

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

AD-EP-ALL-0602

Rev. 4

ATTACHMENT 4

Page 1 of 4

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

Screening and Evaluation Number	Applicable Sites
EREG #: 02174968	BNP <input type="checkbox"/>
	CNS <input type="checkbox"/>
	CR3 <input type="checkbox"/>
	HNP <input type="checkbox"/>
5AD #: AD-EP-ALL-0105 02166743 AD-EP-MNS-0105 02174966	MNS <input checked="" type="checkbox"/>
	ONS <input type="checkbox"/>
	RNP <input type="checkbox"/>
	GO <input type="checkbox"/>

Document and Revision
Fleet Standard ERO Project:
AD-EP-MNS-0105, Rev. 0 (PRR
2136364)

Issuing new Fleet EP and MNS site specific procedures for Activation and
Operation of the Technical Support Center and the existing site procedure

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):

In conjunction with implement the common EOF for BNP, HNP, and RNP, an initiative was undertaken by Duke Energy to standardize the augmenting ERO positions, functions and responsibilities (tasks) across the fleet. This involved changes to the current MNS augmenting ERO, based on the number of responders and their titles identified in the site emergency plan and implementing procedures. Included in the standard ERO initiative is the development of fleet standard ERO checklists, procedures and forms. Note: This initiative makes no changes to the on-shift ERO or 45-minute augmenting response positions.

This screening/evaluation will review issuing new Fleet EP Procedures and superseding fleet and site specific EP Procedures to support the Fleet Standard ERO project. The following table shows the relationship between the old and new procedures:

Old Procedure Number	Old Procedure Title	New Procedure Number	New Procedure Title
RP/0/A/5700/012	Activation of the Technical Support Center (TSC)	AD-EP-ALL-0105	Activation and Operation of the Technical Support Center
		AD-EP-MNS-0105	MNS Site Specific TSC Support
		RP/0/A/5700/026	Operations/Engineering Required Actions In The Technical Support Center. (TSC)

Enclosure 1 is the MNS ERO Position Comparison and Evaluation – TSC/OSC

This document shows how the ERO responsibilities in the superseded procedure maps to the new procedures.

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

Part II. Activity Previously Reviewed? Is this activity Fully bounded by an NRC approved 10 CFR 50.90 submittal or Alert and Notification System Design Report? If yes, identify bounding source document number or approval reference and ensure the basis for concluding the source document fully bounds the proposed change is documented below: Justification:	<table border="1"><tr><td>Yes</td><td><input type="checkbox"/></td><td>No</td><td><input checked="" type="checkbox"/></td></tr><tr><td colspan="2">10 CFR 50.54(q) Effectiveness Evaluation is not required. Enter justification below and complete Attachment 4, Part V.</td><td colspan="2">Continue to Attachment 4, 10 CFR 50.54(q) Screening Evaluation Form, Part III</td></tr></table>	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	10 CFR 50.54(q) Effectiveness Evaluation is not required. Enter justification below and complete Attachment 4, Part V.		Continue to Attachment 4, 10 CFR 50.54(q) Screening Evaluation Form, Part III	
Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>						
10 CFR 50.54(q) Effectiveness Evaluation is not required. Enter justification below and complete Attachment 4, Part V.		Continue to Attachment 4, 10 CFR 50.54(q) Screening Evaluation Form, Part III							
Bounding document attached (optional) <input type="checkbox"/>									
Part III. Editorial Change Is this activity an editorial or typographical change only, such as formatting, paragraph numbering, spelling, or punctuation that does not change intent? Justification:	<table border="1"><tr><td>Yes</td><td><input type="checkbox"/></td><td>No</td><td><input checked="" type="checkbox"/></td></tr><tr><td colspan="2">10 CFR 50.54(q) Effectiveness Evaluation is not required. Enter justification and complete Attachment 4, Part V.</td><td colspan="2">Continue to Attachment 4, Part IV and address non editorial changes</td></tr></table>	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	10 CFR 50.54(q) Effectiveness Evaluation is not required. Enter justification and complete Attachment 4, Part V.		Continue to Attachment 4, Part IV and address non editorial changes	
Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>						
10 CFR 50.54(q) Effectiveness Evaluation is not required. Enter justification and complete Attachment 4, Part V.		Continue to Attachment 4, Part IV and address non editorial changes							
Part IV. Emergency Planning Element and Function Screen (Reference Attachment 1, Considerations for Addressing Screening Criteria)									
Does this activity involve any of the following, including program elements from NUREG-0654/FEMA REP-1 Section II? If answer is yes, then check box.									
1	10 CFR 50.47(b)(1) Assignment of Responsibility (Organization Control)								
1a	Responsibility for emergency response is assigned. <input checked="" type="checkbox"/>								
1b	The response organization has the staff to respond and to augment staff on a continuing basis (24-7 staffing) in accordance with the emergency plan. <input checked="" 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="checkbox"/>								
3	10 CFR 50.47(b)(3) Emergency Response Support and Resources								
3a	Arrangements for requesting and using off site assistance have been made. <input checked="" type="checkbox"/>								
3b	State and local staff can be accommodated at the EOF in accordance with the emergency plan. (NA for CR3) <input type="checkbox"/>								
4	10 CFR 50.47(b)(4) Emergency Classification System								
4a	A standard scheme of emergency classification and action levels is in use. (Requires final approval of Screen and Evaluation by EP CFAM.) <input type="checkbox"/>								

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

Part IV. Emergency Planning Element and Function Screen (cont.)		
5	10 CFR 50.47(b)(5) Notification Methods and Procedures	
5a	Procedures for notification of State and local governmental agencies are capable of alerting them of the declared emergency within 15 minutes (60 minutes for CR3) after declaration of an emergency and providing follow-up notification.	<input type="checkbox"/>
5b	Administrative and physical means have been established for alerting and providing prompt instructions to the public within the plume exposure pathway. (NA for CR3)	<input type="checkbox"/>
5c	The public ANS meets the design requirements of FEMA-REP-10, Guide for Evaluation of Alert and Notification Systems for Nuclear Power Plants, or complies with the licensee's FEMA-approved ANS design report and supporting FEMA approval letter. (NA for CR3)	<input type="checkbox"/>
6	10 CFR 50.47(b)(6) Emergency Communications	
6a	Systems are established for prompt communication among principal emergency response organizations.	<input type="checkbox"/>
6b	Systems are established for prompt communication to emergency response personnel.	<input type="checkbox"/>
7	10 CFR 50.47(b)(7) Public Education and Information	
7a	Emergency preparedness information is made available to the public on a periodic basis within the plume exposure pathway emergency planning zone (EPZ). (NA for CR3)	<input type="checkbox"/>
7b	Coordinated dissemination of public information during emergencies is established.	<input type="checkbox"/>
8	10 CFR 50.47(b)(8) Emergency Facilities and Equipment	
8a	Adequate facilities are maintained to support emergency response.	<input type="checkbox"/>
8b	Adequate equipment is maintained to support emergency response.	<input type="checkbox"/>
9	10 CFR 50.47(b)(9) Accident Assessment	
9a	Methods, systems, and equipment for assessment of radioactive releases are in use.	<input type="checkbox"/>
10	10 CFR 50.47(b)(10) Protective Response	
10a	A range of public PARs is available for implementation during emergencies. (NA for CR3)	<input type="checkbox"/>
10b	Evacuation time estimates for the population located in the plume exposure pathway EPZ are available to support the formulation of PARs and have been provided to State and local governmental authorities. (NA for CR3)	<input type="checkbox"/>
10c	A range of protective actions is available for plant emergency workers during emergencies, including those for hostile action events.	<input type="checkbox"/>
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"/>

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

Part IV. Emergency Planning Element and Function Screen (cont.)		
14	10 CFR 50.47(b)(14) Drills and Exercises	
14a	A drill and exercise program (including radiological, medical, health physics and other program areas) is established.	<input type="checkbox"/>
14b	Drills, exercises, and training evolutions that provide performance opportunities to develop, maintain, and demonstrate key skills are assessed via a formal critique process in order to identify weaknesses.	<input type="checkbox"/>
14c	Identified weaknesses are corrected.	<input type="checkbox"/>
15	10 CFR 50.47(b)(15) Emergency Response Training	
15a	Training is provided to emergency responders.	<input type="checkbox"/>
16	10 CFR 50.47(b)(16) Emergency Plan Maintenance	
16a	Responsibility for emergency plan development and review is established.	<input type="checkbox"/>
16b	Planners responsible for emergency plan development and maintenance are properly trained.	<input type="checkbox"/>
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.		<input type="checkbox"/>
Justification:		
If any Attachment 4, 10 CFR 50.54(q) Screening Evaluation Form, Part IV criteria are checked, then complete Attachment 4, 10 CFR 50.54(q) Screening Evaluation Form, Part V and perform a 10 CFR 50.54(q) Effectiveness Evaluation. Program Element 4a requires final approval of Screen and Evaluation by EP CFAM.		<input checked="" type="checkbox"/>
Part V. Signatures:		
EP CFAM Final Approval is required for changes affecting Program Element 4a. If CFAM approval is NOT required, then mark the EP CFAM signature block as not applicable (N/A) to indicate that signature is not required.		
Preparer Name (Print): Ernestine M. Kuhr	Preparer Signature: See CAS	Date: 1/11/18
Reviewer Name (Print): Jeffery White	Reviewer Signature: See CAS	Date: See CAS
Approver (EP Manager Name (Print): See CAS	Approver Signature: See CAS	Date: See CAS
Approver (CFAM, as required) Name (Print) N/A	Approver Signature: N/A	Date: N/A

QA RECORD

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

Screening and Evaluation Number				Applicable Sites	
EREG #: 02162372				BNP	<input type="checkbox"/>
				CNS	<input type="checkbox"/>
				CR3	<input type="checkbox"/>
				HNP	<input type="checkbox"/>
5AD #:				MNS	<input checked="" type="checkbox"/>
AD-EP-ALL-0101	02166730	SR/0/A/2000/001	02167787	ONS	<input type="checkbox"/>
AD-EP-ALL-0103	02166736	SR/0/A/2000/003	02167773	RNP	<input type="checkbox"/>
AD-EP-ALL-0104	02166163	SR/0/A/2000/004	02167771	GO	<input type="checkbox"/>
AD-EP-ALL-0105	02166743	EP FAM 3.11	02167854		
AD-EP-ALL-0106	02166944	EP FAM 3.14	02167860		
AD-EP-ALL-0108	02166951	ETQS 7111.0	02167798		
AD-EP-ALL-0109	02166957	MTP 7111.0	02167581		
AD-EP-ALL-0110	02166964	HP/0/B/1009/023	02161924		
AD-EP-ALL-0205	02166978	RP/0/A/5700/012	02161748		
AD-EP-ALL-0304	02166985	RP/0/A/5700/018	02161745		
AD-EP-ALL-0500	02166992	RP/0/A/5700/020	02161747		
AD-EP-MNS-0105	02169848	RP/0/A/5700/024	02161746		
AD-EP-MNS-0106	02160850	RP/0/B/5700/023	02161749		
AD-EP-MNS-0203	02161744				
Document and Revision Fleet Standard ERO Project - See list below			Issuing new Fleet EP Procedures and superseding fleet and site specific EP Procedures.		
<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>In conjunction with implement the common EOF for BNP, HNP, and RNP, an initiative was undertaken by Duke Energy to standardize the augmenting ERO positions, functions and responsibilities (tasks) across the fleet. This involved changes to the current MNS augmenting ERO, based on the number of responders and their titles identified in the site emergency plan and implementing procedures. Included in the standard ERO initiative is the development of fleet standard ERO checklists, procedures and forms. Note: This initiative makes no changes to the on-shift ERO or 45-minute augmenting response positions.</p> <p>The adoption of the standard ERO made changes to the functional procedures for Field Monitoring, Classification, Protective Action Recommendations (PARs), and Notification.</p> <p>This screening/evaluation will review issuing new Fleet EP Procedures and superseding fleet and site specific EP Procedures to support the Fleet Standard ERO project. The following table shows the relationship between the old and new procedures:</p>					

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

Old Procedure Number	Old Procedure Title	New Procedure Number	New Procedure Title
AD-EP-ALL-0203	Protocol for Field Monitoring Coordinator During Emergency Conditions	AD-EP-ALL-0203	Field Monitoring During Declared Emergency
EP FAM 3.11	State/County EOC Liaison Reference Manual	AD-EP-ALL-0103	Activation and Operations of the Emergency Operations Facility, Attachment 17
MTP 7111.0	Emergency Response Training	AD-EP-ALL-0500	Emergency Response Training
ETQS 7111.0	Emergency Response Training	AD-EP-ALL-0500	Emergency Response Training
HP/0/B/1009/023	Environmental Monitoring for Emergency Conditions	AD-EP-MNS-0203	MNS Site Specific Field Monitoring Information
RP/0/A/5700/000 ¹	Emergency Classification	AD-EP-ALL-0101	Emergency Classification
RP/0/A/5700/012	Activation of the Technical Support Center (TSC)	AD-EP-ALL-0105	Activation and Operation of the Technical Support Center
		AD-EP-MNS-0105	MNS Site Specific TSC Support
		RP/0/A/5700/026	Operations/Engineering Required Actions In The Technical Support Center (TSC)
RP/0/A/5700/018	Notification to the States and Counties from the Technical Support Center	AD-EP-ALL-0304	State and County Notifications
RP/0/A/5700/020	Activation and Operation of the Operations Support Center (OSC)	AD-EP-ALL-0106	Activation and Operation of the Operations Support Center
		AD-EP-MNS-0106	MNS Site Specific OSC Support
RP/0/A/5700/024	Recovery and Reentry Procedure	AD-EP-ALL-0110	Recovery
RP/0/B/5700/023	Nuclear Communications (NC) Emergency Response Plan	AD-EP-ALL-0108	Joint Information System Support
SR/0/A/2000/001	Corporate Communications response to the Emergency Operations	AD-EP-ALL-0108	Joint Information System Support

¹ Procedure RP/0/A/5700/000 is not being superseded at this time; however, AD-EP-ALL-0101 has been added for use by TSC and EOF for Emergency Classification.

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

	Facility		
SR/0/A/2000/003	Activation of the Emergency Operations Facility (CNS, MNS, ONS)	AD-EP-ALL-0103	Activation and Operations of the Emergency Operations Facility
SR/0/A/2000/004	Notification to States and Counties from the Emergency Operations Facility for Catawba, McGuire and Oconee	AD-EP-ALL-0304	State and County Notifications
EP FAM 3.14	Forms for Emergency Plan Implementing Procedures	AD-EP-ALL-0104	ERO Common Guidelines and Forms
		AD-EP-ALL-0106	Activation and Operation of the Operations Support Center
		AD-EP-ALL-0304	State and County Notifications
		AD-SY-ALL-0420	Fitness for Duty Unscheduled Call Out

The implementation of the new EPIPs include some minor process changes that do not change intent of EPIPs, Emergency Plan, or are affected by any planning standard. Process changes made by implementing the new EPIPs included in this evaluation include:

- Revised Recovery Organization (AD-EP-ALL-0110)
- Stand alone KI PAR is now a follow-up notification (AD-EP-ALL-0304)

Enclosure 1 is the MNS ERO Position Comparison and Evaluation – TSC/OSC

Enclosure 2 is the MNS ERO Position Comparison and Evaluation – JIC

Enclosure 3 is the EOF ERO Position Comparison and Evaluation

These documents show how the ERO responsibilities in the superseded procedures map to the new procedures.

Part II. Activity Previously Reviewed?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
Is this activity Fully bounded by an NRC approved 10 CFR 50.90 submittal or Alert and Notification System Design Report?	10 CFR 50.54(q) Effectiveness Evaluation is not required. Enter justification below and complete Attachment 4, Part V.			
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:	Continue to Attachment 4, 10 CFR 50.54(q) Screening Evaluation Form, Part III			
Justification:				
Bounding 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="checkbox"/>
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.		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="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 checked="" 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="checkbox"/>
3	10 CFR 50.47(b)(3) Emergency Response Support and Resources				
3a	Arrangements for requesting and using off site assistance have been made.				<input checked="" type="checkbox"/>
3b	State and local staff can be accommodated at the EOF in accordance with the emergency plan. (NA for CR3)				<input type="checkbox"/>
4	10 CFR 50.47(b)(4) Emergency Classification System				
4a	A standard scheme of emergency classification and action levels is in use. (Requires final approval of Screen and Evaluation by EP CFAM.)				<input type="checkbox"/>
5	10 CFR 50.47(b)(5) Notification Methods and Procedures				
5a	Procedures for notification of State and local governmental agencies are capable of alerting them of the declared emergency within 15 minutes (60 minutes for CR3) after declaration of an emergency and providing follow-up notification.				<input 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"/>
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"/>

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

Part IV. Emergency Planning Element and Function Screen (cont.)		
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 checked="" 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 checked="" 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 checked="" 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 checked="" 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 checked="" type="checkbox"/>
16	10 CFR 50.47(b)(16) Emergency Plan Maintenance	
16a	Responsibility for emergency plan development and review is established.	<input type="checkbox"/>
16b	Planners responsible for emergency plan development and maintenance are properly trained.	<input type="checkbox"/>

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

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. ATTACHMENT 4 Justification:		<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. Program Element 4a requires final approval of Screen and Evaluation by EP CFAM.		<input checked="" type="checkbox"/>
Part V. Signatures:		
Preparer Name (Print): Ernestine M. Kuhr	Preparer Signature: See CAS	Date: 12/5/17
Reviewer Name (Print): Jeffery White	Reviewer Signature: See CAS	Date: See CAS
Approver (EP Manager Name (Print): See CAS	Approver Signature: See CAS	Date: See CAS
Approver (CFAM, as required) Name (Print) N/A	Approver Signature: N/A	Date: N/A

QA RECORD

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

Screening and Evaluation Number				Applicable Sites	
EREG #: 02162372				BNP	<input type="checkbox"/>
				CNS	<input type="checkbox"/>
				CR3	<input type="checkbox"/>
				HNP	<input type="checkbox"/>
5AD #:				MNS	<input checked="" type="checkbox"/>
AD-EP-ALL-0101	02166730	SR/0/A/2000/001	02167787	ONS	<input type="checkbox"/>
AD-EP-ALL-0103	02166736	SR/0/A/2000/003	02167773	RNP	<input type="checkbox"/>
AD-EP-ALL-0104	02166163	SR/0/A/2000/004	02167771	GO	<input type="checkbox"/>
AD-EP-ALL-0105	02166743	EP FAM 3.11	02167854		
AD-EP-ALL-0106	02166944	EP FAM 3.14	02167860		
AD-EP-ALL-0108	02166951	ETQS 7111.0	02167798		
AD-EP-ALL-0109	02166957	MTP 7111.0	02167581		
AD-EP-ALL-0110	02166964				
AD-EP-ALL-0205	02166978	HP/0/B/1009/023	02161924		
AD-EP-ALL-0304	02166985	RP/0/A/5700/012	02161748		
AD-EP-ALL-0500	02166992	RP/0/A/5700/018	02161745		
AD-EP-MNS-0105	02169848	RP/0/A/5700/020	02161747		
AD-EP-MNS-0106	02160850	RP/0/A/5700/024	02161746		
AD-EP-MNS-0203	02161744	RP/0/B/5700/023	02161749		
Document and Revision Fleet Standard ERO Project - See list below		Issuing new Fleet EP Procedures and superseding fleet and site specific EP Procedures.			
Part I. Description of Proposed Change:					
<p>In conjunction with implement the common EOF for BNP, HNP, and RNP, an initiative was undertaken by Duke Energy to standardize the augmenting ERO positions, functions and responsibilities (tasks) across the fleet. This involved changes to the current MNS augmenting ERO, based on the number of responders and their titles identified in the site emergency plan and implementing procedures. Included in the standard ERO initiative is the development of fleet standard ERO checklists, procedures and forms. Note: This initiative makes no changes to the on-shift ERO or 45-minute augmenting response positions.</p> <p>The adoption of the standard ERO made changes to the functional procedures for Field Monitoring, Classification, Protective Action Recommendations (PARs), and Notification. In addition, fleet standard procedures were adopted for Emergency Exposure Control and Emergency Response Training.</p> <p>This screening/evaluation will review issuing new Fleet EP Procedures and superseding fleet and site specific EP Procedures to support the Fleet Standard ERO project. The following table shows the relationship between the old and new procedures:</p>					
Old Procedure Number	Old Procedure Title	New Procedure Number	New Procedure Title		
AD-EP-ALL-0203	Protocol for Field	AD-EP-ALL-0203	Field Monitoring During		

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

	Monitoring Coordinator During Emergency Conditions		Declared Emergency
EP FAM 3.11	State/County EOC Liaison Reference Manual	AD-EP-ALL-0103	Activation and Operations of the Emergency Operations Facility, Attachment 17
MTP 7111.0	Emergency Response Training	AD-EP-ALL-0500	Emergency Response Training
ETQS 7111.0	Emergency Response Training	AD-EP-ALL-0500	Emergency Response Training
HP/0/B/1009/023	Environmental Monitoring for Emergency Conditions	AD-EP-MNS-0203	MNS Site Specific Field Monitoring Information
RP/0/A/5700/000 ¹	Emergency Classification	AD-EP-ALL-0101	Emergency Classification
RP/0/A/5700/012	Activation of the Technical Support Center (TSC)	AD-EP-ALL-0105	Activation and Operation of the Technical Support Center
		AD-EP-MNS-0105	MNS Site Specific TSC Support
		RP/0/A/5700/026	Operations/Engineering Required Actions In The Technical Support Center (TSC)
RP/0/A/5700/018	Notification to the States and Counties from the Technical Support Center	AD-EP-ALL-0304	State and County Notifications
RP/0/A/5700/020	Activation and Operation of the Operations Support Center (OSC)	AD-EP-ALL-0106	Activation and Operation of the Operations Support Center
		AD-EP-MNS-0106	MNS Site Specific OSC Support
RP/0/A/5700/024	Recovery and Reentry Procedure	AD-EP-ALL-0110	Recovery
RP/0/B/5700/023	Nuclear Communications (NC) Emergency Response Plan	AD-EP-ALL-0108	Joint Information System Support
SR/0/A/2000/001	Corporate Communications response to the Emergency Operations Facility	AD-EP-ALL-0108	Joint Information System Support
SR/0/A/2000/003	Activation of the Emergency Operations	AD-EP-ALL-0103	Activation and Operations of the Emergency Operations

¹ Procedure RP/0/A/5700/000 is not being superseded at this time; however, AD-EP-ALL-0101 has been added for use by TSC and EOF for Emergency Classification.

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

	Facility (CNS, MNS, ONS)		Facility
SR/0/A/2000/004	Notification to States and Counties from the Emergency Operations Facility for Catawba, McGuire and Oconee	AD-EP-ALL-0304	State and County Notifications
EP FAM 3.14	Forms for Emergency Plan Implementing Procedures	AD-EP-ALL-0104	ERO Common Guidelines and Forms
		AD-EP-ALL-0106	Activation and Operation of the Operations Support Center
		AD-EP-ALL-0304	State and County Notifications
		AD-SY-ALL-0420	Fitness for Duty Unscheduled Call Out

The implementation of the new EPIPs include some minor process changes that do not change intent of EPIPs, Emergency Plan, or are affected by any planning standard. Process changes made by implementing the new EPIPs included in this evaluation include:

- Revised Recovery Organization (AD-EP-ALL-0110)
- Stand alone KI PAR is now a follow-up notification (AD-EP-ALL-0304)

Enclosure 1 is the MNS ERO Position Comparison and Evaluation – TSC/OSC

Enclosure 2 is the MNS ERO Position Comparison and Evaluation – JIC

Enclosure 3 is the EOF ERO Position Comparison and Evaluation

These documents show how the ERO responsibilities in the superseded procedures map to the new procedures.

Attachment 6, 10 CFR 50.54(q) Initiating Condition (IC) and Emergency Action Level (EAL) and EAL Bases Validation and Verification (V&V) Form, is attached (required for IC or EAL change)

Yes ☐
No ☒

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

MNS Emergency Plan Change 2 (dated February 1981), additional information submitted April 3, 1981 and July 1, 1981, Revision 97-1 (dated April 1997), and Revision 11-3 (dated October, 2011) reflect the NRC approved versions related to the augmenting ERO. The augmenting ERO documented in the current MNS E-Plan, Revision 17-1 (September, 2017) Sections B and G, bounds the NRC approved E-Plan augmenting ERO and is used as the basis for the detailed comparison and evaluation provided in Enclosures 1, 2, and 3.

Licensing Basis for Requesting Offsite Assistance

MNS Emergency Plan Change 2 (dated February 1981), is the NRC approved version related to the licensing basis for requesting offsite assistance. The process for requesting offsite assistance in the current MNS E-Plan, Revision 17-1 (September, 2017) Section C bounds the NRC approved E-Plan for emergency notifications and is used as the basis for evaluation..

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

Licensing Basis for Emergency Notifications

MNS Emergency Plan Change 2 (dated February 1981), is the NRC approved version related to the licensing basis for emergency notifications. The process for emergency notifications in the current MNS E-Plan, Revision 17-1 (September, 2017) Section E bounds the NRC approved E-Plan for emergency notifications and is used as the basis for evaluation.

Licensing Basis for Field Monitoring

MNS Emergency Plan Change 2 (dated February 1981), is the NRC approved version related to the licensing basis for field monitoring. The process for field monitoring documented in the current MNS E-Plan, Revision 17-1 (September, 2017) Section I bounds the NRC approved E-Plan for field monitoring and is used as the basis for evaluation.

Licensing Basis for Emergency Exposure Control

MNS Emergency Plan Change 2 (dated February 1981), is the NRC approved version related to the licensing basis for emergency exposure control. The process for emergency exposure control documented in the current MNS E-Plan, Revision 17-1 (September, 2017) Section K bounds the NRC approved E-Plan for emergency exposure control and is used as the basis for evaluation.

Licensing Basis for Recovery Organization

MNS Emergency Plan Change 2 (dated February 1981), is the NRC approved version related to the licensing basis for the recovery organization. The current recovery organization, documented in the current MNS E-Plan, revision 17-1 (September, 2017) Section M, bounds the NRC approved E-Plan recovery organization and is used as the basis for evaluation.

Licensing Basis for Emergency Response Organization Training

MNS Emergency Plan Change 2 (dated February 1981), is the NRC approved version related to the licensing basis for emergency response training. The current training program, documented in the current MNS E-Plan, revision 17-1 (September, 2017) Section O bounds the NRC approved E-Plan training program and is used as the basis for evaluation.

List Commitments Associated with the Change

A search to identify site specific commitments related to the ERO positions and their assigned responsibilities was performed. No site specific commitments were identified aside from those in the Emergency Plan.

RG 1.219 Guidance on Making Changes to Emergency Plans for Nuclear Power Reactors, Rev 1. (July 2016)
3.5 Emergency Plan

a. "Emergency plan" means the document(s) that the licensee prepared and maintains that identifies and describes its methods for maintaining emergency preparedness and responding to emergencies. An emergency plan includes the plan that the NRC originally approved and all subsequent changes that the licensee made with and without prior NRC review and approval under 10 CFR 50.54(q). See 10 CFR 50.54(q)(1)(ii) for additional information.

b. This definition highlights that "emergency plan" includes the documents that describes the programmatic methods that the licensee uses to maintain emergency preparedness and to respond to emergencies. These methods, or program elements, are the implementation aspects of the planning standards in 10 CFR 50.47(b) and the requirements in Appendix E to 10 CFR Part 50 and generally correspond to the evaluation criteria of NUREG-0654 or approved alternatives that supply specific acceptable methods for complying with the planning standards in

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

10 CFR 50.47(b) and the requirements in Appendix E to 10 CFR Part 50. Such programmatic documents are subject to the 10 CFR 50.54(q) change process. Non-programmatic documents, such as training rosters, equipment and maintenance test reports, lesson plans, and other documents that "document the performance" of the program elements, as opposed to those that "establish" the program elements, are not included.

c. Ordinarily, sub-tier documents such as emergency plan implementing procedures (EPIPs) are not considered to be part of an emergency plan for the purpose of evaluating proposed changes. If a licensee relocates a programmatic description from the emergency plan to a sub-tier document, that programmatic description continues to be subject to the 10 CFR 50.54(q) change process. For example, licensees have relocated the details of emergency classification schemes from the emergency plan to an EPIP or to large wall charts maintained in the control room. Because the EPIP or wall chart is now the means to demonstrate compliance with the planning standards in 10 CFR 50.47(b)(4), these sub-tier documents are subject to 10 CFR 50.54(q). Repeating, as opposed to relocating, program element descriptions in sub-tier documents do not necessarily make the sub-tier documents subject to the 10 CFR 50.54(q) change process. However, the descriptions in the various documents must remain consistent.

d. As a simple test, a licensee can consider what programmatic document(s), in addition to its emergency plan, it would supply during an inspection to demonstrate that its emergency plan meets the regulatory requirements, as informed by the evaluation criteria in NUREG-0654 or by approved alternatives. These documents would likely be subject to the 10 CFR 50.54(q) change process.

e. This definition also highlights the need to consider the NRC-approved plan and the subsequent changes in reviewing against 10 CFR 50.54(q) to ensure that a series of incremental changes (each determined not to reduce the effectiveness of the plan) do not reduce the effectiveness of the plan when compared to the NRC-approved plan.

The differences in approved revisions and the current revisions of the Emergency Plans have been reviewed and they have been determined to meet the regulatory requirements required during the course of revisions. Each revision has been reviewed by the NRC during the inspection process.

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

If the emergency plan, modified as proposed, no longer complies with planning standards in 10 CFR 50.47(b) and the requirements in Appendix E to 10 CFR Part 50, then ensure the change is rejected, modified, or processed as an exemption request under 10 CFR 50.12, Specific Exemptions, rather than under 10 CFR 50.54(q):

The changes resulting from the adoption of the standard ERO establish a closer relationship between risk significant / key functions and the positions assigned those functions. The objective of the changes is to ensure that those functions and their processes are linked directly to the augmented minimum staffing positions to allow for optimum relief of on shift personnel and less complicated response execution following facility activation.

Refer to Enclosures 1, 2, and 3 for a detailed review of the differences between the current MNS augmenting ERO and the standard augmenting ERO, and the evaluation of those changes from the organizational hierarchy, position and response, and task-by-task levels, including procedure references.

The adoption of the standard augmenting ERO into the MNS Emergency Plan Implementing Procedures: (1) provides a response organization defined by specific structure and responsibilities, which is consistent with regulations and industry guidance, and (2) maintains an efficient augmentation capability for both minimum staffing and full staffing positions.

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

The adoption of the standard augmenting ERO into the MNS Emergency Plan Implementing Procedures continues to meet the regulatory requirements of 10CFR50.47(b)(1), (b)(2), (b)(7), 10CFR50 Appendix E, Section IV.A. This change does not alter, add or remove previous site specific commitments with regards to the augmenting ERO.

The fleet standard TSC, OSC, EOF and JIC facility activation procedures adopted into the MNS Emergency Plan Implementing Procedures continue to provide arrangements for requesting and effectively using assistance resources to meet the requirements of 10CFR50.47(b)(3).

To align all Duke Energy Nuclear facilities, the addition solely to consider the use of potassium iodide (KI) as a Protective Action Recommendation to an Emergency Notification Form, based on dose assessment, will be considered a follow-up message. KI will continue to be included in initial General Emergency notifications as appropriate, based on fleet procedures. This change only affects the addition of KI to a GE PAR recommendation if KI was not initially included. KI is considered a supplement to Protective Action Recommendations of sheltering and evacuations as defined in Federal Register Volume 66, Number 13, dated Friday, January 19, 2001, Rules and Regulations. The adoption of this fleet standard into the MNS emergency plan implementing procedures does continue to meet the regulatory requirements of 10CFR50.47(b)(5).

The adoption of a fleet standard procedure for field monitoring with a site specific supplement into the MNS Emergency Plan Implementing Procedures continues to provide means for assessing and monitoring actual or potential offsite consequences of a radiological emergency conditions to meet the requirements of 10CFR50.47(b)(9) and 10CFR50 Appendix E, Section IV.E.

The adoption of a fleet standard procedure for emergency exposure control into the MNS Emergency Plan Implementing Procedures continues to provide means for controlling radiological exposures, in an emergency, including exposure guidelines consistent with EPA Emergency Worker and Lifesaving Activity Protective Action Guides to meet the requirements of 10CFR50.47(b)(11).

The adoption of a fleet standard recovery organization and plan into the MNS Emergency Plan Implementing Procedures provides a flexible recovery organization based on the complexity of the event or recovery plan. This new recovery organization and plan is based on the current recovery organization and plan in place at HNP, which has been evaluated in drills and exercises. The adoption of a fleet standard recovery organization into the MNS Emergency Plan Implementing Procedures continues to meet the regulatory requirements of 10CFR50.47(b)(13) and 10CFR50 Appendix E Section IV.H. This change does not alter, add or remove previous site specific commitments with regards to the recovery organization and plan.

The adoption of a fleet standard procedure for emergency response organization training at McGuire ensures that radiological emergency response training is provided to those who may be called on to assist in an emergency, including periodic drill participation, to meet the requirements of 10CFR50.47(b)(15) and 10CFR50 Appendix E, Section IV.F.

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):

1. The following portion of planning standard §50.47(b)(1) is related to the change in adopting the standard augmenting ERO:

Primary responsibilities for emergency response by the nuclear facility licensee have been assigned, and each principal response organization has staff to augment its initial response on a continuous basis.

The functions for §50.47(b)(1) related to this change are:

- a. Responsibility for emergency response is assigned.

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

- b. The response organization has the staff to respond and augment on a continuing basis (24/7 staffing) in accordance with the E-plan.*

The NUREG-0654 Part II.A elements for §50.47(b)(1) related to this change are:

- A.1.d. Each organization shall identify a specific individual by title who shall be in charge of the emergency response.*

- A.2. Each principal organization shall be capable of continuous (24-hour) operations for a protracted period. The individual in the principal organization who will be responsible for assuring continuity of resources (technical, administrative, and material) shall be specified by title.*

2. The following portion of planning standard §50.47(b)(2) is related to the change in adopting the standard augmenting ERO:

..., timely augmentation of response capabilities is available and the interfaces among various onsite response activities and offsite support and response activities are specified.

The function for §50.47(b)(2) related to this change is:

- b. The process for timely augmentation of onshift staff is established and maintained.*

The NUREG-0654 Part II.B elements for §50.47(b)(2) related to this change are:

- B.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.*

- B.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.*

- B.5. Each licensee shall specify the positions or title and major tasks to be performed by the persons to be assigned to the functional areas of emergency activity. For emergency situations, specific assignments shall be made for all shifts and for plant staff members, both onsite and away from the site. These assignments shall cover the emergency functions in Table B-1 entitled, "Minimum Staffing Requirements for Nuclear Power Plant Emergencies." The licensee must be able to augment on-shift capabilities within a short period after declaration of an emergency. This capability shall be as indicated in Table B-1.*

- B.7. Each licensee shall specify the corporate management, administrative, and technical support personnel who will augment the plant staff as specified in the table entitled "Minimum Staffing Requirements for Nuclear Power Plant Emergencies," (Table B-1)*

3. The following portions of §50 Appendix E, Section IV.A are related to the change in adopting the standard augmenting ERO:

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:

- 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*

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

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.*
4. *Identification, by position and function to be performed, of persons within the licensee organization who will be responsible for making offsite dose projections, ...*
4. The following portion of planning standard §(b)(3) is related to the change in adopting standard facility activation procedures:

Arrangements for requesting and effectively using assistance resources have been made ...and other organizations capable of augmenting the planned response have been identified.

The function for §50.47(b)(3) related to this change is:

- a. *Arrangements for requesting and using offsite assistance have been made.*

The NUREG-0654 Part II.C elements for §50.47(b)(3) related to this change are:

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

- a. *specific persons by title authorized to request Federal assistance; see A.1.d., A.2.a.*
- b. *specific Federal resources expected, including expected times of arrival at specific nuclear facility sites;*

C.3 Each organization shall identify radiological laboratories and their general capabilities and expected availability to provide radiological monitoring and analyses services which can be used in an emergency.

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

5. The following portion of planning standard §50.47(b)(5) is related to the change in adopting the standard recovery organization and plan and KI PAR as a follow-up notification:

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 followup 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.

The function for §50.47(b)(5) related to this change is:

- a. *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.*

There are no applicable portions of §50 Appendix E, Section IV.D associated with the change in follow-up notifications.

The NUREG-0654 Part II.E elements for §50.47(b)(5) related to this change are:

E.4 (In part)Each licensee shall make provisions for follow-up messages from the facility to offsite authorities

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

which shall contain the following information if it is known and appropriate:

l. recommended emergency action, including protective measures;

n. prognosis for worsening or termination of event based on plant information.

6. The following portion of planning standard §50.47(b)(7) is related to the change in adopting the standard augmenting ERO:

Information is made available to the public on a periodic basis on how they will be notified and what their initial actions should be in an emergency (e.g., listening to a local broadcast station and remaining indoors), the principal points of contact with the news media for dissemination of information during an emergency (including the physical location or locations) are established in advance, and procedures for coordinated dissemination of information to the public are established.

The function for §50.47(b)(7) related to this change are:

b. Coordinated dissemination of public information during emergencies is established.

The NUREG-0654 Part II.G elements for §50.47(b)(7) related to this change is:

G.4.a Each principal organization shall designate a spokesperson who should have access to all necessary information.

7. The following portion of planning standard §50.47(b)(9) is associated with the change to supersede the existing site field monitoring procedure with a revised fleet field monitoring procedure and a new site specific field monitoring procedure:

a. Adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency conditions are in use.

The following portion of §50 Appendix E, Section IV.E is related to the change to the field monitoring procedures:

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

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

The function for §50.47(b)(9) related to this change is:

a. Methods, systems, and equipment for assessment of radioactive releases are in use.

The NUREG-0654 Part II.I elements for §50.47(b)(9) related to this change are:

I.7 Each organization shall describe the capability and resources for field monitoring within the plume exposure Emergency Planning Zone which are an intrinsic part of the concept of operations for the facility.

I.8 Each organization, where appropriate, shall provide methods, equipment and expertise to make rapid assessments of the actual or potential magnitude and locations of any radiological hazards through liquid or gaseous release pathways. This shall include activation, notification means, field team composition, transportation, communication, monitoring equipment and estimated deployment times.

8. The following portion of planning standard §50.47(b)(11) is associated with the change in adopting a standard procedure for radiological exposure control:

Means for controlling radiological exposures, in an emergency, are established for emergency workers. The

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

means for controlling radiological exposures shall include exposure guidelines consistent with EPA Emergency Worker and Lifesaving Activity Protective Action Guides.

The function for §50.47(b)(11) related to this change is:

- a. *The resources for controlling radiological exposures for emergency workers are established.*

The NUREG-0654 Part II.K elements for §50.47(b)(11) related to this change are

K.1 Each licensee shall establish onsite exposure guidelines consistent with EPA Emergency Worker and Lifesaving Activity Protective Actions Guides (EPA 520/1-75/001)

K.2 Each licensee shall provide an onsite radiation protection program to be implemented during emergencies, including methods to implement exposure guidelines. The plan shall identify individual(s), by position or title, who can authorize emergency workers to receive doses in excess of 10 CFR Part 20 limits. Procedures shall be worked out in advance for permitting onsite volunteers to receive radiation exposures in the course of carrying out lifesaving and other emergency activities. These procedures shall include expeditious decision making and a reasonable consideration of relative risks.

K.3.a Each organization shall make provision for 24-hour-per-day capability to determine the doses received by emergency personnel involved in any nuclear accident, including volunteers. Each organization shall make provisions for distribution of dosimeters, both self-reading and permanent record devices.

K.3.b Each organization shall ensure that dosimeters are read at appropriate frequencies and provide for maintaining dose records for emergency workers involved in any nuclear accident.

9. The following portion of planning standard §50.47(b)(13) is associated with the change in adopting the standard recovery organization and plan:

General plans for recovery and reentry are developed.

The function for §50.47(b)(13) related to this change are:

- a. *Plans for recovery and reentry are developed.*

The NUREG-0654 Part II.M elements for §50.47(b)(13) related to this change are:

M.1 Each organization, as appropriate, shall develop general plans and procedures for reentry and recovery and describe the means by which decisions to relax protective measures (e.g., allow reentry into an evacuated area) are reached. This process should consider both existing and potential conditions.

M.2 Each licensee plan shall contain the position/title, authority and responsibilities of individuals who will fill key positions in the facility recovery organization. This organization shall include technical personnel with responsibilities to develop, evaluate and direct recovery and reentry operations.

M.3 Each licensee and State plan shall specify means for informing members of the response organizations that a recovery operation is to be initiated, and of any changes in the organizational structure that may occur.

M.4 Each plan shall establish a method for periodically estimating total population exposure.

10. Planning standard §50.47(b)(15) is associated with the change in adopting the standard ERO training program:
Radiological emergency response training is provided to those who may be called on to assist in an

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

emergency.

The function for §50.47(b)(15) is related to this change:

a. Training is provided to emergency responders.

The NUREG-0654 Part II.O elements for §50.47(b)(15) related to this change are:

O.1 Each organization shall assure the training of appropriate individuals.

O.2 The training program for members of the onsite emergency organization shall, besides classroom training, include practical drills in which each individual demonstrates ability to perform his assigned emergency function. During the practical drills, on-the-spot correction of erroneous performance shall be made and a demonstration of the proper performance offered by the instructor.

O.4 Each organization shall establish a training program for instructing and qualifying personnel who will implement radiological emergency response plans. The specialized initial training and periodic retraining programs (including the scope, nature and frequency) shall be provided in the following categories:

a. Directors and/or coordinators of the plant emergency organization;

b. Personnel responsible for accident assessment;

c. Radiological monitoring teams and radiological analysis personnel;

d. Police, security, and firefighting personnel;

e. Repair and damage control/corrective action teams (onsite);

f. First aid and rescue personnel;

g. Local support services personnel including Civil Defense/Emergency Service personnel;

h. Medical support personnel;

i. Licensee's headquarters support personnel;

j. Personnel responsible for transmission of emergency information and instructions.

O.5 Each organization shall provide for the initial and annual retraining of personnel with emergency response responsibilities.

11. The following portion of §50 Appendix E, Section IV.F is associated with the change in adopting the standard ERO training program

1. The program to provide for: (a) The training of employees and exercising, by periodic drills, of emergency plans to ensure that employees of the licensee are familiar with their specific emergency response duties, and (b) The participation in the training and drills by other persons whose assistance may be needed in the event of a radiological emergency shall be described. This shall include a description of specialized initial training and periodic retraining programs to be provided to each of the following categories of emergency personnel:

i. Directors and/or coordinators of the plant emergency organization;

ii. Personnel responsible for accident assessment, including control room shift personnel;

iii. Radiological monitoring teams;

iv. Fire control teams (fire brigades);

v. Repair and damage control teams;

vi. First aid and rescue teams;

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

vii. Medical support personnel;

viii. Licensee's headquarters support personnel;

ix. Security personnel.

In addition, a radiological orientation training program shall be made available to local services personnel; e.g., local emergency services/Civil Defense, local law enforcement personnel, local news media persons.

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

The total number of responders filling TSC and OSC augmented positions in the current MNS ERO is 49 and the total number of responders filling augmented positions in the standard ERO is 46 (a difference of 3 fewer responders).

- 45 Minute ERO Responders: The standard ERO imposes no changes to 45 minute responders. All 45 minute response positions are staffed in accordance with existing site specific Emergency Plan commitments. MNS has two 45 minute response positions.
- 75 Minute ERO Responders: The current augmented ERO has twenty-three (23) 75 minute responders and the standard augmented ERO has twenty-four (24) 75 minute responders (a difference of 1 more responder).
- Full Staffing ERO Responders: The current augmented ERO has twenty-four (24) full staff responders and the standard augmented ERO has twenty (20) full staff responders (a difference of 4 fewer responders).

Refer to Enclosures 1, 2 and 3 for a detailed review of the differences between the current MNS augmenting ERO and the standard augmenting ERO, and the evaluation of those changes.

1. Capability Assessment

All emergency response related functions and tasks performed by the current MNS augmenting ERO have been dispositioned against the standard ERO positions as documented in Enclosures 1, 2 and 3. Changes to ERO task assignments categorized as deviations were evaluated and determined not to degrade the capability to perform their particular function.

Additionally, all ERO tasks for each position have been formally defined, indexed to their corresponding planning standard, and listed in the Emergency Plan Implementing Procedures for Emergency Response Facility Activation. These tasks can now be readily adopted into the ERO systematic approach to training based qualification process and easily associated with the drill and exercise evaluation performance objectives and demonstration criteria. Thus, the capability to determine performance vs. process issues and feedback to training of task level items is significantly improved.

2. Timeliness Assessment

The standard augmenting ERO, with minor modification, is based on the current augmenting ERO in place at CNS, MNS and ~~MNS~~ ^{ONS 42m} which has been evaluated in numerous drills and exercises. There are no changes to the on-shift ERO or 45 minute response positions as part of the standard augmenting ERO initiative.

The aspect of timeliness with regard to the ability of any position to perform their assigned responsibilities was further evaluated by a review of the impact of any new tasks assigned to a position by a process similar to that used in the on-shift staffing study task analysis. (It was assumed there was no timeliness impact for positions that were not assigned new tasks or were only assigned new tasks which were determined to be undocumented and were actually performed by the position. New tasks are categorized as deviations.) The aspects of overburden and overlap were considered in the determination of whether there was a potential adverse impact on timeliness to any assigned task. No position was identified with task overburden or overlap with regard to the addition of any responsibilities.

The adoption of the standard ERO made changes to the functional procedures for Field Monitoring, Classification,

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

Protective Action Recommendations (PARs), Notification, Emergency Exposure Controls, and Emergency Response Training.

- Field Monitoring - MNS will still have the capability, radiological equipment, and communication methods to perform field monitoring, so this is not a Reduction in Effectiveness (RIE).
- Classification - The EAL scheme, based on NEI 99-01 rev. 6, is not changing, so this is not an RIE.
- Protective Action Recommendations (PARs) - PARs are still based on NUREG-0654 Supplement 3. Current PAR flow charts were moved to a new Fleet PAR procedures, so this is not an RIE.
- Notification - The Emergency Notification Form is not changing, and MNS is still using WebEOC and DEMNET to transmit the information, so this is not an RIE.
- Emergency Exposure Controls - Emergency exposure guidelines are still consistent with EPA guidance for Emergency Workers in EPA-400-R-92-001, so this is not an RIE.
- Emergency Response Training - Emergency response organization personnel will still be trained prior performing emergency response duties and continuing training will be provided as required by the ERO training matrix. Training includes participation in drills. Thus, this is not an RIE.

Based on the above, the adoption of the standard augmenting ERO will continue to maintain or improve the capability and timeliness of the MNS augmenting ERO to respond to an event and effectively perform their assigned tasks. The standard recovery organization and plan continues to ensure plans for recovery and reentry are developed.

The changes described do not affect the emergency planning functions listed in Part IV associated with 10 CFR 50.47(b) because the changes ensure adequate personnel, as well as emergency facilities and equipment to support the emergency response are provided and maintained. The changes do not affect supporting requirements described in 10 CFR 50, Appendix E.IV. because the changes continue to ensure that adequate provisions shall be made and described for emergency facilities and equipment and the changes continue to ensure the organization for coping with radiological emergencies is described.

The changes described provide additional assurance that the normal plant operating organization and ERO has the ability and capability to:

- respond to an emergency;
- perform functions in a timely manner;
- effectively identify and take measures to ensure protection of the public health and safety; and
- effectively use response equipment and emergency response procedures.

These changes support the McGuire Nuclear Station Emergency Plan, by ensuring that procedures used during response to a classified emergency are available. Effective use of these procedures helps ensure emergency response capabilities described in the MNS Emergency Plan are adequately maintained and demonstrated.

The changes described do not reduce the effectiveness of the McGuire Nuclear Station Emergency Plan, as written and approved; and continue to meet NRC requirements, as described in 10 CFR 50.47(b) and 10 CFR 50, Appendix E.

Part VI. Evaluation Conclusion.

Answer the following questions about the proposed change.

1	Does the proposed change comply with 10 CFR 50.47(b) and 10 CFR 50 Appendix E?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
2	Does the proposed change maintain the effectiveness of the emergency plan (i.e., no reduction in effectiveness)?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
3	Does the proposed change maintain the current Emergency Action Level (EAL) scheme?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

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

4	Choose one of the following conclusions:		
a	The activity does continue to comply with the requirements of 10 CFR 50.47(b) and 10 CFR 50, Appendix E, and the activity does not constitute a reduction in effectiveness or change in the current Emergency Action Level (EAL) scheme. Therefore, the activity can be implemented without prior NRC approval.	<input checked="checked" type="checkbox"/>	
b	The activity does not continue to comply with the requirements of 10 CFR 50.47(b) or 10 CFR 50 Appendix E or the activity does constitute a reduction in effectiveness or EAL scheme change. Therefore, the activity cannot be implemented without prior NRC approval.	<input type="checkbox"/>	
Part VII. Disposition of Proposed Change Requiring Prior NRC Approval			
Will the proposed change determined to require prior NRC approval be either revised or rejected?		Yes <input type="checkbox"/>	No <input type="checkbox"/>
If No, then initiate a License Amendment Request in accordance 10 CFR 50.90 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): Ernestine M Kuhr	Preparer Signature: See CAS	Date: 12/5/17
Reviewer Name (Print): Jeffery White	Reviewer Signature: See CAS	Date: See CAS
Approver (EP Manager) Name (Print): See CAS	Approver Signature: See CAS	Date: See CAS
Approver (CFAM, as required) Name (Print): N/A	Approver Signature: N/A	Date: N/A
If the proposed activity is a change to the E-Plan or implementing procedures, then create two EREG General Assignments. If required by Section 5.5, Submitting Reports of Changes to the NRC, then create two EREG General Assignments.		
• One for EP to provide the 10 CFR 50.54(q) summary of the analysis, or the completed 10 CFR 50.54(q), to Licensing.		<input checked="" type="checkbox"/>
• One for Licensing to submit the 10 CFR 50.54(q) information to the NRC within 30 days after the change is put in effect.		<input checked="" type="checkbox"/>

QA RECORD



Information Use

NUCLEAR OPERATING FLEET
ADMINISTRATIVE PROCEDURE
NON-SAFETY RELATED
AD-EP-MNS-0105

MNS SITE SPECIFIC TSC SUPPORT

REVISION 000

Effective Dates:

NA
Brunswick

NA
Catawba

NA
Harris (HNP)

01/31/2018
McGuire

NA
Oconee

NA
Robinson

NA
NGO

PRR 02168071**DESCRIPTION****REV. 000**

1. PRR 02136364 - was initiated to develop this procedure.
2. PRR 02168071 - was initiated to enhance Steps and structure due to feedback from training

This is a New procedure.

MNS SITE SPECIFIC TSC SUPPORT	AD-EP-MNS-0105
	Rev. 000
	Page 3 of 18

TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE</u>
1.0 PURPOSE.....	4
2.0 SCOPE.....	4
3.0 DEFINITIONS	4
4.0 RESPONSIBILITIES	4
5.0 INSTRUCTIONS	5
6.0 RECORDS	5
7.0 REFERENCES.....	5
 <u>ATTACHMENTS</u>	
1 MNS TSC Relocation	6
2 OAC Support ERDS Operation	9
3 Dose Assessor Ventilation Monitor Guidance	10
4 Operations Manager Guidance	11
5 Assistant Operations Manager Guidance.....	12
6 SAMG Communication Links	14
7 Reactor Engineer Guidance	15
8 Engineering Manager Guidance.....	17
9 Emergency Coordinator Guidance	18

MNS SITE SPECIFIC TSC SUPPORT	AD-EP-MNS-0105
	Rev. 000
	Page 4 of 18

1.0 PURPOSE

Provide site specific instructions for TSC activation and operations in support of fleet procedure AD-EP-ALL-0105, Activation and Operation of the Technical Support Center.

2.0 SCOPE

This procedure is used by McGuire Nuclear Station Emergency Response Organization personnel assigned to the TSC when an emergency has been declared at the plant.

3.0 DEFINITIONS

None

4.0 RESPONSIBILITIES

MNS personnel assigned to the TSC are responsible for completing actions outlined in this procedure.

MNS SITE SPECIFIC TSC SUPPORT	AD-EP-MNS-0105
	Rev. 000
	Page 5 of 18

5.0 INSTRUCTIONS

1. **WHEN** directed from position specific checklist located in AD-EP-ALL-0105, Activation and Operation of the Technical Support Center,
THEN follow guidance in appropriate attachments.

6.0 RECORDS

1. All logs, forms and records completed as the result of implementing this procedure during an actual declared event and the recovery phase shall be retained as permanent plant records. Nuclear Generation Record Retention Rule Number 421734, "Procedures-Technical Completed".
2. All checklists, logs and forms completed as the result of implementing this procedure shall be collected at the end of the event and provided to the site or corporate Emergency Preparedness Manager.

7.0 REFERENCES

7.1 Commitments

1. NCR 01579494
2. NCR 01733681

7.2 Procedures

1. AD-EP-ALL-0105, Activation and Operations of the Technical Support Center

7.3 Miscellaneous Documents

1. McGuire Nuclear Station (MNS) Emergency Plan

MNS SITE SPECIFIC TSC SUPPORT	AD-EP-MNS-0105
	Rev. 000
	Page 6 of 18

ATTACHMENT 1
Page 1 of 3

<< MNS TSC Relocation >>

1.0 MNS ALTERNATE TSC SETUP GUIDANCE

1. **IF** wireless phones with headsets, spare phone batteries, phone battery chargers **AND** ERO position procedure books can be taken from facility during relocation, **THEN instruct** personnel to bring them with them during relocation (see alternate facility layout at end of this section).
2. **IF** equipment **AND** procedures can **NOT** be transported from facility, **THEN utilize** local phone equipment **AND** make copies of procedures maintained in Administration Building to set up emergency response operations.
3. **IF** OSC is moved to alternate location, **THEN ensure** Continuous Accountability Log process is implemented.
4. Using assigned Administration Building area on layout drawing at end of this section, **set up** assigned location as follows:☐

NOTE

- Alternate TSC phone sets are stored in CBX Equipment Room, room number 112. Key to door is maintained by Security at SAS.☐
- IT Support can assist with phone and computer connections:☐

- a. **Obtain** phone equipment necessary to conduct ERO function at assigned location **AND connect** to wall **AND** ceiling outlets.☐
- b. **IF** a computer is needed, **THEN use** a computer that is **NOT** being used for another ERO function. (e.g., Regulatory Compliance section, Business Management group, **OR** Human Resources group) may be used.

<< MNS TSC Relocation >>

1.0 MNS ALTERNATE TSC SETUP GUIDANCE (continued)

- c. **IF** necessary,
THEN obtain copies of your position's procedure Attachment from
 "Emergency Planning Procedures" cabinet. ☐
- d. **IF** copies of plant procedures are required,
THEN perform one of following:..... ☐
- For Emergency Plan Implementing Procedures (RPs), **make** a copy from Control Copy located in "Emergency Planning Procedures" cabinet..... ☐
 - For all other procedures **print** a copy from Fusion on DAE..... ☐
5. **Assume OR continue** ERO response actions per checklist guidance instructions. ☐

	Elect Eng	NRC Communicator	NRC Resident	OPS Mgr	Assistant OPS Mgr	Ringdown Phone to EOF
Mech Engineer	4954	4962 875-1955	4519 PC 875-4789 875-4770	4951	4520 875-1953	Assistant Emergency Coordinator
Reactor Engineer	PC 4968	875-4778 875-4788			4950	Emergency Coordinator
	Security	RP Manager	Site Evacuation Coordinator	Log Keeper	Eng Mgr	Ringdown Phone to OSC
		4959	PC			

*2211

MNS SITE SPECIFIC TSC SUPPORT	AD-EP-MNS-0105
	Rev. 000
	Page 8 of 18

ATTACHMENT 1
Page 3 of 3

<< MNS TSC Relocation >>

1.0 MNS ALTERNATE TSC SETUP GUIDANCE (continued)

NOTE

* Indicates existing phones. All others are to be plugged in when the Alternate TSC is activated.

Other TSC Position Locations

Site Evacuation Coordinator (EP Room 114) - *4458, *4977, *875-1951.

Offsite Communicator (EP Room 117) -- *4970, *875-1951.

IT Support (CBX Equipment Room - 4248

OAC Support (CBX Equipment Room 112) -- *4999.

Dose Assessor (SCR Room 100D) -- *4405.

Company Spokesperson - (Rooms 141 and 118) -- *4400, *4419, *4233.

NRC (NRC Office, Room 126) -- *875-1681.

Other, use Jaguar Room as needed (Room 144) -- *4826.

Office Equipment

FAX (Mail Room, Room 116) -- *875-4506.

FAX (EP Room 114) -- *875-4382.

Copier (Mail Room, Room 116).

Copier (SA Room 170).

CBX (CBX Office in Admin. Building Lobby).

End of Attachment

MNS SITE SPECIFIC TSC SUPPORT	AD-EP-MNS-0105
	Rev. 000
	Page 9 of 18

ATTACHMENT 2

Page 1 of 1

<< OAC Support ERDS Operation >>

1.0 MNS ERDS ACTIVATION INSTRUCTIONS

1. OAC Support **OR** Designee shall perform the following. ☐

NOTE

- ERDS is not activated for drills unless directed to do so by Emergency Planning.{7.1.1}..... ☐
- ERDS can only be activated or deactivated from designated computer terminals. (STA's Office, TSC OAC Support Room, and all within Control Room horse shoe area) ☐
- ERDS is not activated for a Notification of Unusual Event. {7.1.2}..... ☐

2. **IF** Emergency Response Data System (ERDS) is **NOT** activated, **THEN** activate ERDS (for affected unit(s)) as follows:.....
- a. **Double click** on file (Desktop icon) "ERDS" _LinkControl_MNS.pdi" ☐
 - b. **Click** on CONNECT (Activate) ☐
 - c. **Click** on YES..... ☐
 - d. **Record** date **AND** time ERDS was activated in Emergency Response Log..... ☐
3. **Notify** OPS Manager in the TSC to inform the SM that ERDS was activated.
4. **Inform** the EC that ERDS was Activated.
5. **IF** ERDS failed to activate after five attempts, **THEN** have the NRC Communicator notify the NRC via ENS **OR** other available means.
6. **WHEN** event is over, **THEN** terminate ERDS by clicking on 'Disconnect'.(Terminate).....

End of Attachment

MNS SITE SPECIFIC TSC SUPPORT	AD-EP-MNS-0105
	Rev. 000
	Page 10 of 18

ATTACHMENT 3

Page 1 of 1

<< Dose Assessor Ventilation Monitor Guidance >>

1.0 DOSE ASSESSOR GUIDANCE

1. **Perform** RP/0/A/5700/026, Required Actions in the Technical Support Center (TSC) Enclosure 4.2 Dose Assessor TSC EMF Alignment

End Of Attachment

MNS SITE SPECIFIC TSC SUPPORT	AD-EP-MNS-0105
	Rev. 000
	Page 11 of 18

ATTACHMENT 4

Page 1 of 1

<< Operations Manager Guidance >>

1.0 OPERATIONS MANAGER GUIDANCE

1. **Establish** communications with OPS using the Cell Phone via 4500 Bridge line..☐
2. **Refer** to Attachment 6 SAMG Communication Links to establish communication links between SAMG evaluators.....☐
3. **Refer** to RP/0/A/5700/000, Classification Of Emergency☐

<< Assistant Operations Manager Guidance >>

1.0 ASSISTANT OPERATIONS MANAGER GUIDANCE

1. **Perform** RP/0/A/5700/026, Operations/Engineering Required Actions in the Technical Support Center (TSC).....☐
2. **IF** there is a Loss Of Offsite Power,
THEN evaluate having appropriate personnel perform RP/0/B/5700/033, MNS Emergency Response Facility Activation During a Dual Unit Loss of Power event.....
3. **IF** there is a Loss Of Normal TSC Communications to Offsite agencies **OR** to Control Room,
THEN evaluate having appropriate personnel perform RP/0/B/5700/032, Loss of Normal Communication Systems.....
4. **Establish** communications with OPS using the cell phone via 4500 bridge line.....☐
5. **IF** entering SAMGs,
THEN perform Attachment 6 SAMG Communication Links to establish communication links between SAMG evaluators.....
6. **WHEN** event is terminated,
THEN have the following completed paperwork delivered to the TSC.....
 - **Ensure** Control Room SRO brings to the TSC.....
 - ◇ All completed procedures (OPs, APs, EPs, RPs, etc..).....☐
 - ◇ All Configuration Control Cards.....☐
 - **Ensure** OSC, OPS SRO brings to the TSC.....
 - ◇ All completed procedures (OPs, APs, EPs, RPs, MPs, IPs, etc..).....☐
 - ◇ All Configuration Control Cards.....☐
 - ◇ All complete Task Work Sheets.☐

MNS SITE SPECIFIC TSC SUPPORT	AD-EP-MNS-0105
	Rev. 000
	Page 13 of 18

ATTACHMENT 5

Page 2 of 2

<< Assistant Operations Manager Guidance >>

1.0 ASSISTANT OPERATIONS MANAGER GUIDANCE (continued)

7. **WHEN** completed paperwork is received,
THEN begin review of paperwork to evaluate plant configuration.
8. **Ensure** Clearance is generated for any component left out of
Normal position for plant conditions.....

End Of Attachment

MNS SITE SPECIFIC TSC SUPPORT	AD-EP-MNS-0105
	Rev. 000
	Page 14 of 18

ATTACHMENT 6

Page 1 of 1

<< SAMG Communication Links >>

1.0 SAMG COMMUNICATION LINKS.

NOTE

- EP Controller bridge (12 party): 9 (980) 875-4575☐
- In next step the RP spare bridge line: 9 (980) 875-4833 is a 6 party bridge line.....☐

1. **Establish** communications links between the SAMG evaluators (TSC OPS Manager, TSC Assistant OPS Manager, Reactor Engineer, Engineering Manager, **AND** EOF Accident Assessment Interface) by dialing on to the RP spare bridge at 9-980-875-4833.

- **Evaluate** using an alternate bridge line listed below if for some reason the RP spare bridge is unavailable.....☐

OR

- **IF** other communications links are desired **OR** needed **THEN** dial the number listed as desired to determine if that bridge is currently being used.
- **IF** the desired bridge line is **NOT** being used, **THEN** the appropriate parties may dial in to use it.....

NOTE

To connect one of the 3000 series bridge numbers, dial: 9 (980) 875-4000, then '1' followed by the 3000 series number.☐

- McGuire site bridge (6 - party) 3030☐
- McGuire site bridge (6 - party) 3200☐

End of Attachment

MNS SITE SPECIFIC TSC SUPPORT	AD-EP-MNS-0105
	Rev. 000
	Page 15 of 18

ATTACHMENT 7

Page 1 of 2

<< Reactor Engineer Guidance >>

1.0 REACTOR ENGINEER GUIDANCE

1. **Refer** to RP/0/A/5700/000, Classification Of Emergency ☐
2. **Obtain** a copy of RP/0/A/5700/019, Core Damage Assessment, from the procedure cabinet..... ☐
3. **Monitor** core conditions as appropriate using either PI data, SDS OR the OAC Critical Points AND Steam Tables as follows: ☐
 - Core Subcooling. ☐
 - Reactor Vessel Water Level (RVLIS)..... ☐
 - Power level if Reactor NOT TRIPPED..... ☐
 - Ask the Operations Liaison to check all rods at bottom on reactor tripped..... ☐
 - Source Range Trends following Reactor Trip. ☐
 - **Compare** each loop T-hot, T-cold AND T-avg..... ☐
 - What is the most recent boron concentration, AND has there been any safety injection? ☐
 - Reactor coolant pumps On OR Off Natural OR Forced circulation..... ☐
 - Pressurizer Level. ☐
 - Containment EMFs. ☐
 - Injection flow AND letdown flow (NC inventory)..... ☐

MNS SITE SPECIFIC TSC SUPPORT	AD-EP-MNS-0105
	Rev. 000
	Page 16 of 18

ATTACHMENT 7

Page 2 of 2

<< Reactor Engineer Guidance >>

1.0 REACTOR ENGINEER GUIDANCE (continued)

- Containment Pressure. ☐
- Current burnup **AND** previous two cycles EFPD. ☐
- The number of failed rods **AND** DEI prior to transient. ☐
- Fuel Pool Temperature (Phase A **OR** Phase B Isolation) ☐

4. **IF** entering SAMG,
THEN perform Attachment 5 SAMG Communication links.

End of Attachment

MNS SITE SPECIFIC TSC SUPPORT	AD-EP-MNS-0105
	Rev. 000
	Page 17 of 18

ATTACHMENT 8

Page 1 of 1

<< Engineering Manager Guidance >>

1.0 ENGINEERING MANAGER GUIDANCE

1. **Obtain** a copy of RP/0/A/5700/026, Operations **AND** Engineering Required Actions In The Technical Support Center (TSC), from the procedure cabinet **AND** begin system **AND** plant parameter evaluation. ☐
2. **IF** entering SAMG,
THEN perform Attachment 5 SAMG Communication links..... _____

End Of Attachment

MNS SITE SPECIFIC TSC SUPPORT	AD-EP-MNS-0105
	Rev. 000
	Page 18 of 18

ATTACHMENT 9
Page 1 of 1

<< Emergency Coordinator Guidance >>

1.0 Emergency Coordinator Guidance

1. **Refer** to RP/0/A/5700/000, Classification Of Emergency☐



Information Use

NUCLEAR OPERATING FLEET
ADMINISTRATIVE PROCEDURE
NON-SAFETY RELATED
AD-EP-MNS-0106

MNS SITE SPECIFIC OSC SUPPORT

REVISION 000

Effective Dates:

NA
Brunswick

NA
Catawba

NA
Harris (HNP)

01/31/2018
McGuire

NA
Oconee

NA
Robinson

NA
NGO

MNS SITE SPECIFIC OSC SUPPORT	AD-EP-MNS-0106
	Rev. 000
	Page 2 of 8

REVISION SUMMARY
PRR 02136365 DESCRIPTION
<p>Rev.000 PRR 02136365 This is a new procedure.</p>

TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE</u>
1.0 PURPOSE.....	4
2.0 SCOPE.....	4
3.0 DEFINITIONS	4
4.0 RESPONSIBILITIES	4
5.0 INSTRUCTIONS	5
6.0 RECORDS	5
7.0 REFERENCES.....	5
<u>ATTACHMENTS</u>	
1 MNS Alternate OSC Setup Guidance	6

MNS SITE SPECIFIC OSC SUPPORT	AD-EP-MNS-0106
	Rev. 000
	Page 4 of 8

1.0 PURPOSE

Provide site specific instructions for OSC activation and operations in support of fleet procedure AD EP ALL 0106, Activation and Operation of the Operations Support Center.

2.0 SCOPE

This procedure is used by McGuire Nuclear Station Emergency Response Organization personnel assigned to the OSC when an emergency has been declared at the plant.

3.0 DEFINITIONS

None

4.0 RESPONSIBILITIES

McGuire personnel assigned to the OSC are responsible for completing actions outlined in this procedure.

MNS SITE SPECIFIC OSC SUPPORT	AD-EP-MNS-0106
	Rev. 000
	Page 5 of 8

5.0 INSTRUCTIONS

1. **WHEN** directed from position specific checklist located in AD-EP-ALL-0106, Activation and Operation of the Operations Support Center,
THEN follow guidance in appropriate attachment(s) of this procedure.

6.0 RECORDS

1. All logs, forms and records completed as the result of implementing this procedure during an actual declared event and the recovery phase shall be retained as permanent plant records. Nuclear Generation Record Retention Rule Number 421734, "Procedures-Technical Completed".
2. All checklists, logs and forms completed as the result of implementing this procedure shall be collected at the end of the event and provided to the site or corporate Emergency Planning Manager.

7.0 REFERENCES

7.1 Commitments

None

7.2 Procedures

AD-EP-ALL-0106, Activation and Operations of the Operations Support Center.

7.3 Miscellaneous Documents

McGuire Nuclear Plant (MNS) Emergency Plan

MNS SITE SPECIFIC OSC SUPPORT	AD-EP-MNS-0106
	Rev. 000
	Page 6 of 8

ATTACHMENT 1
Page 1 of 3

<< MNS Alternate OSC Setup Guidance >>

1. **IF** wireless phones with headsets, spare phone batteries, phone battery chargers **AND** ERO position procedure books can be taken from the facility during the relocation,
THEN instruct personnel to bring them with them during the relocation (see the alternate facility layout at the end of this section).... _____
2. **IF** equipment **AND** procedures cannot be transported from the facility,
THEN utilize local phone equipment **AND** make copies of procedures maintained in the Administration Building to set up emergency response operations. _____
3. **IF** the OSC is moved to the alternate location,
THEN ensure the Continuous Accountability Log process is implemented..... _____
4. Using the assigned Administration Building area on layout drawing at the end of this section, set up assigned location as follows:..... ☐

NOTES

- Alternate OSC phone sets are stored in the CBX Equipment Room, room no. 112, a key to the door is maintained by Security at the SAS..... ☐
- Extra tables, If needed, are normally stored in the closet spaces at the east and west ends of room TR 155. If, tables are not available in these locations, Nuclear Supply Chain can supply extra tables. ☐
- IT Support can assist with phone and computer connections. ☐
- If needed, RP can use PCs located in the Dosimetry Records Central Office (Admin room 165B). ☐

- a. **Obtain** phone equipment necessary to conduct ERO function at assigned location **AND** connect to wall **AND** ceiling outlets. ☐

MNS SITE SPECIFIC OSC SUPPORT	AD-EP-MNS-0106
	Rev. 000
	Page 7 of 8

ATTACHMENT 1
Page 2 of 3

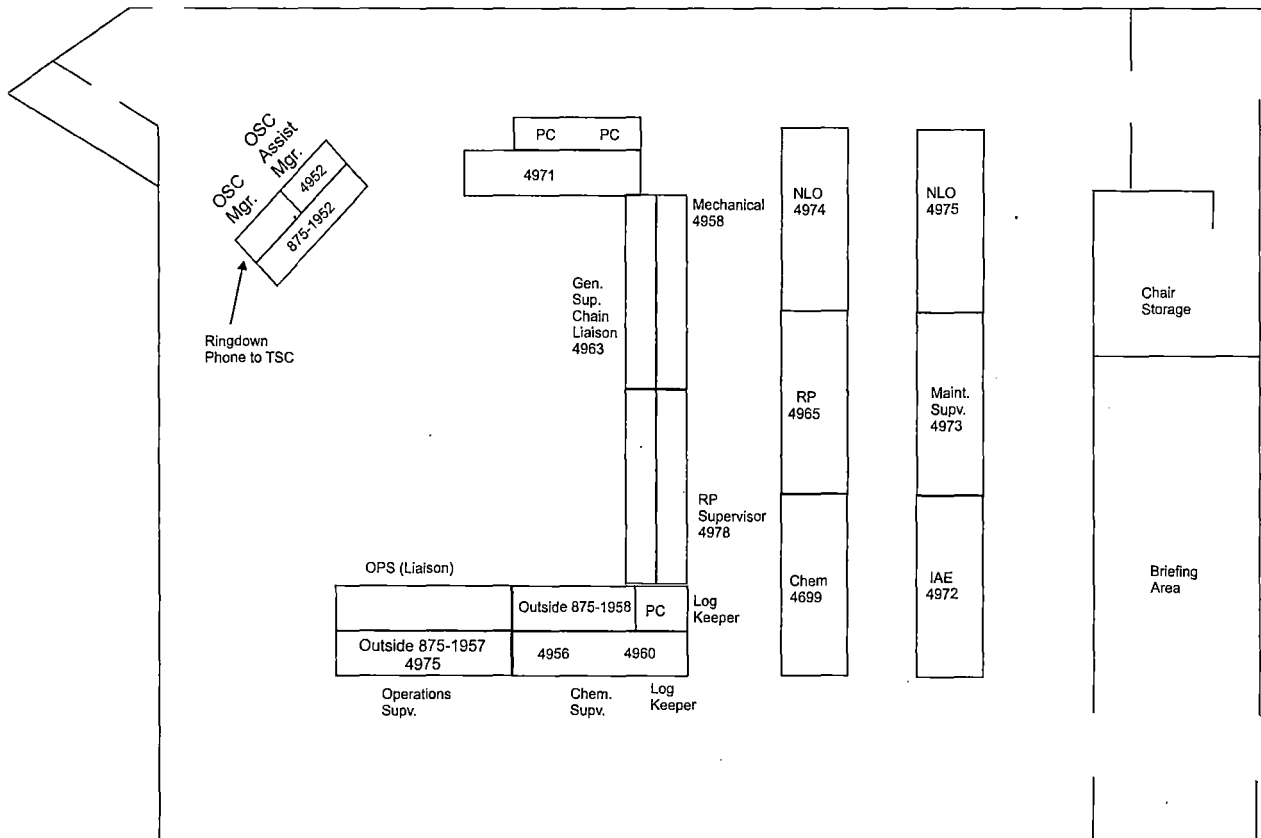
<< MNS Alternate OSC Setup Guidance >>

NOTE

- The computer located in room TR 155 can also be used for accessing NEDL and SDS.
- If needed a computer that is not being used for another ERO function (e.g., Regulatory Compliance section, Business Management group, Human Resources group) may be used☐

- b. IF necessary,
THEN obtain copies of the ERO position checklists, form
AND functional procedures located in the "Emergency
Planning Procedures" cabinet.....
- c. IF copies of plant procedures are required,
THEN perform one of the following:.....
 - For Emergency Plan Implementing Procedures (RPs), make a copy from the Control (Copy located in the "Emergency Planning Procedures" cabinet).....☐
 - For all other procedures print a copy from NEDL Portal on DAE.☐
5. **Assume OR continue** ERO response actions per checklist guidance instructions.....☐

<< MNS Alternate OSC Setup Guidance >>



Drawing No.
D01NG0020.DLS

Office Equipment

- FAX, Mail Room, Room 116
- FAX, EP, Room 114
- Copier, Mail Room, Room 116
- Copier, SA, Room 170
- CBX, CBX Office in Lobby



Information Use

NUCLEAR OPERATING FLEET
ADMINISTRATIVE PROCEDURE
NON-SAFETY RELATED
AD-EP-MNS-0203

MNS SITE SPECIFIC FIELD MONITORING

REVISION 000

Effective Dates:

NA
Brunswick

NA
Catawba

NA
Harris (HNP)

01/31/2018
McGuire

NA
Oconee

NA
Robinson

TBD
NGO

MNS SITE SPECIFIC FIELD MONITORING	AD-EP-MNS-0203
	Rev. 000
	Page 2 of 26

REVISION SUMMARY
PRR 02136362 DESCRIPTION
<p>Rev. 000 This is a new MNS specific procedure.</p>

MNS SITE SPECIFIC FIELD MONITORING	AD-EP-MNS-0203
	Rev. 000
	Page 3 of 26

TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE</u>
1.0 PURPOSE.....	4
2.0 SCOPE.....	4
3.0 DEFINITIONS	4
4.0 RESPONSIBILITIES	4
5.0 INSTRUCTIONS	5
5.1 Initial Site Specific FMT Instructions	5
5.2 Site Specific Closeout Actions.....	7
6.0 RECORDS	8
7.0 REFERENCES.....	8

ATTACHMENTS

1	Designated Limnological Sample Points	10
2	Detailed Guide to All TLD Sample Locations	11
3	List of Designated Milk Sample Locations.....	17
4	Directions for Predetermined Survey / Sample Locations	18

MNS SITE SPECIFIC FIELD MONITORING	AD-EP-MNS-0203
	Rev. 000
	Page 4 of 26

1.0 PURPOSE

1. This procedure provides site specific instructions for conduct of Field Monitoring in the area of the McGuire Nuclear Station (MNS).

2.0 SCOPE

1. This procedure applies to the McGuire Nuclear Station (MNS) and is used by site and corporate EOF personnel to perform radiological monitoring in the area of the plant during emergencies.

3.0 DEFINITIONS

None

4.0 RESPONSIBILITIES

1. The EOF Field Monitoring Team Coordinators (FMC) and TSC Dose Assessors are responsible for directing survey activities during declared events at MNS.
2. Field Monitoring Team (FMT) members are responsible for performing surveys and taking environmental samples.

MNS SITE SPECIFIC FIELD MONITORING	AD-EP-MNS-0203
	Rev. 000
	Page 5 of 26

5.0 INSTRUCTIONS

5.1 Initial Site Specific FMT Instructions

1. **Upon** activation of the Emergency Response Organization, report to the OSC (Operations Support Center).....☐
2. **Proceed** to the equipment storage area (Room 158 of the Administration Building) **AND** unlock the equipment storage locker, using emergency key set located in storage area key box (Combination 911).....☐
3. **Obtain** the following equipment: Normal issue TLD, electronic dosimeter (DMC-2000). Using Sentinel, log on to RWP-98. ED alarm setpoints are 1000 mRem/hr (dose rate) **AND** 500 mRem (accumulated dose).....☐
4. **Obtain** portable instruments (ion chamber and count rate meters) **AND** source check. Survey the area for radiation levels.☐
5. **Remove** portable radios from chargers (one unit for each FMT).☐
 - a. Turn the off/on/volume control switch on the top of the radio until MNS-FM is displayed.☐
 - (1) **IF** MNS-FM does **NOT** display MNS-FM, **THEN** ensure Group Selector knob is set to "1" **AND** that A/B switch is set to position "A".....
 - b. **Test** the radios using the mobile call sign: "WQC 700, McGuire Base, this is KA8-2138, portable radio check. Do you copy?"☐
 - (1) **IF** McGuire Base does **NOT** respond, **THEN perform** radio checks with the other sample van using the mobile call sign **AND** transmitting:
"KA8-2138, Sample Van (other sample van), this is Sample Van (your sample van) portable radio check. Do you copy?"☐
 - c. **IF** a radio does **NOT** function, **THEN remove it** from service by removing the battery. Ensure that the radio is turned off before removing **OR** replacing any battery.
6. **Obtain** all other necessary equipment: respirators.....☐

MNS SITE SPECIFIC FIELD MONITORING	AD-EP-MNS-0203
	Rev. 000
	Page 6 of 26

5.1 Initial Site Specific FMT Instructions (continued)

NOTES

- Canvas bags can be used to carry instruments and respirators. ☐
- All protective clothing is located in the back cabinet of the sample vans. ☐

7. **Obtain** canvas bags ESK-1 or ESK-2 (sample van kits). ☐

8. One team shall contact the TSC Dose Assessor for the status of any release **AND** current Met Data. ☐

a. Communicate this information to the other teams. ☐

9. **Proceed** to the sample vans monitoring portable instruments in transit. Start sample van engines **AND** stabilize inside temperature. ☐

10. **Turn on** the sample van radio. ☐

a. **Verify** the unit displays MNS-FM. ☐

(1) **IF** MNS-FM is **NOT** displayed,
THEN toggle the Group Select knob until MNS-FM is displayed. ☐

b. **Test** the radios using the mobile call sign and transmitting: ☐

"WQC 700, McGuire Base, this is KA8-2138, sample van 1
(or 2). Do you copy?" " ☐

(1) **IF** McGuire Base does **NOT** respond,
THEN perform radio check with the other sample van
using the mobile call sign **AND** transmitting: ☐

"KA8-2138 Sample Van (other sample van), this is
Sample Van (your van). Do you copy?" ☐

11. **Turn on** the cellular phone. ☐

NOTE

It may be necessary to move the vans from under the unit high voltage lines to test the cellular phones. ☐

a. **Test** the phone by calling TSC Dose Assessor. ☐

MNS SITE SPECIFIC FIELD MONITORING	AD-EP-MNS-0203
	Rev. 000
	Page 7 of 26

5.1 Initial Site Specific FMT Instructions (continued)

NOTE

The air sampler is located on the left side behind the rear seat.....☐

12. **Start** the power inverter (located behind the left side of the driver's seat) to the ON position.....☐
 - a. **Verify** that air sampler has current calibration.....☐

NOTE

Use attachments to this procedures for MNS specific survey and sampling locations.☐

13. **Notify** TSC Dose Assessor OR EOF FMT Coordinator that pre-dispatch checks are complete **AND**:☐
 - MNS Team (1,2) is proceeding west of the plant to traverse from MOC parking lot to Cowan's Ford Dam parking lot.....☐
 - MNS Team (1,2) is proceeding east of the plant to traverse from Hwy 73 (stop light) entrance to the MOC to the end of the discharge canal fishing area.☐
 - MNS Team (1,2) is standing by at (location).....☐
14. **Perform** duties in accordance with AD-EP-ALL-0203, Attachment 6, Field Monitoring Team Checklist.☐
 - a. **Coordinate** initial survey for plume boundary identification with TSC Dose Assessor OR EOF FMT Coordinator by monitoring dose rates while traversing east **AND** west of the site (~0.5 miles).☐
 - East of site - travel from the Hwy. 73 (stoplight) entrance to the MOC to the end of the discharge canal fishing area.☐
 - West of site - travel from the MOC parking lot to Cowan's Ford Dam Parking Lot.☐

5.2 Site Specific Closeout Actions

1. IF needed,
THEN refuel Sample Van at MNS Garage using card on key ring.

MNS SITE SPECIFIC FIELD MONITORING	AD-EP-MNS-0203
	Rev. 000
	Page 8 of 26

5.2 Site Specific Closeout Actions (continued)

2. **Ensure** mobile van radios are switched off. ☐
3. **Ensure** that power inverter is turned to the OFF position..... ☐
4. **Perform** inventory of protective clothing **AND** emergency equipment per PT/0/A/4600/088. (Notify the RP Staff Scientist of any discrepancies.) ☐
5. **Turn off** all instruments **AND** portable radios **AND** place in storage cabinet..... ☐
6. **Place** portable radio into a charging unit..... ☐
7. **Ensure** that storage cabinet is closed and locked..... ☐
8. **Turn in** all relevant surveys and checklists. ☐
9. **Return** keys to lock box in room 158..... ☐

6.0 RECORDS

1. All logs, forms and records completed as the result of implementing this procedure during an actual declared event shall be retained as permanent plant records. Nuclear Generation Record Retention Rule Number 421734, "Procedures-Technical Completed".
2. All checklists, logs and forms completed as the result of implementing this procedure shall be collected at the end of the event and provided to the site or corporate Emergency Planning Manager.

7.0 REFERENCES

7.1 Commitments

None

7.2 Procedures

1. AD EP ALL 0103, Activation and Operations of the Emergency Operations Facility
2. AD-EP-ALL-0105, Activation and Operations of the Technical Support Center

MNS SITE SPECIFIC FIELD MONITORING	AD-EP-MNS-0203
	Rev. 000
	Page 9 of 26

7.2 Procedures (continued)

3. AD-EP-ALL-0203, Field Monitoring During Declared Emergency

7.3 Miscellaneous Documents

1. McGuire Nuclear Station (MNS) Emergency Plan

<< Designated Limnological Sample Points >>

NOTES

- Full lake elevation is 760'. ☐
- Catawba River spillway elevation (for Charlotte intakes) is 647'6" ☐

1. **Mt Holly Intakes** - Sector E (South ~ 5 miles) ☐

- Sample elevation - 630' ☐
- Accessible on Hwy 273, north of Duke Power Mt. Holly Training Center. ☐

2. **Charlotte Intakes** - Sector E (South) 5-6 miles ☐

- Sample elevation 635' - Unit 1 intake..... ☐
 - ◇ 640' - Unit 2 intake ☐
 - ◇ 637' - Unit 3 intake ☐
- Accessible by land on SR 2004 (Mt. Holly-Huntersville Road) (Pump Station Road)..... ☐

3. **Limnological Sampling Directions**

- a. **Pull** one of the blue stoppers out of the end of the main tube **AND** attach the wire loop to one of the small pins on the handle tripping mechanism. ☐
- b. **Repeat** for the other stopper..... ☐
- c. **Lower** the bottle under water keeping the line taut, **AND** drop the weight to strike the tripping mechanism. This will release the cables **AND** close the bottle..... ☐
- d. For shoreline sampling when the elevation difference is small, attach one stopper **AND** fill the bottle with water by scooping. The bottle can now be closed **AND** the black nozzle used to empty the sample into a cubitainer. ☐

MNS SITE SPECIFIC FIELD MONITORING	AD-EP-MNS-0203
	Rev. 000
	Page 11 of 26

ATTACHMENT 2

Page 1 of 6

<< Detailed Guide to All TLD Sample Locations >>

NOTE

This enclosure is meant to provide a guide to one who is NOT familiar with the environmental TLD sample route. Appropriate deviations from this sequence and route may be made as necessary. Some numbers no longer used.....□

1.0 Sample location numbers:

#	Location
143	Point of land north of intake pumps.
144	On the fence, at air sampling site #120, near E.P. Boat House.
145	On the fence, at air sampling site #121, near guard house at Training and Technology Center.
146	Shoreline of discharge canal, below the bridge.
147	On the fence, at the Training and Technology Center, Environmental Laboratory, behind the QA building, next to the beige aluminum building.
148	Second utility pole on the right-hand side of Energy Explorium Entrance from Hwy. 73.
149	Near site fence, 200 feet east of U-2 Access Road on Hwy. 73.
151	Fence east side inside O.C. (Owner Controlled) Gate #2.
152	Near railroad tracks west of McGuire main entrance.
153	Clearing on the left, inside O.C. (Owner Controlled) Gate #4 (S. River Gate).
154	Edge of river bank, access O.C. (Owner Controlled) Gate #5 (Lower Dam Access).
156	Top of earthen dam, access O.C. (Owner Controlled) Gate #7.
157	Williamson access area (on the Mecklenburg Neck) on utility pole just beyond access sign.
158	End of state maintained Road #2189 (Bethel Church Road).
159	Anchorage Marine Shipyard at Holiday Harbor Marina.
160	On the fence, at Anchorage Marine Showroom.
161	Main power pole at the intersection of Hwy. 21 and Hwy. 73.
162	First power pole at the intersection of Gilead Road and State Road #2139.
163	Point of land north of intake pumps.

Sample location numbers (cont.):

MNS SITE SPECIFIC FIELD MONITORING	AD-EP-MNS-0203
	Rev. 000
	Page 12 of 26

ATTACHMENT 2

Page 2 of 6

<< Detailed Guide to All TLD Sample Locations >>

1.0 Sample location numbers: (continued)

#	Location
164	On the fence, at air sampling site #120, near E.P. Boat House.
165	Approximately 2 miles down power plant road from River Bend Steam Station.
166	Water tank across from River Bend Steam Station.
167	Behind Lucia Volunteer Fire Department.
168	Power pole at State Road #1511 at Killian Creek.
169	Last power pole on Kincaid Road.
170	Second utility pole on right from intersection of Hwy. #73 and State Road #1386.
171	Utility pole at Triangle Hardware.
172	Power pole at the residence located at 625 Golf course Ln.
173	First utility pole on S.R. #1891 intersection with S.R. #2393.
174	On the fence, at air sampling site #134, near East Lincoln Junior High School.
175	Utility pole, fifth house on right, Hoyle Road.
177	On a tree at the residence, 908 Belmarrow Dr.
178	Duke Power Substation at AmeriSteel Corporation.
180	Mooreville Water Treatment Plant.
181	Davidson Water Treatment Plant.
182	On the fence, at air sampling site #133, at Cornelius substation.
186	On peninsula beyond MNS fishing access.
187	First gravel road past Energy Explorium.
191	Fenced pumping station on John Connor Dr.
196	New Landfarm fence.
197	New Landfill fence.
198	Old Landfill fence.
199	Old Landfill fence at groundwater well MW-1.

MNS SITE SPECIFIC FIELD MONITORING	AD-EP-MNS-0203
	Rev. 000
	Page 13 of 26

ATTACHMENT 2

Page 3 of 6

<< Detailed Guide to All TLD Sample Locations >>

1.0 Sample location numbers: (continued)

B. Directions to sampling locations:

	Location
Site #144	Located inside the air sampling cage by the HP Boathouse (air site #120)
Site #187	Continue past Energy Explorium and take first right on to a gravel road. The TLD is located inside air sampler cage (air site #195).
Site #186	Proceed toward the Plant to the end of the fishing access. Bear to the right at the site boundary fence, unlock the cable and proceed out on the peninsula. The TLD is on a stake about half way out the peninsula to the right on a stake.
Site #143	Continue out the peninsula to the point where the TLD is located on a stake near the osprey nest site.
Site #145	Heading back toward the guardhouse, the TLD is located inside the cage at the air sampling site #121.
Site #146	Passing the guardhouse on your left, the TLD is located on the left, attached to the backside of the light pole, just after crossing the bridge.
Site #147	Continue forward to main entrance road. Turn into the QA entrance on your left. The TLD is on the chainlink fence beside the brown aluminum building. (A large oak tree is in front of the fence).
Site #148	Continue down entrance road to the fourth light pole on the left. The TLD is on the backside of the utility pole. You'll have to pull over to the right off of the road and allow the other person to pick up the TLD on the left side of the road.
Site #149	Continue on to the stop sign at Hwy 73. Turn right and go to the first clearing on the right. The TLD is located on the site boundary fence.
Site #189	Continue forward on Hwy 73 toward MNS. The TLD is located just off the right side of the road on a stake near a tree with a red painted dot just before transmission lines cross Highway 73.
Site #152	Continue past MNS main entrance for approximately 100 yards to the clearing on your right. The TLD is located between on a stake..
Site #151	Enter MNS main entrance. The TLD is located on the fence by OC gate #2 immediately on the right.
Site #153	Continue into MNS and head toward the setting ponds/land farm area. Circle around the settling ponds and pass the air site (#125) on the left. Proceed to OC gate #4 and approximately 100 feet from the gate is a clearing on the left. The TLD is located on a stake in the clearing.
Site #154	Drive vehicle back around setting ponds toward the land farm area and turn left on the first gravel road and proceed through QC gate #5. Drive to where the road forks. Take the left fork and down the next gravel/dirt road on your right, you may drive directly to the level grassy area near the riverbank edge. The TLD is on a stake near the riverbank edge approximately 3/4 of the way down the length of the rocky bank just past the control monument.
Site #190	Continue along the riverbank follow the tree line away from the river until you see a "dangerous water" sign. Continue forwards approximately 300 yards to the tree with a painted red dot on it. The TLD is on a stake.

MNS SITE SPECIFIC FIELD MONITORING	AD-EP-MNS-0203
	Rev. 000
	Page 14 of 26

ATTACHMENT 2

Page 4 of 6

<< Detailed Guide to All TLD Sample Locations >>

1.0 Sample location numbers: (continued)

Directions to sampling locations (cont.):

	Location
Site #156	Drive the vehicle back up the hill toward warehouse #5. Make a left turn just before you get to warehouse #5 and go up toward the intake structures. The road heads toward MNS and then makes a hairpin turn back toward the dam. Drive all the way to the edge of Cowan's Ford Dam and the TLD is located to the left of the cement wall on a stake.
Site #196	Return to Hwy 73 and turn left. Turn right at MNS Garage Access Road and proceed past garage to dirt road on the right. Drive down dirt road past electrical switch yard to the MNS landfarm on the left. The landfarm is fenced in and the TLD is on the fence adjacent to the road. NOTE: TLD #196 replaces old TLD #LF2.
Site #197	Proceed down dirt road to the landfill. The TLD is located to the left of the gate to the landfill.
Site #198	Proceed back toward garage and take dirt road to left. Drive to road ends at old landfill gate. TLD is at top of hill to the right of the gate.
Site #199	Drive through gate to back side of the landfill. You will see a groundwater well (MW-near the back gate. The TLD is at MW-1 on a steel post.
Site #191	Return to Hwy 73 and turn right. Drive toward Cornelius and take a left on Jetton Rd. Drive to John Connor Rd. and take a left onto it. Drive a short distance to the CMUD pumping station on the left. The TLD is on the air sampler environmental house inside the fenced pumping station (air site #192).
Site #158	Return to Hwy 73 and turn left. Proceed to Bethel Church Rd. (SR 2189) and turn left. Proceed to Staghorn Rd. The TLD is located on a utility pole at the intersection of Bethel Church Road and Staghorn Road.
Site #159	Return to Hwy 73. Turn left and make a sharp left turn onto Henderson Rd. Drive to the end of that road. The TLD is on the oak "NRC Tree" by the water.
Site #160	Return to Hwy 73 and turn left. Follow 73 east to Hwy 21 South, turn right and go to the Anchorage Marine Showroom, which will be on the left. The TLD is located on the chain link fence in front of the parkinglot.
Site #161	Return to Hwy 73 and turn left. Continue to the intersection of 21 and Sam Furr Rd. The TLD is located on the back of the Energy Explorium sign to the right.
Site #178	Continue on Hwy. 21 (heading south) and go until you intersect with Gilead Road. Turn left onto Gilead Road. Proceed to the intersection of Gilead and Old Statesville Road (Hwy. 115) and turn right. Keep going past North Mecklenburg High School and continue to the "Croft Community" sign (which will be on your right). Immediately after this sign on your right is a dirt road. Turn right and this is the entrance to the Duke Power substation @ Florida Steel Corp. Use a DPC #2 key to gain access down the road. The TLD is on a stake to the left of the road approximately 100 yards past the entrance gate.
Site #163	Return to Hwy.115. and turn left, proceed to SR #2117 (Hambright Road). Turn left (directly in front of Alexander Jr. High School) and proceed to McCoy Rd. (~3.0 miles). The TLD is located on the telephone pole (beside the NRC TLD) at the residence.
Site #164	Turn around on McCoy Rd. then turn right on Hambright Rd. Come to the intersection of Hambright and Beatties Ford Road. The TLD is located on the left side of the road on a telephone pole.

MNS SITE SPECIFIC FIELD MONITORING	AD-EP-MNS-0203
	Rev. 000
	Page 15 of 26

ATTACHMENT 2
Page 5 of 6

<< Detailed Guide to All TLD Sample Locations >>

1.0 Sample location numbers: (continued)

Directions to sampling locations (cont.):

	Location
Site #162	Turn right onto Beatties Ford Rd. and proceed to Bud Henderson Rd., turn right. Go to Gilead Rd. and turn right. Proceed to Ranson Rd. (SR #2139, this road is in a sharp curve) and turn left. TLD is on the second pole on the left near an electric fence.
Site #182	Return to Gilead Rd. and turn left. Travel forward over I-77. Turn left onto Old Statesville Road and go to Cornelius. TLD is inside cage at air sampler site #133.
Site #181	Travel on to Davidson water treatment plant. The TLD is on a power pole in the front of the plant.
Site #157	From Davidson water treatment plant, go to stop sign and turn left onto Gamble St. Go one block and turn right onto Jetton St. Follow until road ends, turn left and you will see I-77 to your right. Take I-77 North to exit 33, Hwy. 21N. Turn left. Proceed until you come to Brawley School Rd. (there will be a church on your right just before the intersection where you will be turning left.) Follow Brawley School Rd. which eventually turns into Mayhew Rd. past Mallard Head Country Club until the road dead-ends (~ 8 mi.). The TLD is located on a utility pole in the right rearyard.
Site #180	Go back to intersection of Brawley School Rd. and Hwy 21. Cross straight over 21 towards Mooresville. At Hwy 21N, turn left and continue to Mooresville water treatment plant. The TLD is located on a utility pole to the right of the driveway.
Site #173	Return to Hwy 21-South and turn right. Proceed approximately 1/2 mile and veer to your right to Hwy. 150 west. Proceed past Marshall Station to the intersection of SR 1899 and 150 and turn left. This will be SR 1899 Slanting Bridge Rd. Continue to Keistler's Store Rd. and turn left. Follow this road to Mountain Shore Lane, turn left (across from the two-story beige house). Next turn left onto Glenwood Rd. The TLD is located on the first power pole in the front yard of the first house on the left.
Site #172	Return to Slanting Bridge Rd. Turn left and continue to Hwy. 16. Turn left and go to Fairfield Rd. (~3.3 miles) on the left in the Westport Community and turn left (SR 1389). Take the first left onto North Golf Course drive which turns into Lakeshore Drive. At the intersection of Golf Course Drive and Lakeshore Drive. The TLD is on the utility pole to the right @ 625 Golf Course Dr.
Site #171	Return to Hwy 16-South, turn left. TLD is on the utility pole on the north side of the Triangle Ace Hardware (which will be on the left).
Site #170	Return to Hwy. 16 and turn left. Proceed to the intersection of Hwy. 16 and 73. Turn right onto 73 and turn left onto Little Egypt Rd. The TLD is on the 2nd utility pole on the right.
Site #174	Return to Hwy. 73 and turn left. Go to East Lincoln Jr. High School. The TLD is located in the air sampling cage at air sampling site #134.
Site #175	Return to Hwy. 73 and turn right. Go to Boger City. Hwy. 73 runs into Hwy. 27. Go straight to the first light and turn right on to Buffalo Shoals Rd. Proceed until you come to SR 1332 (Highland Rd.) and turn left. Follow to Hoyle Road on your right and turn right. Go to 208 Hoyle Road. TLD is on the fence beside the house.

MNS SITE SPECIFIC FIELD MONITORING	AD-EP-MNS-0203
	Rev. 000
	Page 16 of 26

ATTACHMENT 2

Page 6 of 6

<< Detailed Guide to All TLD Sample Locations >>

1.0 Sample location numbers: (continued)

Directions to sampling locations (cont.):

	Location
Site #175	Return to Hwy. 73 and turn right. Go to Boger City. Hwy. 73 runs into Hwy. 27. Go straight to the first light and turn right on to Buffalo Shoals Rd. Proceed until you come to SR 1332 (Highland Rd.) and turn left. Follow to Hoyle Road on your right and turn right. Go to 208 Hoyle Road. TLD is on the fence beside the house.
Site #168	Return to Hwy. 73 and go back past East Lincoln Jr. High School, take a right on Old Plank Road. Go approximately 5 miles until you cross a bridge. The TLD is located on a utility pole on the right just after crossing the bridge.
Site #177	Return to Hwy 73 and continue to stop light at Hwy. 16. Turn right on to Hwy 16 and proceed to Rozzelles Ferry Road (old Hwy. 16) and take a right. Rozzelles Ferry turns into Belhaven Blvd. Go to a green Coulwood School sign. Turn right at this sign. This is Kentberry Rd. Continue ~ one block and turn left onto Belmarrow Dr. The TLD is located @ 908 Belmarrow Rd. on a safety light pole at the driveway entrance to the left.
Site #166	Return to Hwy. 16 and turn right. Continue to the Catawba River. After crossing the bridge, turn right at Steam Plant Rd. and follow this road to Riverbend Steam Station. Continue on Horseshoe Bend Beach Rd. to the water tower that is across the road directly in front of the steam station. The TLD is on the fence which surrounds the water tower.
Site #165	Continue down the road, away from Hwy. 16, ~ 1 mile to a real sharp curve in the road. There'll be a dirt area on your left where you can pull over at a barricade. The TLD is on utility pole to the left of the barricade.
Site #167	Return to Hwy. 16. At the light, go straight and proceed to the building at 14522 Lucia Riverbend Highway on the right. The TLD is located on a power pole that supplies the building.
Site #169	Return to Hwy. 16 and turn left. Proceed to Hill's Chapel United Methodist Church on the left. Just past the church is a dirt road (Glover Lane), turn left and go to the end of this road. The TLD is located on a utility pole on the right.

MNS SITE SPECIFIC FIELD MONITORING	AD-EP-MNS-0203
	Rev. 000
	Page 17 of 26

ATTACHMENT 3

Page 1 of 1

<< List of Designated Milk Sample Locations >>

This enclosure is meant to provide a guide to one who is **NOT** familiar with the environmental milk sample route. Appropriate deviations from this sequence and route may be made as necessary.

1.0 Sample location numbers:

- 139 William Cook Dairy
- 138 Henry Cook Dairy
- 140 David Kidd Dairy
- 141 Lynch Dairy

2.0 Directions to sampling locations:

Location #139 <u>William Cook Dairy</u>	Turn left when leaving MNS main entrance and proceed to Oliver Hager Rd. (SR #2142) on your right. Follow road to the large main house. Behind the house is a garage storage area. The milk will be in a refrigerator in the garage area.
Location #138 <u>Henry Cook Dairy</u>	Return to Hwy. 73 and turn left. Proceed to Beatties Ford Rd. (Rd. beside Phillips 73 General Store) and turn left. Follow Beatties Ford Rd. approximately .5 miles to Gilead Rd. Turn left. Follow Gilead Rd. approximately 4 mi. to Ervin Cook Rd. Turn left. Henry Cooks Dairy will be the second dairy on your left, approx. 1 mi. It will be on your left just before the road ends. The milk will be in a refrigerator in the white wooden building on your right.
Location #140 <u>Kidd's Dairy</u>	Return to Beatties Ford Road and make a left. Proceed to Jim Kidd Road (approximately 1.0 miles) and turn right. Proceed approximately .5 of a mile and look for a white house on the right. Follow the dirt road to the rear of the house. The milk sample is taken from the vat located in the block building behind the house.
Location #141 <u>Lynch Dairy</u>	From ASC turn right onto Hwy. 73. Follow Hwy. 73 until it intersects with Hwy. 27. Follow Hwy. 27 into Boger City to SR#1003 (Buffalo Shoals Road) and turn right. The Lynch residence is 5.4 miles on the right (yellow frame house).

MNS SITE SPECIFIC FIELD MONITORING	AD-EP-MNS-0203
	Rev. 000
	Page 18 of 26

ATTACHMENT 4

Page 1 of 9

<< Directions for Predetermined Survey / Sample Locations >>

Example: A- 2- 1
 Evacuation Mile Sample
 Zone Radius Point

Location	Directions
A-2-1	From the intersection of Hwy. 73 and Jetton Road (SR2151), go west on Jetton Road 2.0 miles. Turn left onto John Connor Rd. and go 1.0 miles. Turn right on Belle Isle Dr. (SR2331) and go to the end of the road.
A-3-1	From the intersection of Hwy. 73 and Jetton Road (SR2151), go west on Jetton 3.8 miles to dead end.
A-3-2	From the intersection of Hwy. 73 and Jetton Road (SR2151), go west on Jetton Road 2.1 miles to the intersection of Jetton Road and North Beatties Ford Rd. Go to end of road and turn right.
A-3-3	From the intersection of Hwy. 73 and Nantz Road (SR2148), go west on Nantz Road. Go to end of Nantz Road.
A-5-1	Take I-77 north to exit 33, turn left on Williamson Road (SR1109). Turn left on Brawley School Road (SR1100), go west 8.0 miles on Brawley School Road to dead end at water. NOTE: Brawley School Road becomes Mayhew Road at Meckenburg County Line.
A-5-2	From the intersection of Hwy. 73 and Bethel Church Road (SR2189), go north on Bethel Church Road to the end of Bethel Church Road.
A-5-3	From the main plant entrance, go east on Hwy. 73 (6.4 miles) to the intersection of Hwy. 73 and Henderson Road (SR2307).
A-6-1	From the intersection of Williamson Road (SR1109) and Brawley School Road (SR1109), go west 6.9 miles on Brawley School Road. Turn left on Torrence Chapel Road (SR2065), go 0.4 miles. Stop on roadside. NOTE: Brawley School Road becomes Mayhew Road at Mecklenburg County Line. Torrence Chapel Road is the first left after the county line.
B-1-1	One mile from plant on Lake Norman. (WNW)
B-1-2	One mile from plant on Lake Norman. (NW)
B-1-3	One mile from plant on Lake Norman. (NNW)
B-1-4	One mile from plant on Lake Norman. (N)
B-1-5	One mile from plant on Lake Norman. (NNE)
B-1-6	Emergency Boat House and dock.
B-1-7	One and ½ miles from plant on Lake Norman directly east of TTC. (NE)
B-1-8	One and ¼ miles from plant on Lake Norman (NE) at mouth of discharge canal.
B-1-9	One and ½ miles from plant on Lake Norman (ENE).
B-1-10	Bridge over discharge canal on road to TTC.
B-1-11	The intersection of U-2 access road and the road to TTC.

MNS SITE SPECIFIC FIELD MONITORING	AD-EP-MNS-0203
	Rev. 000
	Page 19 of 26

ATTACHMENT 4

Page 2 of 9

<< Directions for Predetermined Survey / Sample Locations >>

Location	Directions
B-1-12	On the roadside of U-2 access road .2 miles off of Hwy. 73.
B-1-13	The intersection of Hwy. 73 and the U-2 access road.
B-1-14	The intersection of Hwy. 73 and the access road to the firing range.
B-1-15	U-1 main entrance.
B-1-16	Right past the bridge on Hwy. 73 over the Catawba River (below the dam).
B-1-17	The east side of Cowans Ford Dam, access through O.C. Gate #5 (lower dam access).
B-1-18	At the intake structure.
B-2-1	2 miles from plant on Lake Norman (NE).
B-2-2	From McGuire main entrance, go east on Hwy. 73 (2.5 miles). Turn left on Terry Lane (SR2255). Go 0.5 miles to the end of Terry Lane (SR2255).
B-3-1	From McGuire main entrance, go east on Hwy. 73 (3.8 miles). Turn left on Norman Island Drive (SR2145). Go to the end of Norman Island Drive.
C-1-1	At the intersection of Hubbard Road and Hwy. 73 turn on Hubbard Road (SR2134) and stop on roadside.
C-1-2	From the intersection of Beatties Ford Road (SR2128) and Hwy. 73, go south 1.3 miles on Beatties Ford Road. Turn right onto Cashion Road (SR2133), go to end of road.
C-2-1	From the intersection of Beatties Ford Road (SR2128) and Hwy. 73, go south 1.3 miles on Beatties Ford Road to the intersection of Beatties Ford Road and Cashion Road (SR2133).
C-2-2	From the intersection of Beatties Ford Road (SR2128) and Hwy. 73, go south 1.5 miles on Beatties Ford Road. Turn right on Stephens Road (SR2132), go .7 miles to dead end at gate.
D-2-1	From the intersection of Beatties Ford Road (SR2128) and Hwy. 73, go south .3 miles on Beatties Ford Road to the intersection of Beatties Ford Road and Gilead Road (SR2136).
D-3-1	From McGuire main entrance go east on Hwy. 73 (3.8 miles) to first stoplight. Cashion's convenience store parking lot on Hwy. 73.
D-3-2	From the intersection of Beatties Ford Road (SR2128) and Hwy. 73, go .3 miles south on Beatties Ford Road. Turn left on Gilead Road (SR2136), go 1.2 miles to the intersection of Gilead Road and Bud Henderson Road (SR2131).
D-3-3	From the intersection of Beatties Ford Road (SR2128) and Hwy. 73, go south on Beatties Ford Road 2.4 miles to the intersection of Beatties Ford Road and Jim Kidd Road (SR2129).
D-3-4	From the intersection of Beatties Ford Road (SR2128) and Hwy. 73, go south on Beatties Ford Road 3.5 miles. Turn right on Neck Road (SR2074), go 2.4 miles to the intersection of Neck Road and Allison Ferry Road (SR2127).

MNS SITE SPECIFIC FIELD MONITORING	AD-EP-MNS-0203
	Rev. 000
	Page 20 of 26

ATTACHMENT 4

Page 3 of 9

<< Directions for Predetermined Survey / Sample Locations >>

Location	Directions
D-3-5	From the intersection of Beatties Ford Road (SR2128) and Hwy. 73, go south on Beatties Ford Road 3.5 miles. Turn right on Neck Road (SR2074), go 2.4 miles. Turn right on Allison Ferry Road (SR2127), go .7 miles to dead end.
D-5-1	From the intersection of Beatties Ford Road (SR2128) and Hwy. 73, go south on Beatties Ford Road .3 miles. Turn left on Gilead Road (SR2136), go 3.0 miles to the intersection of Gilead Road and Ranson Road (SR2139).
D-5-2	From the intersection of Beatties Ford Road (SR2128) and Hwy. 73, go south on Beatties Ford Road 4.2 miles. Turn left on Hambright Road (SR2117), go 1.6 miles to the intersection of Hambright Road and McCoy Road (SR2120).
D-5-3	From the intersection of Beatties Ford Road (SR2128) and Hwy. 73, go south on Beatties Ford Road 4.2 miles to the intersection of Beatties Ford Road and Hambright Road (SR2117).
D-5-4	From the intersection of Beatties Ford Road (SR2128) and Hwy. 73, go south on Beatties Ford Road 5.0 miles to the intersection of Beatties Ford Road and Sample Road (SR2125).
D-5-5	From the intersection of Beatties Ford Road (SR2128) and Hwy. 73, go south on Beatties Ford Road 3.5 miles. Turn right on Neck Road (SR2074), go 2.4 miles. Bear to left and continue 0.6 miles. Stop on roadside. Should see entrance to Cowan's Ford Waterfowl Refuge.
E-6-1	From the intersection of Beatties Ford Road (SR2128) and Mt. Holly Huntersville Road (SR2004), go west on Mt. Holly-Huntersville Road to the intersection of Mt. Holly-Huntersville Road and Oakdale Road (SR2042).
E-7-1	From the intersection of Beatties Ford Road (SR2128) and Mt. Holly-Huntersville Road (SR2004), go west on Mt. Holly-Huntersville Road 3.2 miles to the intersection of Mt. Holly-Huntersville Road and Pump Station Road (SR2001).
E-8-1	From the intersection of Beatties Ford Road (SR2128) and Miranda Road (SR2025), go west on Miranda Road to the intersection of Miranda Road and Sunset Road (SR2042).
E-8-2	From the intersection of Mt. Holly-Huntersville Road (SR2004) and Hwy. 16, go south on Hwy. 16 to intersection of Hwy. 16 and Pleasant Road (SR2008).
E-8-3	From the intersection of Mt. Holly-Huntersville Road (SR2004) and Hwy. 16, go west on Mt. Holly-Huntersville .8 miles to the intersection of Mt. Holly-Huntersville Road and Harwood Lane (SR1667) - directly across from Mountainair Road.
E-10-1	From the intersection of Beatties Ford Road (SR2128) and Sunset Road (SR2108), go west on Sunset .7 miles. Turn left on Peachtree Road (SR2019), go 1.3 miles to the intersection of Peachtree Road and Oak Road (SR2027).
E-10-2	From the intersection of Mt. Holly-Huntersville Road (SR2004) and Hwy. 16, go south on Hwy. 16 (1.5 miles). Turn right on Valleydale Road, then make an immediate right (50 ft.) onto Gumbranch Road. Go .7 miles on Gumbranch. Turn left on Cathey Road, go 1.0 miles to the intersection of Cathey Road and Tom Saddler Road.

MNS SITE SPECIFIC FIELD MONITORING	AD-EP-MNS-0203
	Rev. 000
	Page 21 of 26

ATTACHMENT 4

Page 4 of 9

<< Directions for Predetermined Survey / Sample Locations >>

Location	Directions
F-5-1	From the intersection of US21 and Gilead Road (SR2136), go south on US21 (.9 miles) to the intersection of US21 and Mt. Holly-Huntersville Road (SR2004).
F-7-1	From the intersection of US21 and Gilead Road (SR2136), go south on US21 (2.9) miles. Turn right on Alexanderana Road (SR2116), go 1.0 miles to the intersection of Alexanderana Road and Mt. Holly-Huntersville Road (SR2004).
F-8-1	From the intersection of I-77 and Gilead Road (SR2136) - Exit #23, go south to I-77 to the intersection of I-77 and Reames Road (SR2110) - Exit #18.
F-9-1	From the intersection of US21 and Gilead Road (SR2136), go east on Gilead Road .7 miles. Continue straight on Huntersville-Concord Road (SR2426) 3.6 miles to the intersection of Huntersville-Concord Road and Hiwasee (this also may be called Huntersville-Concord Road).
F-9-2	From the intersection of US21 and Gilead Road (SR2136), go east on Gilead Road .7 miles. Continue straight on Huntersville-Concord Road (SR2426) 2.4 miles. Turn right on Asbury Chapel Road (SR2442), go 2.4 miles to the intersection of Asbury Chapel Road and Trails End Road (SR2445).
F-10-1	From the intersection of US21 and Gilead Road (SR2136), go east on Gilead Road .7 miles. Turn right on Hwy. 115, go 2.9 miles. Turn left on Alexanderana Road (SR2457), go .9 miles. Turn left on Eastfield Road (SR2459), to 2.3 miles to the intersection of Eastfield Road and Prosperity Church Road (SR2475).
F-10-2	From the intersection of US21 and Gilead Road (SR2136), go south on US21 5.2 miles. Turn left on Lakeview Road (SR2112), go 1.0 miles. Turn right on Hwy. 115, go .7 miles to the intersection of Hwy. 115 and Victoria Ave. (SR2631) Beachwood Mobile Home Park Road.
G-5-1	From the intersection of US21 and Gilead Road (SR2136), go north on US21 (3.8 miles) to the intersection of US21 and Westmoreland (SR2147).
G-5-2	From the intersection of US21 and Gilead Road (SR2136), go north on US21 (2.3 miles) to the intersection of US21 and Sam Furr Road (SR2145).
G-6-1	From the intersection of US21 and Gilead Road (SR2136), go east on Gilead Road .7 miles. Turn left on Hwy. 115, go 3.7 miles to the intersection of Hwy. 115 and Bailey Road (SR2416).
G-6-2	From the intersection of US21 and Gilead Road (SR2136), go east on Gilead Road .7 miles. Turn left on Hwy. 115, go 1.6 miles. Turn right on McCord Road (SR2427), go .3 miles. Turn right on Hagers Road (SR2438), go .5 miles to dead end.
G-8-1	From the intersection of US21 and Gilead Road (SR2136), go north on US21 (2.3 miles). Turn right on Sam Furr Road (SR2145), go 3.9 miles. Turn left on Davidson-Concord Road and continue to intersection of Davidson-Concord Road and Rockey River Road (SR2420).

MNS SITE SPECIFIC FIELD MONITORING	AD-EP-MNS-0203
	Rev. 000
	Page 22 of 26

ATTACHMENT 4

Page 5 of 9

<< Directions for Predetermined Survey / Sample Locations >>

Location	Directions
G-8-2	From the intersection of US21 and Gilead Road (SR2136), go east on Gilead Road .7 miles. Turn left on Hwy. 115, go .7 miles. Turn right on Ramah Church Road (SR2439), go 2.4 miles to the intersection of Ramah Church Road and McCord Road (SR2427).
G-10-1	From the intersection of US21 and Gilead Road (SR2136), go east on Gilead Road .7 miles. Turn left on Hwy. 115, go 2.0 miles. Turn right on Sam Furr Road (SR2145), go 2.7 miles. Turn left on Davidson-Concord Road, go 2.3 miles. Turn right on Rocky River Road (SR2420), go 2.3 miles. Turn left on Shearer Road (SR2418), go 2.6 miles to the intersection of Shearer Road and Fisher Road (SR2419).
H-6-1	From the intersection of US21 and Hwy. 73, to east on Hwy. 73 .9 miles to the intersection of Hwy. 73 and Hwy. 115.
H-7-1	From the intersection of I-77 and Hwy. 73 (Exit #28), go north on I-77 to the intersection of I-77 and Griffith Street (SR2158) (Exit #30).
H-7-2	From the intersection of I-77 and Griffith Street (SR2158) Exit #30, go east on Griffith Street .9 miles to Sadler Square Shopping Center.
I-7-1	From the intersection of Brawley School Road (SR1100) and Williamson Road (SR1109), go west on Brawley School Road 5.2 miles to the intersection of Brawley School Road and Garden Road (SR1111).
I-7-2	From the intersection of Brawley School Road (SR1100) and Williamson Road (SR1109), go west on Brawley School Road 2.7 miles. Turn left on Isle of Pines Road (SR1113), go 3.4 miles to dead end.
I-8-1	From the intersection of Brawley School Road (SR1100) and Williamson Road (SR1109), go west on Brawley School Road 3.8 miles. Turn right on Chuckwood Road (SR1177), go to end.
I-9-1	From the intersection of Brawley School Road (SR1100) and Williamson Road (SR1109), go west on Brawley School Road 3.8 miles to the intersection of Brawley School Road and Chuckwood Road (SR1177).
I-10-1	From the intersection of Brawley School Road (SR1100) and Williamson Road (SR1109), go west on Brawley School Road 3.2 miles. Turn right onto McKendries Road (SR1115), go 1.6 miles to the intersection of McKendries Road and Lakeview Drive (SR1455).
J-7-1	From the intersection of I-77 and US21 (Exit #33), go west on US21 over I-77 (.2 miles). Turn left on Alcove Road (SR1206), go 1.8 miles. Turn right on Langtree Road (SR1102), go 2.0 miles to entrance Alexander Island.
J-9-1	From the intersection of I-77 and Griffith Street (Exit #30), go east on Griffith Street (SR2158) 1 mile. Turn left on Hwy. 115, go 1.4 miles to the intersection of Hwy. 115 and Midway Lake Road (SR1137).

MNS SITE SPECIFIC FIELD MONITORING	AD-EP-MNS-0203
	Rev. 000
	Page 23 of 26

ATTACHMENT 4

Page 6 of 9

<< Directions for Predetermined Survey / Sample Locations >>

Location	Directions
J-10-1	From the intersection of I-77 and US21 (Exit #33), go west on US21 over I-77 (.2 miles). Turn left on Alcove Road (SR1206) then bear right on Catalina Road (SR1110) go .6 miles. Bear right on Malibur Road (SR1194) go .4 miles to dead end at Cul-de-sac.
J-10-2	From the intersection of I-77 and US21 (Exit #33), go east on US21 (.1 miles). Turn right on Fairview Road (SR1246), go .9 miles. Turn right on Hwy. 115, go .3 miles. Turn left at Faith Road (SR1136), go .8 miles to the intersection of Faith Road and Midway Lake Road (SR1137).
K-9-1	From the intersection of Hwy. 73 and Hwy. 16, go north on Hwy. 16 6.6 miles. Turn right on Campground Road (SR1373), go 2.8 miles to the intersection of Slanting Bridge Road (SR1373) and Keistler Store Road (SR1899). NOTE: Campground Road turns into Slanting Bridge Road at Catawba County Line.
K-9-2	From the intersection of Hwy. 73 and Hwy. 16, go north on Hwy. 16 6.6 miles. Turn right on Campground Road (SR1373), go 4.8 miles. Turn right on Hwy. 150, go 1.7 miles. Turn right on Kiser Island Road (SR1841), go 3.1 miles to dead end at circle. NOTE: Campground Road turns into Slanting Bridge Road at Catawba County Line.
L-1-1	From the McGuire main entrance, go west on Hwy. 73 (.5 miles) to the Cowans Ford Dam.
L-1-2	From the McGuire main entrance, go west on Hwy. 73 (1.4 miles). Turn right onto Cowans Ford Road (SR1395), go .8 miles.
L-2-1	From the McGuire main entrance go 1.4 miles to the intersection of Hwy. 73 and Cowans Ford Road (SR 1395).
L-2-2	From the intersection of Hwy. 73 and Hwy. 16, go north on Hwy. 16 (0.6 miles). Turn right onto Hagers Ferry Road (SR1393) and go 1.4 miles. Go straight on paved road (Lucky Point) 0.4 miles.
M-1-1	From the McGuire main entrance, go west on Hwy. 73 (0.9 miles) to the intersection of Hwy. 73 and Caswell Road (SR1578).
M-2-1	From the McGuire main entrance, go west on Hwy. 73 (2.3 miles). Turn left onto Killian Road (SR1396), go 2.2 miles. Stop on roadside of railroad crossing.
N-2-1	From the intersection of Hwy. 73 and Hwy. 16, go north on Hwy. 16 (.6 miles). Turn right onto Hagers Ferry Road (SR1393), go 1.4 miles. Go left onto Hager's Ferry Road (SR1393), go 1.6 miles to where pavement ends residence 8886 Hager's Ferry Rd.
N-3-1	From the intersection of Hwy. 73 and Hwy. 16, go north on Hwy. 16 (.6 miles). Turn right onto Hagers Ferry Road (SR1393), go .9 miles to the intersection of Hagers Ferry Road and - Nixon Heights, Lane (SR 1568).
N-3-2	From the intersection of Hwy. 73 and Hwy. 16, go north on Hwy. 16 (2.1 miles). Turn right on Unity Church Road (SR1439), go .3 miles. Turn right on Graham Road, go 1.6 miles to end of road.
N-4-2	From the intersection of Hwy. 73 and Hwy. 16, go north on Hwy. 16 (2.1 miles). Turn right on Unity Church road (SR1439), go 2.4 miles to Beatties Ford Access Area.

MNS SITE SPECIFIC FIELD MONITORING	AD-EP-MNS-0203
	Rev. 000
	Page 24 of 26

ATTACHMENT 4

Page 7 of 9

<< Directions for Predetermined Survey / Sample Locations >>

Location	Directions
N-5-1	From the intersection of Hwy. 73 and Hwy. 16, go north on Hwy. 16 (3.2 miles). Turn right on Lakeshore Drive (SR1456) go 1.3 miles. Turn right on Island View Court (SR1495) go .1 miles to dead end.
O-3-1	From the intersection of Hwy. 73 and Hwy. 16, go south on Hwy. 16 (2.0 miles). Turn left on Sifford Road (SR1397), go 1.2 miles to the intersection of Sifford Road and Mac Lane (SR 1710).
O-4-1	From the intersection of Hwy. 73 and Hwy. 16, go south on Hwy. 16 (1.2 miles). Stop on roadside at Hills Chapel United Methodist Church.
O-4-2	From the intersection of Hwy. 73 and Hwy. 16, go south on Hwy. 16 (.6 miles) to the intersection of Hwy. 16 and Pilot Knob Road (SR1394).
O-5-1	From the intersection of Hwy. 73 and Hwy. 16, go south on Hwy. 16 (2.2 miles). Turn right on Old Plank Road (SR1511), go 1.0 miles. Stop on roadside past bridge.
P-5-1	From the intersection of Hwy. 73 and Hwy. 16, go west on Hwy. 73 (1.5 miles) to the intersection of Hwy. 73 and Little Egypt Road (SR1386).
P-5-2	From the intersection of Hwy. 73 and Hwy. 16, go west on Hwy. 73 (1.5 miles). Turn right on Little Egypt Road (SR1386), go 1.9 miles. Turn right on Optimist Club Road (SR1380), go about .6 miles. Stop near creek.
P-6-1	From the intersection of Hwy. 73 and Hwy. 16, go west on Hwy. 73 (3.6 miles). Turn right on Schronce Road (SR1385). Go to intersection of Schronce Road (SR1385) and Ingleside Farm Road (SR1383).
P-6-2	From the intersection of Hwy. 73 and Hwy. 16, go west on Hwy. 73 (1.5 miles). Turn right on Little Egypt Road (SR1386), go 3.2 miles to the intersection of Little Egypt Road which is now St. James Church Road - SR1380 and Kidville Road (SR1381).
P-6-3	From the intersection of Hwy. 73 and Hwy. 16, go north on Hwy. 16 (4.9 miles). Turn right on Webb's Chapel Road (SR1379), go 1.6 miles to the intersection of Webb's Chapel Road and Burton Road.
P-8-1	From the intersection of Hwy. 73 and Hwy. 16, go west on Hwy. 73 (5.3 miles). Turn right on Beth Haven Church Road (SR1360), go 1.4 miles. Stop on roadside past bridge.
P-8-2	From the intersection of Hwy. 73 and Hwy. 16, go west on Hwy. 73 (2.5 miles). Turn right on Ingleside Farm Road (SR1383), go .1 mile and bear left 3.2 miles more. Turn right on Beth Haven Church Road (SR1360), go 1.3 miles. Turn right on Forney Hill Road (SR1373), go .7 miles. Stop on roadside passed bridge.
P-8-3	From the intersection of Hwy. 73 and Hwy. 16, go north on Hwy. 16 (7.8 miles) to the intersection of 16 and SR1373 (Campground Road or Slanting Bridge Road). Turn right on this road and go about 1.8 miles to the intersection of SR1373 and Pineridge Drive (SR1375).

<< Directions for Predetermined Survey / Sample Locations >>

Location	Directions
P-10-1	From the intersection of Hwy. 73 and Hwy. 16, go west on Hwy. 73 (6.8 miles) to the intersection of Hwy. 73 and Amity Church Road (SR1362).
P-10-2	From the intersection of Hwy. 73 and Hwy. 16, go west on Hwy. 73 (2.5 miles). Turn right on Ingleside Farm Road (SR1383), go .1 miles and bear left 3.2 miles more. Turn right on Beth Haven Church Road (SR1360), go 2.8 miles to the intersection of Beth Haven Church Road and Mundy Road (SR1349).
Q-6-1	From the intersection of Hwy. 73 and Hwy. 16, go west on Hwy. 73 (2.5 miles). Turn right on Ingleside Farm Road (SR1383), go .1 mile bear right and go 1.7 miles more. Turn left on Old Plank Road (SR1511), go .6 miles to the intersection of Old Plank Road and Mariposa (SR1412).
Q-8-1	From the intersection of Hwy. 73 and Hwy. 16, go west on Hwy. 73 (5.3 miles). Turn left on Brevard Place road (SR1360), go .1 mile. Turn left on Old Plank Road (SR1511), go 1 mile. Turn right on Mt. Zion Church Road (SR1404), go 1.9 miles. Stop on road side pass the bridge.
Q-8-2	From the intersection of Hwy. 73 and Hwy. 16, to west on Hwy. 73 (5.3 miles). Turn left on Brevard Place Road (SR1360), go .1 miles. Turn left on Old Plank Road (SR1511), go 1.0 miles to the intersection of Old Plank Road and Mt. Zion Church Road (SR1404).
Q-10-1	From the intersection of Hwy. 73 and Hwy. 16, go west on Hwy. 73 (5.3 miles). Turn left on Brevard Place Road (SR1360), go 3.4 miles to the intersection of Brevard Place Road and Paysour Road (SR1361).
R-3-1	From the main entrance to McGuire go west on Hwy. 73 (2.3 miles). Turn left on Killian Road (SR1396), go 3.4 miles. Stop on roadside (just past Gaston County sign).
R-5-1	From the intersection of Hwy. 73 and Hwy. 16, go south on Hwy. 16 (7.2 miles). Turn left on Horseshoe Bend Beach Road (SR1912), go 2.0 miles. Stop on roadside passed curve.
R-5-2	From the intersection of Hwy. 73 and Hwy. 16, go south on Hwy. 16 (7.2 miles). Turn left on Horseshoe Bend Beach Road (SR1912), go 1.0 miles. Stop on roadside.
R-5-3	From the intersection of Hwy. 73 and Hwy. 16, go south on Hwy. 16 (7.2 miles) to the intersection of Hwy. 16 and Horseshoe Bend Beach Road (SR1912).
R-5-4*	From the intersection of Hwy. 73 and Hwy. 16, go south on Hwy. 16 (4.1 miles) to the intersection of old Hwy. 16 and Stanley-Lucia Road (Blacksnake Road-SR1905).
S-7-1*	From the intersection of old Hwy. 16 and Stanley-Lucia Road (Blacksnake Road-SR1905), go west on Stanley-Lucia Road 2.0 miles. Stop on roadside at Macedona Church parking lot.
S-7-2*	From the intersection of old Hwy. 16 and Stanley-Lucia Road (Blacksnake Road-SR1905), go west on Stanley-Lucia Road 1.1 miles. Turn right on Alexis-Lucia road (SR1820), go 1.6 miles to intersection of Alexis-Lucia Road and Old Lowesville Road (SR 1907).

MNS SITE SPECIFIC FIELD MONITORING	AD-EP-MNS-0203
	Rev. 000
	Page 26 of 26

ATTACHMENT 4

Page 9 of 9

<< Directions for Predetermined Survey / Sample Locations >>

Location	Directions
S-8-1*	From the intersection of old Hwy. 16 and Stanley-Lucia Road (Blacksnake Road-SR1905), go south on old Hwy. 16 (2.0 miles). Turn right on Hwy. 273, go to the intersection of Hwy. 273 and Sand Ford Road (SR1918).
S-8-2*	From the intersection of old Hwy. 16 and Stanley-Lucia Road (Blacksnake Road-SR1905), go west on Stanley-Lucia Road 3.2 miles. Go left at curve and continue 1.5 miles to the intersection of SR1935 and Old NC 27 (SR1923).
S-8-3*	From the intersection of old Hwy. 16 and Stanley-Lucia Road (Blacksnake Road-SR1905), go west on Stanley-Lucia Road 3.2 miles. Go left at curve and continue .7 miles to the intersection of Stanley-Lucia Road and Sandy Ford Road (SR1918).
S-8-4*	From the intersection of old Hwy. 16 and Stanley-Lucia Road (Blacksnake Road-SR1905), go west on Stanley-Lucia Road 1.1 miles. Turn right on Alexis Lucia (SR1820), go 2.2 miles to the intersection of Alexis-Lucia Road and Mariposa Road (SR1902).
S-9-1*	From the intersection of old Hwy. 16 and Stanley-Lucia Road (Blacksnake Road-SR1905), go west on Stanley-Lucia Road 1.1 miles. Turn right on Alexis Lucia Road (SR1820), go 2.2 miles. Turn left on Mariposa (SR1902), go 1.5 miles. Turn right on Airport Road (SR1903), go .6 miles to the intersection of Airport Road and Hwy. 27.
S-10-2*	From the intersection of old Hwy. 16 and Stanley-Lucia Road (Blacksnake Road-SR1905), go south on old Hwy. 16 2.0 miles. Turn right on Hwy. 273, go 4.7 miles to the intersection of Hwy. 273 and N. Main Street.

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

Screening and Evaluation Number	Applicable Sites
EREG #:2163389	BNP <input type="checkbox"/>
	CNS <input type="checkbox"/>
	CR3 <input type="checkbox"/>
	HNP <input type="checkbox"/>
5AD #:2163379	MNS <input checked="" type="checkbox"/>
	ONS <input type="checkbox"/>
	RNP <input type="checkbox"/>
	GO <input type="checkbox"/>
Document and Revision EP Group Manual 1.1, MNS EP Emergency Organization rev 027	

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):

Changes made to EPGM 1.1 to support Fleet Standard ERO Project

Personnel qualified to perform the following functions are required to be available from on-shift: NO CHANGES were made

Personnel qualified to perform the following functions are required to be available within 45 minutes.

RP Technician (In Plant Surveys) (OSC) NO CHANGE

~~RP~~ Technician (On Site Out-of-Plant Surveys) (OSC) NO CHANGE

Personnel qualified to perform the following functions are regulatory required to be available within 75 minutes.

Emergency Coordinator (Station Manager) (TSC) NO CHANGE

Mechanical Maintenance Manager (OSC) Position moved to TSC as Mechanical Engineer (TSC)

IAE Maintenance Manager (OSC) Position moved to TSC as Electrical Engineer (TSC)

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

Offsite Agency Communicator (TSC) Title change to Offsite Communicator (TSC)

NRC Communicator (TSC) NO CHANGE

Field Monitoring Team Members (4) (OSC) (FMT consists of one RP Tech and one vehicle driver) NO
CHANGE

RP Technician (In Plant Surveys) (OSC) NO CHANGE

RP Technician (On Site Out-of-Plant Surveys) (OSC) NO CHANGE

RP Technicians (RP coverage, etc.) (6) (OSC) NO CHANGE

MM Technician (OSC) Title change to Mechanical Technician (OSC)

IAE Technician (2) (OSC) NO CHANGE

Offsite Dose Assessor (TSC) Title changed to Dose Assessor (TSC)

Chem Radwaste Operator (OSC) Title changed to Radwaste Operator (OSC)

Reactor Engineer (TSC) NO CHANGE

**Personnel qualified for the following functions are desired to be available with 75 minutes to assist in
site emergency operations.**

Operations Manager in TSC (TSC) NO CHANGE

Operations Procedure Support (TSC) Title change to Assistant Operations Manager (TSC)

System Engineering Manager (TSC) Title change to Engineering Manager (TSC)

Emergency Planner (TSC) Position deleted because of reduction of EP personnel

Status Coordinator (TSC) Title changed to Log Keeper (TSC)

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

Operations Manager in Control Room (CR) Title changed to Control Room (CR)Operations Bridge

OSC Coordinator (OSC) Title changed to Operations Support Center Manager (OSC)

OSC Status Coordinator (OSC) Title changed to Log Keeper (OSC)

Offsite Agency Communicator (TSC) Title changed to Offsite Communicator (TSC)

Operations Liaison (OSC) NO CHANGE

Operations SRO (OSC) Title change to Operations Supervisor (OSC)

RP Supervisor (OSC) NO CHANGES

Chemistry Manager (OSC) Title change to Chemistry Supervisor (OSC)

Nuclear Supply Chain Manager (OSC) Title Change to General Supply Chain Liaison (OSC)

Security Representative (OSC) Position moved to TSC as Security Coordinator (TSC)

Equipment Engineer (OSC) Position deleted because engineering is in TSC

Data Coordinator (TSC) Changed to two positions; IT Support (TSC) and OAC Support (TSC)

Site Evacuation Coordinator (TSC) NO CHANGE

Radiation Protection Manager (TSC) NO CHANGE

Assistant OSC Coordinator (OSC) Title Change to Assistant OSC Manager (OSC)

Assistant Emergency Coordinator (TSC) NO CHANGE

Offsite Dose Assessor (TSC) Position deleted because of reduction of RP personnel

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

Maintenance Supervisor (OSC) is a NEW POSITION

Personnel qualified to perform the following functions must staff the EOF before it can be declared operational utilizing a 75 minute goal.

EOF Director NO CHANGE

Radiological Assessment Manager NO CHANGE

Accident Assessment Manager NO CHANGE

Offsite Agency Communicator (2) NO CHANGE

Personnel qualified for the following functions are desired to be available within 75 minutes to assist in EOF emergency operations.

Public Spokesperson Title changed to Company Spokesperson

Dose Assessors (2) NO CHANGE

Field Monitoring Coordinator NO CHANGE

Radio Operator NO CHANGE

Public Affairs (Per News Group Plan) Title changed to Corporate Communications (Per News Group Plan)

Data Coordinator NO CHANGE

EOF Services Manager NO CHANGE

Emergency Planner NO CHANGE

Accident Assessment Interface NO CHANGE

Operations Interface Position deleted

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

Assistant EOF Director NO CHANGE

Offsite Agency Communicator NO CHANGE

EOF Log Recorder NO CHANGE

Part II. Activity Previously Reviewed?

Is this activity Fully bounded by an NRC approved 10 CFR 50.90 submittal or Alert and Notification System Design Report?

If yes, identify bounding source document number or approval reference and ensure the basis for concluding the source document fully bounds the proposed change is documented below:

Justification:

Yes

☐

No

X

10 CFR 50.54(q) Effectiveness Evaluation is not required. Enter justification below and complete Attachment 4, Part V.

Continue to Attachment 4 , 10 CFR 50.54(q) Screening Evaluation Form, Part III

Bounding document attached (optional)

☐

Part III. Editorial Change

Is this activity an editorial or typographical change only, such as formatting, paragraph numbering, spelling, or punctuation that does not change intent?

Justification:

Yes

☐

No

X

10 CFR 50.54(q) Effectiveness Evaluation is not required. Enter justification and complete Attachment 4, Part V.

Continue to Attachment 4, Part IV and address non editorial changes

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

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

1

10 CFR 50.47(b)(1) Assignment of Responsibility (Organization Control)

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

1a	Responsibility for emergency response is assigned.	x
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.	x
2	10 CFR 50.47(b)(2) Onsite Emergency Organization	
2a	Process ensures that onshift emergency response responsibilities are staffed and assigned	x
2b	The process for timely augmentation of onshift staff is established and maintained.	x
3	10 CFR 50.47(b)(3) Emergency Response Support and Resources	
3a	Arrangements for requesting and using off site assistance have been made.	<input type="checkbox"/>
3b	State and local staff can be accommodated at the EOF in accordance with the emergency plan. (NA for CR3)	<input type="checkbox"/>
4	10 CFR 50.47(b)(4) Emergency Classification System	
4a	A standard scheme of emergency classification and action levels is in use. (Requires final approval of Screen and Evaluation by EP CFAM.)	<input type="checkbox"/>
5	10 CFR 50.47(b)(5) Notification Methods and Procedures	
5a	Procedures for notification of State and local governmental agencies are capable of alerting them of the declared emergency within 15 minutes (60 minutes for CR3) after declaration of an emergency and providing follow-up notification.	<input type="checkbox"/>
5b	Administrative and physical means have been established for alerting and providing prompt instructions to the public within the plume exposure pathway. (NA for CR3)	<input type="checkbox"/>
5c	The public ANS meets the design requirements of FEMA-REP-10, Guide for Evaluation of Alert and Notification Systems for Nuclear Power Plants, or complies with the licensee's FEMA-approved ANS design report and supporting FEMA approval letter. (NA for CR3)	<input type="checkbox"/>

<< 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"/>

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

AD-EP-ALL-0602



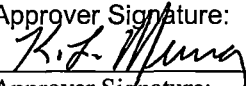
Rev. 3

ATTACHMENT 4

Page 8 of 8

<< 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. ATTACHMENT 4		<input type="checkbox"/>
Justification:		
If any Attachment 4, 10 CFR 50.54(q) Screening Evaluation Form, Part IV criteria are checked, then complete Attachment 4, 10 CFR 50.54(q) Screening Evaluation Form, Part V and perform a 10 CFR 50.54(q) Effectiveness Evaluation. Program Element 4a requires final approval of Screen and Evaluation by EP CFAM.		<input checked="" type="checkbox"/>

Part V. Signatures:		
Preparer Name (Print): Randy Gibson	Preparer Signature: 	Date: 11-29-17
Reviewer Name (Print): Renard O. Burris	Reviewer Signature: 	Date: 11/29/17
Approver (EP Manager Name (Print): Kevin L. Murray	Approver Signature: 	Date: 11-29-17
Approver (CFAM, as required) Name (Print): n/a	Approver Signature: n/a	Date: n/a

QA RECORD

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

Screening and Evaluation Number		Applicable Sites	
EREG #:2163389	BNP	<input type="checkbox"/>	
	CNS	<input type="checkbox"/>	
	CR3	<input type="checkbox"/>	
	HNP	<input type="checkbox"/>	
5AD #:2163379	MNS	<input checked="" type="checkbox"/>	
	ONS	<input type="checkbox"/>	
	RNP	<input type="checkbox"/>	
	GO	<input type="checkbox"/>	
Document and Revision EP Group Manual 1.1, MNS EP Emergency Organization rev 027			
Part I. Description of Proposed Change: Changes made to EPGM 1.1 to support Fleet Standard ERO Project Personnel qualified to perform the following functions are required to be <u>available from on-shift</u>: NO CHANGES were made Personnel qualified to perform <u>the following functions</u> are required to be available within 45 minutes. RP Technician (In Plant Surveys) (OSC) NO CHANGE AXM PP Technician (On Site Out-of-Plant Surveys) (OSC) NO CHANGE RP Personnel qualified to perform the following functions <u>are regulatory required to be available within 75 minutes.</u> Emergency Coordinator (Station Manager) (TSC) NO CHANGE Mechanical Maintenance Manager (OSC) Position moved to TSC as Mechanical Engineer (TSC) IAE Maintenance Manager (OSC) Position moved to TSC as Electrical Engineer (TSC) Offsite Agency Communicator (TSC) Title change to Offsite Communicator (TSC)			

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

NRC Communicator (TSC) NO CHANGE

Field Monitoring Team Members (4) (OSC) (FMT consists of one RP Tech and one vehicle driver) NO CHANGE

RP Technician (In Plant Surveys) (OSC) NO CHANGE

RP Technician (On Site Out-of-Plant Surveys) (OSC) NO CHANGE

RP Technicians (RP coverage, etc.) (6) (OSC) NO CHANGE

MM Technician (OSC) Title change to Mechanical Technician (OSC)

IAE Technician (2) (OSC) NO CHANGE

Offsite Dose Assessor (TSC) Title changed to Dose Assessor (TSC)

Chem Radwaste Operator (OSC) Title changed to Radwaste Operator (OSC)

Reactor Engineer (TSC) NO CHANGE

Personnel qualified for the following functions are desired to be available with 75 minutes to assist in site emergency operations.

Operations Manager in TSC (TSC) NO CHANGE

Operations Procedure Support (TSC) Title change to Assistant Operations Manager (TSC)

System Engineering Manager (TSC) Title change to Engineering Manager (TSC)

Emergency Planner (TSC) Position deleted because of reduction of EP personnel

Status Coordinator (TSC) Title changed to Log Keeper (TSC)

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

Operations Manager in Control Room (CR) Title changed to Control Room (CR)Operations Bridge

OSC Coordinator (OSC) Title changed to Operations Support Center Manager (OSC)

OSC Status Coordinator (OSC) Title changed to Log Keeper (OSC)

Offsite Agency Communicator (TSC) Title changed to Offsite Communicator (TSC)

Operations Liaison (OSC) NO CHANGE

Operations SRO (OSC) Title change to Operations Supervisor (OSC)

RP Supervisor (OSC) NO CHANGES

Chemistry Manager (OSC) Title change to Chemistry Supervisor (OSC)

Nuclear Supply Chain Manager (OSC) Title Change to General Supply Chain Liaison (OSC)

Security Representative (OSC) Position moved to TSC as Security Coordinator (TSC)

Equipment Engineer (OSC) Position deleted because engineering is in TSC

Data Coordinator (TSC) Changed to two positions; IT Support (TSC) and OAC Support (TSC)

Site Evacuation Coordinator (TSC) NO CHANGE

Radiation Protection Manager (TSC) NO CHANGE

Assistant OSC Coordinator (OSC) Title Change to Assistant OSC Manager (OSC)

Assistant Emergency Coordinator (TSC) NO CHANGE

Offsite Dose Assessor (TSC) Position deleted because of reduction of RP personnel

Maintenance Supervisor (OSC) is a NEW POSITION

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

Personnel qualified to perform the following functions must staff the EOF before it can be declared operational utilizing a 75 minute goal.

EOF Director NO CHANGE

Radiological Assessment Manager NO CHANGE

Accident Assessment Manager NO CHANGE

Offsite Agency Communicator (2) NO CHANGE

Personnel qualified for the following functions are desired to be available within 75 minutes to assist in EOF emergency operations.

Public Spokesperson Title changed to Company Spokesperson

Dose Assessors (2) NO CHANGE

Field Monitoring Coordinator NO CHANGE

Radio Operator NO CHANGE

Public Affairs (Per News Group Plan) Title changed to Corporate Communications (Per News Group Plan)

Data Coordinator NO CHANGE

EOF Services Manager NO CHANGE

Emergency Planner NO CHANGE

Accident Assessment Interface NO CHANGE

Operations Interface Position deleted

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

Assistant EOF Director NO CHANGE

Offsite Agency Communicator NO CHANGE

EOF Log Recorder NO CHANGE

Attachment 6, 10 CFR 50.54(q) Initiating Condition (IC) and Emergency Action Level (EAL) and EAL
Bases Validation and Verification (V&V) Form , is attached (required for IC or EAL change)

Yes ☐

No ☐

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

MNS Emergency Plan Section B, On-Site Emergency Organization rev 16-3 September 2016

FIGURE B-1a, MCGUIRE NUCLEAR SITE MINIMUM ON-SHIFT ERO STAFFING REQUIREMENTS FOR EMERGENCIES

FIGURE B-1b, MCGUIRE NUCLEAR SITE MINIMUM AUGMENTED ERO STAFFING REQUIREMENTS FOR EMERGENCIES

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 site are described in the Emergency Planning Group Manual, Section 1.1. These assignments shall cover the emergency functions in Figure B-1(a/b). The minimum on-shift staffing reflective of 2 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 Planning Group Manual, Section 1.1.

EP Group Manual 1.1, MCGUIRE NUCLEAR STATION EMERGENCY PREPAREDNESS EMERGENCY ORGANIZATION rev 026

1.0 OBJECTIVE

This section establishes the Emergency Organization and the functions it is responsible for in effectively supporting the normal operating shift in the management of any emergency condition at the station. It particularly addresses the augmentation of the operating shift resources for accident response situations where the health and safety of station personnel and members of the general public are concerned. It provides a structure by which the normal functions of the operating shift are augmented and immediately directed to accident termination and mitigation, offsite consequence determination, and plant recovery operations.

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

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

If the emergency plan, modified as proposed, no longer complies with planning standards in 10 CFR 50.47(b) and the requirements in Appendix E to 10 CFR Part 50, then ensure the change is rejected, modified, or processed as an exemption request under 10 CFR 50.12, Specific Exemptions, rather than under 10 CFR 50.54(q):

The changes resulting from the adoption of the standard ERO establish a closer relationship between risk significant / key functions and the positions assigned those functions. The objective of the changes is to ensure that those functions and their processes are linked directly to the augmented minimum staffing positions to allow for optimum relief of on shift personnel and less complicated response execution following facility activation.

Staffing requirements for the Functional Area, Major Tasks and Emergency Positions have NOT changed per MNS Emergency Plan Section B, On-Site Emergency Organization. Two required positions that staffed the OSC are repositioned to the TSC and are now staffed by engineers instead of Maintenance Managers. This is illustrated in EP Group Manual 1.1, McGUIRE NUCLEAR STATION EMERGENCY PREPAREDNESS EMERGENCY ORGANIZATION. These changes are described in Part I.

Several title changes were made for required positions but does not affect Functional Area, Major Tasks and Emergency Positions per MNS Emergency Plan Section B, On-Site Emergency Organization. This is illustrated in EP Group Manual 1.1, McGUIRE NUCLEAR STATION EMERGENCY PREPAREDNESS EMERGENCY ORGANIZATION. These changes are described in Part I.

Several desired positions have been deleted, several desired positions have title changes, a desired position moved from OSC to TSC and a new desired position was created in the OSC, but these changes do not affect Functional Area, Major Tasks and Emergency Positions per MNS Emergency Plan Section B, On-Site Emergency Organization. This is illustrated in EP Group Manual 1.1, McGUIRE NUCLEAR STATION EMERGENCY PREPAREDNESS EMERGENCY ORGANIZATION. These changes are described in Part I.

EP Group Manual 1.1, McGUIRE NUCLEAR STATION EMERGENCY PREPAREDNESS EMERGENCY ORGANIZATION describes the organizational hierarchy, position and response, and task-by-task levels of the standard augmenting ERO for the Shift, TSC, OSC for MNS and the EOF. This remains unchanged.

The adoption of the standard augmenting ERO : (1) provides a response organization defined by specific structure and responsibilities, which is consistent with regulations and industry guidance, and (2) maintains an efficient augmentation capability for both minimum staffing and full staffing positions.

The adoption of the standard augmenting ERO does not alter the licensing basis and continues to meet the regulatory requirements of 10CFR50.47(b)(1), (b)(2), and 10CFR50 Appendix E, Section IV.A. This change does not alter, add or remove previous site specific commitments with regards to the augmenting ERO.

<< 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):

1. The following portion of planning standard §50.47(b)(1) is related to the change in adopting the standard augmenting ERO.
Primary responsibilities for emergency response by the nuclear facility licensee have been assigned, and each principal response organization has staff to augment its initial response on a continuous basis.

The functions for §50.47(b)(1) related to this change are:

- a. *Responsibility for emergency response is assigned.*
- b. *The response organization has the staff to respond and augment on a continuing basis (24/7 staffing) in accordance with the E-plan.*

The NUREG-0654 Part II.A elements for §50.47(b)(1) related to this change are:

- A.1.d. *Each organization shall identify a specific individual by title who shall be in charge of the emergency response.*
- A.2. *Each principal organization shall be capable of continuous (24-hour) operations for a protracted period. The individual in the principal organization who will be responsible for assuring continuity of resources (technical, administrative, and material) shall be specified by title.*

2. The following portion of planning standard §50.47(b)(2) is related to the change in adopting the standard augmenting ERO.
..., timely augmentation of response capabilities is available and the interfaces among various onsite response activities and offsite support and response activities are specified.

The function for §50.47(b)(2) related to this change is:

- b. *The process for timely augmentation of on shift staff is established and maintained.*

The NUREG-0654 Part II.B elements for §50.47(b)(2) related to this change are:

- B.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.*
- B.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.*
- B.5. *Each licensee shall specify the positions or title and major tasks to be performed by the persons to be assigned to the functional areas of emergency activity. For emergency situations, specific assignments shall be made for all shifts and for plant staff members, both onsite and away from the site. These assignments shall cover the emergency functions in Table B-1 entitled, "Minimum Staffing Requirements for Nuclear Power Plant Emergencies." The licensee must be able to augment on-shift capabilities within a short period after declaration of an emergency. This capability shall be as indicated in Table B-1.*
- B.7. *Each licensee shall specify the corporate management, administrative, and technical support personnel who will augment the plant staff as specified in the table entitled "Minimum Staffing Requirements for Nuclear Power Plant Emergencies," (Table B-1)*

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

3. The following portions of §50 Appendix E, Section IV.A are related to the change in adopting the standard augmenting ERO.

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:

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.*

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.*

4. *Identification, by position and function to be performed, of persons within the licensee organization who will be responsible for making offsite dose projections, ...*

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

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

Staffing requirements for the Functional Area, Major Tasks and Emergency Positions have NOT changed per MNS Emergency Plan Section B, On-Site Emergency Organization.

The adoption of the standard augmenting ERO does not alter the licensing basis and continues to meet the regulatory requirements of 10CFR50.47(b)(1), (b)(2), and 10CFR50 Appendix E, Section IV.A. This change does not alter, add or remove previous site specific commitments with regards to the augmenting ERO.

1. Capability Assessment

All emergency response related functions and tasks performed by the current MNS augmenting ERO have been dispositioned against the standard ERO positions and are described in Part I. Changes to ERO task assignments were evaluated and determined not to degrade the capability to perform their particular function.

Additionally, all ERO tasks for each position have been formally defined, indexed to their corresponding planning standard, and listed in the Emergency Plan Implementing Procedures for Emergency Response Facility activation for the standard ERO. These tasks can now be readily adopted into the ERO systematic approach to training based qualification process and easily associated with the drill and exercise evaluation performance objectives and demonstration criteria. Thus, the capability to determine performance vs. process issues and feedback to training of task level items is significantly improved.

2. Timeliness Assessment

The standard augmenting ERO, with minor modification, is based on the current augmenting ERO in place at CNS, MNS and ONS which has been evaluated in numerous drills and exercises. There are no changes to the on-shift ERO or 45 minute response positions as part of the standard augmenting ERO initiative.

The aspect of timeliness with regard to the ability of any position to perform their assigned responsibilities was further evaluated by a review of the impact of any new tasks assigned to a position by a process similar to that used in the on-shift staffing study task analysis by Fleet EP. It was assumed there was no timeliness impact for positions that were not assigned new tasks or were only assigned new tasks which were determined to be undocumented and were actually performed by the position. The aspects of overburden and overlap were considered in the determination of whether there was a potential adverse impact on timeliness to any assigned task. No position was identified with task overburden or overlap with regard to the addition of any responsibilities.

Based on the above, the adoption of the standard augmenting ERO will continue to maintain or improve the capability and timeliness of the MNS augmenting ERO to respond to an event and effectively perform their assigned tasks.

Part VI. Evaluation Conclusion.

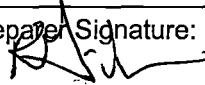
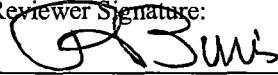

Answer the following questions about the proposed change.

1	Does the proposed change comply with 10 CFR 50.47(b) and 10 CFR 50 Appendix E?	Yes X	No <input type="checkbox"/>
2	Does the proposed change maintain the effectiveness of the emergency plan (i.e., no reduction in effectiveness)?	Yes X	No <input type="checkbox"/>

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

3	Does the proposed change maintain the current Emergency Action Level (EAL) scheme?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
4	Choose one of the following conclusions:		
a	The activity does continue to comply with the requirements of 10 CFR 50.47(b) and 10 CFR 50, Appendix E, and the activity does not constitute a reduction in effectiveness or change in the current Emergency Action Level (EAL) scheme. Therefore, the activity can be implemented without prior NRC approval.	<input checked="" type="checkbox"/>	
b	The activity does not continue to comply with the requirements of 10 CFR 50.47(b) or 10 CFR 50 Appendix E or the activity does constitute a reduction in effectiveness or EAL scheme change. Therefore, the activity cannot be implemented without prior NRC approval.	<input type="checkbox"/>	
Part VII. Disposition of Proposed Change Requiring Prior NRC Approval			
Will the proposed change determined to require prior NRC approval be either revised or rejected?		Yes <input type="checkbox"/>	No <input type="checkbox"/>
If No, then initiate a License Amendment Request in accordance 10 CFR 50.90 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): Randy Gibson	Preparer Signature: 	Date: 11/29/17
Reviewer Name (Print): Renard O. Burris Renard O. Burris	Reviewer Signature: 	Date: 11/29/17
Approver (EP Manager) Name (Print): Kevin L. Murray	Approver Signature: 	Date: 1-29-17
Approver (CFAM, as required) Name (Print): N/A	Approver Signature: N/A	Date: N/A
If the proposed activity is a change to the E-Plan or implementing procedures, then create two EREG General Assignments. If required by Section 5.5, Submitting Reports of Changes to the NRC, then create two EREG General Assignments.		
<ul style="list-style-type: none">One for EP to provide the 10 CFR 50.54(q) summary of the analysis, or the completed 10 CFR 50.54(q), to Licensing.		x
<ul style="list-style-type: none">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.		x

QA RECORD

McGUIRE NUCLEAR STATION
EMERGENCY PREPAREDNESS
EMERGENCY ORGANIZATION

1.0 OBJECTIVE

This section establishes the Emergency Organization and the functions it is responsible for in effectively supporting the normal operating shift in the management of any emergency condition at the station. It particularly addresses the augmentation of the operating shift resources for accident response situations where the health and safety of station personnel and members of the general public are concerned. It provides a structure by which the normal functions of the operating shift are augmented and immediately directed to accident termination and mitigation, offsite consequence determination, and plant recovery operations.

2.0 GENERAL

Initial activities during any emergency condition are directed by the Shift Manager from the control room. The 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 assumes the responsibility of the Emergency Coordinator. The Emergency Coordinator will assure that the following emergency objectives are achieved during the initial phases of any emergency condition:

- 2.1 Initiation of emergency actions within the provisions of the Emergency Plan, including notifications of and protective action recommendations to authorities responsible for coordinating offsite protective actions, enabling the Shift Manager to devote full attention to remedial measures within the station.

This authority to notify and make protective action recommendations to offsite authorities may not be delegated to other personnel within the emergency organization.

- 2.2 Notification and activation of the Station, Corporate, State/Local Government, and the Nuclear Regulatory Commission emergency organizations having a response role.
- 2.3 Continued assessment of actual or potential consequences both onsite and offsite throughout the evolution of the emergency condition.
- 2.4 Effective implementation of emergency measures in the environs including protective actions and/or evacuation of affected areas, implementation of emergency monitoring teams and facilities to evaluate the environmental consequences of the emergency condition, prompt notification and communications with offsite authorities.
- 2.5 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.

3.0 IMPLEMENTATION

- 3.1 The Emergency Organization shall be that organization of normal plant operating shift augmented with additional personnel as deemed necessary by the Shift Manager/Emergency Coordinator, the Station Manager or as required by any emergency procedure. No station personnel will be assigned to the emergency organization prior to receiving specified emergency organization training.
- 3.2 The Shift Manager on duty shall ensure that all actions required by any initiating emergency procedure or by any emergency condition have been performed and that all actions necessary for the protection of persons and property are being taken. The Shift Manager, upon being relieved of the Emergency Coordinator functions, shall continue to take all actions necessary to ensure that any emergency situation is brought under control.
- 3.3 The Emergency Coordinator shall have the authority and responsibility to initiate any emergency actions within the provisions of the Emergency Plan, including the notifications and exchange of information with those authorities responsible for

coordinating offsite emergency measures. The Emergency Coordinator will work closely with the Shift Manager, other station management and Engineering and Technical Support personnel at the Technical Support Center (TSC). He/She shall also maintain communications with offsite personnel at the Emergency Operations Facility (EOF), County Emergency Operations Center(s) and with the North Carolina State Emergency Operations Center. This function will later be assumed by the EOF Director at the Duke Energy Emergency Operations Facility.

After activation of the EOF, the station is still responsible for the minute to minute plant operations and for the lead role in accident assessment. The EOF relieves the station of the burden of overall Emergency Management and in making Protective Action Recommendations to offsite agencies. Further, the EOF supports the station in its function of accident assessment and plant operations as directed by the EOF Director and Emergency Coordinator.

3.4 The EOF Director will assume responsibilities for offsite notification and protective action recommendations at the Emergency Operations Facility (EOF) as this organization is staffed and ready to assume control. The assumption of these functions by the EOF Director will take place for the Alert Emergency Classification and higher.

3.5 The Control Room is the initial center of emergency control. It is designed for evaluation and control over the initial aspects of an emergency and for those actions necessary for coping with the emergency condition. These actions include, but are not limited to:

3.5.1 Continuous evaluation of the magnitude and potential consequences of the emergency condition.

3.5.2 Initial notifications and communications with those station personnel and offsite agencies responsible for coordinating effective response measures.

The Control Room shall be staffed with the operating shift, the Emergency Coordinator and any other personnel the Shift Manager, Station Manager or Emergency Coordinator may require in response to the emergency condition.

3.6 The Technical Support Center (TSC) acts in support of the command and control function of the control room and to display current plant status and diagnostic information to those individuals who are knowledgeable and responsible for engineering, technical, and management support of reactor operation in any

emergency condition. The TSC is located in the Service Building at Elevation 767 and has the capability to house thirty-five (35) persons, necessary communication equipment, diagnostic display information, plant drawings, layouts, maps, and charts necessary to support the emergency organization. Figure H-1 of the McGuire Emergency Plan contains the Technical Support Center general arrangement.

The Emergency Response Organization (ERO) shall be activated by the Emergency Coordinator in accordance with the applicable emergency procedure. The ERO will be notified by the Emergency Response Organization Notification System (ERONS) . The Control Room will notify designated personnel to activate ERONS and will announce via plant page that an Alert, Site Area Emergency or General Emergency has been declared and to activate the TSC, OSC and EOF.

The TSC and OSC shall be activated within one (1) hour and fifteen (15) minutes and will be staffed and organized with positions listed in this manual section. The EOF shall be staffed and ready using one (1) hour and fifteen (15) minutes as a goal for minimum staff to be in place. The EOF will be staffed and organized in accordance with this manual section.

The ERO organizational chart listing phone numbers (work and home) is available electronically.

The TSC shall include, but not be limited to the following personnel:

- 3.6.1 The Emergency Coordinator (EC) shall have complete responsibility for activation of the TSC and the McGuire Site Emergency Plan. They shall staff the TSC with those personnel defined in Section 3.9 or as deemed necessary to effectively assess the emergency condition. They shall institute those procedures necessary to allow the Control Room to gain immediate control of the emergency condition. The Emergency Coordinator will have direct communications with the EOF Director, each County Warning Point or Emergency Operation Center (if activated), the North Carolina State Emergency Response Team and to the Nuclear Regulatory Commission to ensure that they are informed of the emergency condition at all times. The Emergency Coordinator will be the first qualified EC to arrive at the TSC. **IF** the Assistant Emergency Coordinator position is filled, have the Assistant Emergency Coordinator take the lead to execute the Emergency Coordinator TSC activation checklist. This will allow the Emergency Coordinator to focus on Control Room turnover, TSC Activation and facility command and control.
- 3.6.2 The Assistant Emergency Coordinator will assist the Emergency Coordinator in all aspects of emergency response. They will act as a receiver of information when the Emergency Coordinator is unavailable. The Assistant will relay this information to the Emergency Coordinator in a timely manner. The Assistant Emergency Coordinator proactively seeks information when the Emergency Coordinator is in a reactive mode. The Assistant Emergency Coordinator will make face to face confirmation of information provided when the Emergency Coordinator is unavailable. The Assistant Emergency Coordinator will serve as the Emergency Coordinator as needed. The Assistant Emergency Coordinator will be the second qualified Emergency Coordinator to arrive at the TSC. Take the lead to execute the EC TSC activation checklist. By taking the lead to execute the procedure the EC will have better command and control while activating the TSC.
- 3.6.3 Operations Manager will provide expertise to the Emergency Coordinator and the Control Room Operations Bridge via headset

communication regarding solutions to operational problems. They shall provide technical expertise to other members of the TSC as required.

- 3.6.4 The Assistant Operations Manager position will assist the Emergency Coordinator in the applicable Response Procedures and Emergency Procedures. They will also provide information to the Offsite Communicator for transmission of the Emergency Notification Form to Offsite Agencies.
- 3.6.5 Engineering Manager is responsible for providing engineering support to the TSC. They maintain communication with the EOF Accident Assessment group, and calls in Engineering personnel to the site for additional assistance as necessary. When additional Engineering personnel are called to the site, they report to their normal work areas and maintain contact with the Engineering Manager in the TSC. If normal Engineering work areas are evacuated, these site Engineering personnel will report to the EOF.
- 3.6.6 The Reactor Engineer is responsible for addressing any concerns regarding the operation of the core. They provide technical expertise to the Engineering Manager and to other members of the TSC as required. The Reactor Engineer gathers plant data, reviews core cooling information, and performs other core monitoring functions as required. The Reactor Engineer also addresses any reactivity management matters.
- 3.6.7 The Electrical Engineer will provide engineering expertise to the OSC Manager and to other members of the OSC as required. They are responsible for all station electrical equipment. They communicate routinely with the TSC Engineering Manager providing updates and information and engineering assessments and needs.
- 3.6.8 The Mechanical Engineer will provide technical expertise to the OSC Manager and to other members of the OSC as required. They are responsible for all station mechanical equipment and facilities.
- 3.6.9 Radiation Protection Manager (RPM) provides technical expertise to the Emergency Coordinator and other members of the TSC and OSC as required. The RPM assures radiation protection in the TSC and maintains continuous communication with Radiation Protection in the OSC and EOF.

- 3.6.10 The TSC Dose Assessor shall provide technical expertise to the Emergency Coordinator and other members of the TSC as required. He/She will provide initial offsite dose calculations and resultant protective action recommendations for releases of radioactive materials until assumed by the EOF.
- 3.6.11 IT Support will provide support in the area of Information Technology. IT Support will provide computer support for both software and hardware applications in the TSC.
- 3.6.12 OAC Support will provide support in the area of data acquisition. OAC Support will provide computer support for both software and hardware applications of data review in the TSC and the transfer of data to offsite locations.
- 3.6.13 Offsite Communicators are responsible for emergency notifications to Offsite Agencies.
- 3.6.14 NRC Communicator provides continuous NRC communications via the Emergency Notification System (ENS).
- 3.6.15 Log Keeper provides log keeping for the Emergency Coordinator and maintain status boards.
- 3.6.16 Control Room Operations Bridge is the operations interface to the TSC, OSC and EOF. They provide procedural information, plant parameters and task requests.
- 3.6.17 The Site Evacuation Coordinator provides expertise to the Emergency Coordinator regarding site evacuation. They make recommendations on the need for and path of evacuation both onsite and offsite.
- 3.6.18 The Security Coordinator will provide interface with Central Alarm Station. Security will also provide MERT response and will provide onsite radiological conditions to CAS/SAS operators.
- 3.6.19 As Needed Position:

Regulatory Compliance serves as NRC interface in the TSC and provides regulatory support as needed.

- 3.7 The Operations Support Center (OSC) is located on elevation 784+4 and is depicted on Figure B-3 of the McGuire Emergency Plan. The OSC shall be activated as described in 3.9. The personnel assigned to the OSC shall be under the direct supervision of the Operations Support Center Manager.

The OSC shall be staffed and organized in accordance with this manual section or as deemed necessary by the Shift Manager/Emergency Coordinator. The OSC shall include but not be limited to the following personnel:

- 3.7.1 The Operations Support Center Manager is responsible for the overall OSC management, OSC team direction and control and serves as an OSC point of contact with the TSC. They shall coordinate the staffing of the OSC with the appropriate plant management based on the actual plant emergency.
- 3.7.2 The Assistant OSC Manager will assist the OSC Manager in all aspects of emergency response. The Assistant OSC Manager will be the second qualified OSC Manager to arrive at the OSC. They will act as a receiver of information when the OSC Manager is unavailable. The Assistant OSC Manager will relay this information to the OSC Manager in a timely manner. The Assistant OSC Manager proactively seeks information when the OSC Manager is in a reactive mode. The Assistant OSC Manager will make face to face confirmation of information provided when the OSC Manager is unavailable. The Assistant OSC Manager will serve as the OSC Manager as needed.
- 3.7.3 OSC Operations Liaison shall assist the OSC Manager in assessment and evaluation of the emergency condition via headset communication with the Operations Manager in the TSC and the Control Room Operations Bridge.

- 3.7.4 The Radiation Protection (RP) Supervisor provides technical expertise to the Emergency Coordinator and other members of the OSC as required. The RP Supervisor assures radiation protection in the OSC and maintains continuous communication with Radiation Protection in the TSC and EOF.

In addition to the RP Supervisor in the OSC, other OSC RP personnel are:

- On-Site Survey RP Qualified Personnel
- In-Plant Survey RP Qualified Personnel
- Protective Actions RP Qualified Personnel
- Field Monitoring Team (FMT) Members

- 3.7.5 The Log Keeper will log OSC Team Status and maintain OSC Task Work Sheets.

- 3.7.6 The Operations Supervisor shall provide technical expertise to the OSC Manager and other members of the OSC as required. They are responsible for coordinating and briefing teams dispatched from the OSC.

- 3.7.7 The Chemistry Supervisor will provide technical expertise to the OSC Manager and to other members of the OSC as required. They are responsible for coordinating chemical technical support and for initiating necessary action to insure adequate chemical sampling and evaluation to support the emergency condition. The Chemistry Supervisor shall ensure that all areas under his/her direction are staffed and prepared to manage chemistry support for any emergency condition.

- 3.7.8 The Maintenance Supervisor will provide technical expertise to the OSC Manager and to other members of the OSC as required. They are responsible for all station equipment and facilities. The Maintenance Supervisor shall ensure that all areas under his/her direction are staffed

- 3.7.9 The IAE Technicians will provide technical expertise to the OSC Manager and to other members of the OSC as required. They are responsible for maintaining all station IAE equipment in an operational state.

- 3.7.10 The Mechanical Technician will provide technical expertise to the OSC Manager and to other members of the OSC as required. They are

responsible for maintaining all station mechanical equipment in an operational state.

3.7.11 The Radwaste Operator will provide technical expertise to the OSC Manager and to other members of the OSC as required. There are responsible for coordinating radwaste technical support and for initiating necessary action to insure adequate radwaste control to support the emergency condition.

3.7.12 Nuclear Supply Chain Liaison will provide oversight for equipment support, warehouse support and acts as an interface with the EOF Services Manager group. This position also provides commissary for onsite emergency facilities.

- 3.8 The Emergency Operations Facility (EOF) is utilized for direction and control of all emergency and recovery activities, with emphasis on the coordination of offsite activities such as communications with local, State and Federal agencies, and coordination of corporate and other outside support. The EOF location and layout are shown on Figures H-3 thru H-5 of the McGuire Emergency Plan. Upon declaration of an Alert or higher classification the EOF will be alerted and personnel will report to the facility using 75 minutes as a goal for the minimum staff to be in place and operational.

The EOF will be staffed with but not limited to the following personnel:

- 3.8.1 The EOF Director is primarily responsible for overall management of Duke Energy's emergency response activities, determination of public protective action recommendations and coordination with federal, state, and local government agencies. The principal interfaces include the Emergency Coordinator at the TSC, state emergency management directors and senior NRC officials.
- 3.8.2 The Assistant EOF Director will assist the EOF Director in all aspects of emergency response. They will act as a receiver of information when the EOF Director is unavailable. The Assistant will relay this information to the EOF Director in a timely manner. The Assistant EOF Director proactively seeks information when the EOF Director is in a reactive mode. The Assistant EOF Director will make face to face confirmation of information provided when the EOF Director is unavailable. The Assistant EOF Director will serve as the EOF Director as needed.
- 3.8.3 The EOF Services Manager shall assume responsibility for providing administrative, logistic, communications, and related personnel support for the recovery and emergency operation including: EOF communications equipment, transportation, food and lodging, purchasing, insurance as needed, and finance as needed.

- 3.8.4 The EOF Offsite Communicators are responsible for emergency notification to offsite agencies.
- 3.8.5 The EOF Data Coordinator will provide support in the area of Information Technology and data acquisition. The Data Coordinator will provide computer support for both software and hardware applications of data review in the EOF.
- 3.8.6 The Log Recorder is responsible for maintaining the EOF logs and status boards to display current information about the emergency situation.
- 3.8.7 The EOF Radiological Assessment Manager shall coordinate the activities of EOF Dose Assessors, Field Monitoring Coordinator, and Health Physics Network (HPN) Communicator. The Radiological Assessment Manager is responsible for environmental liaison with local, state and federal agencies, and is responsible for offsite monitoring and dose projections. In addition, this position makes recommendations to the EOF Director concerning public protection from radiological hazards.
- 3.8.8 The EOF Dose Assessors perform dose calculations on either actual or projected offsite radiological doses and keeps the Radiological Assessment Manager informed of the pertinent results. This position may also serve as a HPN Communicator.

- 3.8.9 The EOF Field Monitoring Coordinator is responsible for directing and coordinating all environmental monitoring/sampling performed by the Field Monitoring Teams. The Field Monitoring Coordinator assigns areas to be monitored as directed by the Radiological Assessment Manager, compiles and forwards data to the Radiological Assessment Manager, assures the physical resources and equipment needed for monitoring, and coordinates the monitoring teams. The OSC will have initial functional responsibility for the Field Monitoring Teams. The Field Monitoring Teams and any associated data/information will be turned over to the EOF Field Monitoring Coordinator for direction and control as soon as practicable.
- 3.8.10 Field Monitoring Teams working out of the plant OSC perform surveys, collect and analyze certain environmental samples, and communicate results under the direction of the Field Monitoring Coordinator.
- 3.8.11 The EOF Radio Operator maintains constant communications with the Field Monitoring Teams under the direction of the Field Monitoring Coordinator.
- 3.8.12 The EOF Emergency Planner supports the EOF Director activity, provides necessary NRC/State/County interface and facilitates EOF operation.
- 3.8.13 The Accident Assessment Manager coordinates activities of the Accident Assessment staff and Operations Interface personnel assisting the TSC in accident mitigation strategies, advises the EOF Director regarding emergency classification and public protective actions, and provides information on the Emergency Notification Form.
- A. Accident Assessment Interface personnel provide reactor assessment, analysis and fuel subcriticality assessments; accident assessment and mitigation strategies, advises on the anticipated course of the event and assists in determining emergency classifications; provides analysis of plant systems; analysis of core containment and site conditions for core damage and fission product release potential, and accident mitigation strategy support.

3.8.14 Meteorologist personnel are available in the corporation if needed to provide meteorological information.

3.8.15 Other company personnel may be enlisted to support EOF emergency activities as needed.

3.9 Activation of the TSC/OSC Organization

3.9.1 Personnel qualified to perform the following functions are required to be available from on-shift:

- _____ Shift Technical Advisor (Shift Supervisor)
- _____ Emergency Coordinator (Operations Shift Manager)
- _____ Shift Supervisor (SRO)
- _____ Offsite Agency Communicator (Work Control SRO)
- _____ Control Room Operator (RO) (2)
- _____ Non-Licensed Operator (NLO) (2)
- _____ Fire Brigade (per Selected Licensee Commitments)
- _____ Mechanical Technician
- _____ RP Technicians (RP coverage, etc.) (3)
- _____ Chemistry Technician (Post-Accident Sampling)
- _____ IAE Technician (2)
- _____ Security (per Security Plan)
- _____ MERT (2)

3.9.2 Personnel qualified to perform the following functions (two ERO positions) are required to be available within 45 minutes.

_____ RP Technician (In Plant Surveys) (OSC)

_____ RP Technician (On Site Out-of-Plant Surveys) (OSC)

3.9.3 Personnel qualified to perform the following functions (23 ERO positions) are regulatory required to be available within 75 minutes.

_____ Emergency Coordinator (Station Manager) (TSC)

_____ Offsite Communicator (TSC)

_____ NRC Communicator (TSC)

_____ Field Monitoring Team Members (4) (OSC)
(Two teams, each consisting of one RP Qualified Individual and one vehicle driver)

_____ RP Technician (In Plant Surveys) (OSC)

_____ RP Technician (On Site Out-of-Plant Surveys) (OSC)

_____ Protective actions RP Qualified Personnel(RP coverage, etc.) (6) (OSC)

_____ Mechanical Technician (OSC)

_____ IAE Technician (2) (OSC)

_____ Dose Assessor (TSC)

_____ Radwaste Operator (OSC)

_____ Reactor Engineer (TSC)

_____ Electrical Engineer (TSC)

_____ Mechanical Engineer (TSC)

3.9.4 Personnel qualified for the following functions (21 ERO positions) are desired to be available with 75 minutes to assist in site emergency operations.

_____	Assistant Emergency Coordinator (TSC)
_____	Radiation Protection Manager (TSC)
_____	Operations Manager (TSC)
_____	Assistant Operations Manager (TSC)
_____	Engineering Manager (TSC)
_____	Log Keeper (TSC)
_____	Control Room (CR) Operations Bridge
_____	Offsite Communicator (TSC)
_____	Security Coordinator (TSC)
_____	IT Support (TSC)
_____	OAC Support (TSC)
_____	Site Evacuation Coordinator (TSC)
_____	OSC Manager (OSC)
_____	Assistant OSC Manager(OSC)
_____	OSC Operations Liaison (OSC)
_____	Operations Supervisor(OSC)
_____	Maintenance Supervisor (OSC)
_____	RP Supervisor (OSC)

- _____ Chemistry Supervisor (OSC)
- _____ Nuclear Supply Chain Liaison (OSC)
- _____ Log Keeper (OSC)

3.10 Activation of the Emergency Operations Facility (EOF)

3.10.1 Personnel qualified to perform the following functions must staff the EOF before it can be declared ready utilizing a 75 minute goal.

_____ EOF Director

_____ Radiological Assessment Manager

_____ Accident Assessment Manager

_____ Offsite Agency Communicator (2)

3.10.2 Personnel qualified for the following functions are desired to be available within 75 minutes to assist in EOF emergency operations.

_____ Company Spokesperson

_____ Dose Assessors (2)

_____ Field Monitoring Coordinator

_____ Radio Operator

_____ Corporate Communications (Per News Group Plan)

_____ Data Coordinator

_____ EOF Services Manager

_____ Emergency Planner

_____ Accident Assessment Interface

_____ Assistant EOF Director

_____ Offsite Agency Communicator

_____ EOF Log Recorder

3.11 ALTERNATE SITE FACILITIES

3.11.1 In the event the TSC becomes environmentally uninhabitable due to radiological or other conditions, the TSC shall move to alternate TSC facilities. The Alternate TSC in the Admin Building is located in Rooms 111, 114, 117, 112, SCR Room 100D, 118, 141, 126 and the Jaguar Room if required. In the event the Alternate TSC becomes uninhabitable due to radiological or other conditions, TSC personnel will report to the Simulator at the Training and Technology Center or EOF, as directed by the Emergency Coordinator.

3.11.2 In the event that the OSC becomes environmentally uninhabitable due to radiological or other conditions, the OSC shall move to the Alternate OSC facilities. The Alternate OSC in the Admin Building is located in room TR-155. In the event the Alternate OSC becomes uninhabitable due to radiological or other conditions, OSC personnel will report to other facilities as directed by the Emergency Coordinator.

3.12 SITE EVACUATION

3.12.1 At the Site Area Emergency classification, site evacuation shall be considered for non-essential personnel.

3.12.2 At the General Emergency classification, site evacuation is required for non-essential personnel.

3.12.3 Radiation Protection shall determine the habitability for the protection of personnel remaining on site after the Site Evacuation.

4.0 ENCLOSURES

None