawba Nuclear Station will include an acoustic alerting signal, tone alert radios for special facilities and notification of the public by the Emergency Alert System (EAS). The system is designed to meet the acceptance criteria of Section B of Appendix 3, NUREG-0654, FEMA-REP-1, Rev. 1. As a back-up, State and Local plans maintain the alert mechanism via emergency vehicles, automated dialing systems, PA Systems, etc. to also alert the public to monitor commercial broadcasts for emergency information. See Appendix 3, Alert and Notification System Plan.

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

Duke Energy will cooperate with FEMA and the state/local governments in their sampling of the residents to assess the ability to hear the alerting signal, the public's awareness of the meaning of the prompt notification message, and the availability of emergency information.

The siren system will be tested and maintained in accordance with the schedule as specified in Appendix 3.

The EAS System is the primary notification system. Backups include the use of county vehicles with audio equipment, county automated dialing systems, and other media communications.

E.7 Supporting Information for Public Information Messages

The portion of Figure E-1 in which protective action recommendations are made assists the state and local authorities in preparing messages for the public's information via the EAS (Emergency Alert System).

EAS message formats are described in the North Carolina and South Carolina Emergency Plans.

Figure E-1
Page 1 of 1

NUCLEAR POWER PLANT EMERGENCY NOTIFICATION FORM

MESSAGE # _____ Confirmation Phone #: _____ AUTHENTICATION CODE #: _____

Lines 1 - 6 are required for INITIAL Notifications

1. EVENT: <input type="checkbox"/> DRILL <input type="checkbox"/> ACTUAL DECLARATION <input type="checkbox"/> TERMINATION (ONLY Lines 1, 2, & 4 required)		
2. AFFECTED SITE: CATAWBA		
3. EMERGENCY CLASSIFICATION <input type="checkbox"/> UNUSUAL EVENT <input type="checkbox"/> ALERT <input type="checkbox"/> SITE AREA EMERGENCY <input type="checkbox"/> GENERAL EMERGENCY		
4. EAL # _____	Declaration Date: ____/____/____	Time: _____
	Termination Date: ____/____/____	Time: _____ (mark "N/A" for EAL # & Description)
EAL DESCRIPTION: _____		
5. RELEASE TO THE ENVIRONMENT (caused by the emergency): <input type="checkbox"/> NONE <input type="checkbox"/> IS OCCURRING <input type="checkbox"/> HAS OCCURRED		
6. PROTECTIVE ACTION RECOMMENDATIONS: <input type="checkbox"/> NONE <input type="checkbox"/> EVACUATE: _____ <input type="checkbox"/> SHELTER: _____ <input type="checkbox"/> CONSIDER THE USE OF KI (POTASSIUM IODIDE) IN ACCORDANCE WITH ORO PLANS AND POLICIES <input type="checkbox"/> OTHER: _____		

Lines 7-11 are NOT required for INITIAL notifications. Lines 7-11 may be provided separately for follow-up notifications.

7. PROGNOSIS: Upgrade in classification or PAR change is likely before the next follow-up notification ☐ Yes ☐ No

8. SITE UNIT(S) STATUS:

AFFECTED UNIT

☐ YES Unit 1 - _____ % Power Shutdown: Date ____/____/____ Time _____
☐ YES Unit 2 - _____ % Power Shutdown: Date ____/____/____ Time _____

9. METEOROLOGICAL DATA:

Wind direction from: _____ degrees Wind Speed: _____ mph Precipitation: _____ inches
Stability Class: ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G

Lines 10 - 11 are completed for follow-up notifications, IF Line 5 IS OCCURRING or HAS OCCURRED is selected

10. AIRBORNE RELEASE CHARACTERIZATION: ☐ GROUND ☐ MIXED ☐ ELEVATED

MAGNITUDE UNITS: ☐ Ci ☐ Ci/sec ☐ μ Ci/sec

Noble Gases: _____ Iodines: _____ Particulates: _____

11. DOSE PROJECTION: Projection period: _____ Hours Estimated Release Duration _____ Hours

Performed. Date ____/____/____ Time: _____	DISTANCE	TEDE (mrem)	Thyroid CDE (mrem)
	Site Boundary		
	2 Miles		
	5 Miles		
	10 Miles		

12. REMARKS (As Applicable): _____

13. APPROVED BY: _____ TITLE: _____ Date ____/____/____ Time _____

14. NOTIFIED BY: _____ Date ____/____/____ Time _____

15. RECEIVED BY (ORO use only): _____ Date ____/____/____ Time _____

EM-78 / Nuclear Power Plant Emergency Notification Form / March 2015 revision

CONDUCT OF PRE-JOB BRIEFINGS AND POST-JOB CRITIQUES	AD-HU-ALL-0003
	Rev. 0
	Page 26 of 40

ATTACHMENT 2

Simple Pre Job Brief

(Reference AD-HU-ALL-0003, Section 5.3 and Attachment 2).

Prepared By:

S.N. Fischer, Catawba Emergency Planning on 09/29/2016.

Job Scope:

Submittal of this Emergency Plan revision (Revision 16-2). Success is the development of complete and accurate information to the NRC.

Work Task Expected Results:

Individuals will provide information that has been reviewed and approved internally. A final review of the cover letter will ensure that no mistakes have been made.

Experience Level:

No qualifications are required for providing Regulatory Affairs with information that goes into regulatory correspondence. However, it is incumbent on the individual to ensure that he/she is cognizant of the topic and can provide complete and accurate information.

Relevant OE:

There have been several industry violations against 10CFR50.9 (completeness and accuracy of information) in recent years. It is important to provide quality information such that the site avoids the need for additional violations.

The following would produce probable worst case consequences if an error in the correspondence should occur:

10CFR50.9 violation

Incorrect milestone dates provided

Incorrect information provided that forms the basis for a regulatory decision

Incomplete or inaccurate submittal

Untimely submittal

Procedural violation

Personnel to review PJB:

T.E. Owusu

S.E. Andrews

C. Wilson

J.M. White

CONDUCT OF PRE-JOB BRIEFINGS AND POST-JOB
CRITIQUES

AD-HU-ALL-0003

Rev. 2

ATTACHMENT 2

Page 1 of 2

<< Standard Pre-Job Brief Form >>

Brief #: _____ (If Pre Planned)	Risk Level (check one)			<u>REVERSE BRIEF</u> Y / N
	<input type="checkbox"/> Low Risk	<input type="checkbox"/> Medium Risk	<input type="checkbox"/> High Risk	
PJB Lead: S.N. Fischer		Date Prepared: 09/29/2016		
Attendees: T.E. Owusu; S.E. Andrews; C. Wilson; J.M. White				
Scope / What are we trying to accomplish? Submittal of this Emergency Plan revision (Revision 16-2). Success is the development of complete and accurate information to the NRC.				
<u>Affected Unit(s)</u>		<u>Affected Train(s)</u>		
<input type="checkbox"/> Unit 1 <input type="checkbox"/> Unit 2 <input type="checkbox"/> Unit 3 <input checked="" type="checkbox"/> Shared <input type="checkbox"/> N/A		<input type="checkbox"/> Train A <input type="checkbox"/> Train B <input type="checkbox"/> Train C <input checked="" type="checkbox"/> N/A		
<u>Affected Channel(s)</u>		<u>Affected Loop(s)</u>		
<input type="checkbox"/> I (A) <input type="checkbox"/> II (B) <input type="checkbox"/> III (C) <input type="checkbox"/> IV (D) <input checked="" type="checkbox"/> N/A		<input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input checked="" type="checkbox"/> N/A		
Affected Component: N/A		WR/WO #:		
Procedure(s) / Attachments: AD-HU-ALL-0003				
Level of Use: <input type="checkbox"/> Information Use <input type="checkbox"/> Reference Use <input type="checkbox"/> Continuous Use <input type="checkbox"/> Mixed Use				
Critical Steps:				
Error Likely Situations:				
Special Plant Conditions or System Alignments:				
Personal Safety and Environmental (e.g., PPE, Hazards, Asbestos, Chemical)				

<< Standard Pre-Job Brief Form >>

Radiological Safety:

Site, Fleet and Industry OE:

Worst Case Consequences:

General Information and Additional Questions:

Actions:

Supervisor Approval: _____ **Date:** _____

Post Job Critique Conducted: ☐ Yes ☐ No ☐ N/A