

After Action Report

Harris Nuclear Plant

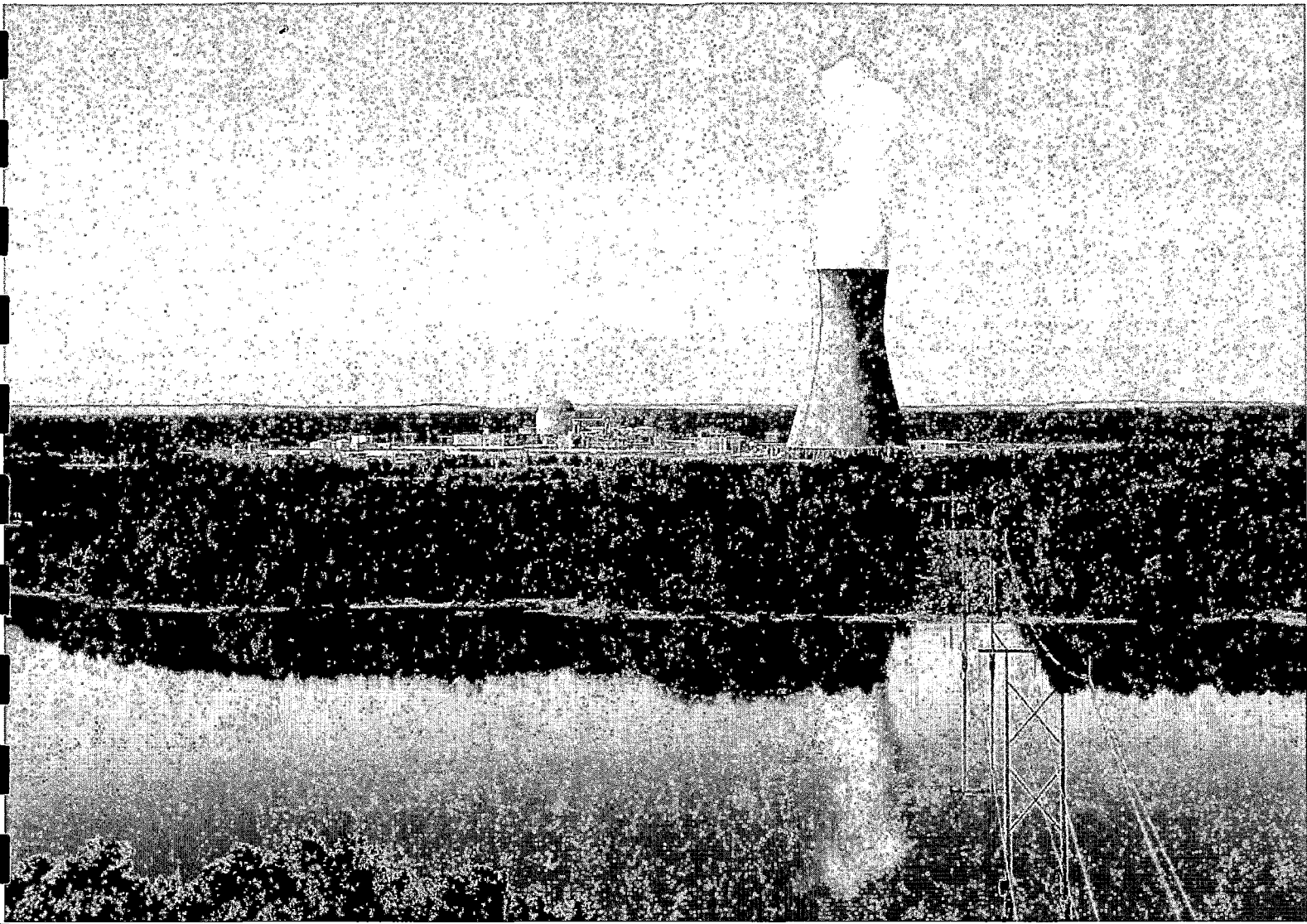
Radiological Emergency Preparedness Exercise

Exercise Date: April 30, 2019

August 8, 2019



FEMA



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Table of Contents

	Page
Table of Contents.....	3
Executive Summary.....	5
Section 1: Exercise Overview.....	7
1.1 Exercise Details	7
1.2 Exercise Planning Team Leadership	8
1.3 Participating Organizations	9
Section 2: Exercise Design Summary.....	13
2.1 Exercise Purpose and Design.....	13
2.2 Exercise Core Capabilities and Objectives	13
2.3 Exercise Scenario.....	15
Section 3: Analysis of Capabilities.....	17
3.1 Exercise Evaluation and Results.....	17
3.2 Summary Results of Exercise Evaluation.....	17
3.3 Jurisdictional Summary Results of Exercise Evaluation	19
3.3.1 State of North Carolina.....	19
3.3.1.1 State Emergency Operations Center	19
3.3.1.2 Central Branch Office/Regional Coordination Center- Central	21
3.3.1.3 Dose Assessment	22
3.3.1.4 Field Monitoring Team Management.....	23
3.3.1.5 Field Monitoring Team Operations	24
3.3.1.6 Mobile Radiological Laboratory.....	25
3.3.2 Joint Operations	26
3.3.2.1 Joint Information Center.....	26
3.3.2.2 Waterway Clearance- Lake Jordan.....	28
3.3.2.3 Traffic Control Points	28
3.3.3 Risk Jurisdictions.....	29
3.3.3.1 Wake County, North Carolina	29
3.3.3.1.1 Emergency Operations Center	29
3.3.3.1.2 Area Command Post	32
3.3.3.1.3 Protective Actions for Schools.....	33
3.3.3.1.4 Waterway Clearance – Lake Harris	33
3.3.3.1.5 Emergency Worker & Vehicle Monitoring & Decon	34
3.3.3.1.6 Reception and Congregate Care Center	35
3.3.3.2 Chatham County, North Carolina.....	37
3.3.3.2.1 Emergency Operations Center	37
3.3.3.2.2 Protective Actions for Schools.....	39

3.3.3.2.3 Reception and Congregate Care Center39

3.3.3.3 Harnett County, North Carolina41

3.3.3.3.1 Emergency Operations Center41

3.3.3.3.2 Traffic Control Points44

3.3.3.3.3 Reception and Congregate Care Center45

3.3.3.4 Lee County, North Carolina47

3.3.3.4.1 Emergency Operations Center47

3.3.3.4.2 Emergency Worker Decontamination.....50

3.3.3.4.3 Reception and Congregate Care Center51

Section 4: Conclusion53

Appendix A: Exercise Timeline55

Appendix B: Exercise Key Leaders and Evaluators57

Appendix C: Extent of Play Agreement59

Executive Summary

On April 30, 2019, the U.S. Department of Homeland Security, Federal Emergency Management Agency Region IV, Radiological Emergency Preparedness Program staff evaluated a plume exposure pathway exercise for the 10-mile emergency planning zone of the Harris Nuclear Plant. The evaluations of out of sequence activities conducted the week of April 15-18, 2019 are also included in this report.

The Harris Nuclear Plant is located in New Hill, North Carolina near the city of Raleigh. The 10-mile emergency planning zone is divided into 14 subzones designated A through N and encompasses portions of the risk counties of Wake, Chatham, Harnett, and Lee. The plant is operated by Duke Energy.

The purpose of the exercise was to assess the level of state and local preparedness in responding to an incident at the Harris Nuclear Plant. It was conducted in accordance with Federal Emergency Management Agency policies and guidance concerning the exercise of state and local radiological emergency response plans and procedures. The previous federally evaluated exercise at this site was conducted on April 26, 2017.

Officials and representatives from participating agencies and organizations demonstrated knowledge of their radiological emergency response plans and procedures and successfully implemented them during the exercise. All jurisdictions met their exercise objectives and successfully demonstrated the corresponding core capabilities identified in Section 2.2 of this report. Federal Emergency Management Agency staff did not identify any level 1 or level 2 findings during this exercise.

We would like to acknowledge the Harris Task Force, which contributed to the success of this exercise. The task force was instrumental in incorporating several improvements to their plans and procedures; all of which enhance the overall preparedness of state and county responders.

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Section 1: Exercise Overview

1.1 Exercise Details

Exercise Name

2019 Harris Nuclear Plant Radiological Emergency Preparedness Exercise

Type of Exercise

Full scale

Exercise Date

April 30, 2019

Exercise Off Scenario/Out of Sequence Dates

April 15-18, 2019

Program

United States Department of Homeland Security, Federal Emergency Management Agency Region IV, Radiological Emergency Preparedness Program

Mission

Response

Scenario Type

Full Participation Plume Exposure Pathway Radiological Emergency Preparedness Exercise

1.2 Exercise Planning Team Leadership

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Raleigh, North Carolina 27601

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Emergency Management Director
Chatham County
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Pittsboro, North Carolina 27312

Mr. Larry Smith
Emergency Service Director
Harnett County
1005 Edwards Drive
Lillington, North Carolina 27546

Mr. Shane Seagroves
Emergency Services Director
Lee County
204 West Courtland Drive
Sanford, North Carolina 27330

1.3 Participating Organizations

The following agencies and organizations participated in the 2019 Harris Nuclear Plant exercise.

State of North Carolina:

- Department of Public Safety, Division of Emergency Management
- Department of Public Safety, Public Affairs Office
- Department of Public Safety, North Carolina State Highway Patrol
- Department of Health and Human Services, Division of Public Health
- Department of Health and Human Services, Division of Facility Services
- Department of Public Health, Division of Health Service Regulation, Radiation Protection Section
- Department of Public Health, Division of Health Service Regulation, Office of Emergency Medical Services
- Department of Environment and Natural Resources Wildlife Resources Commission, Division of Enforcement
- Department of Agriculture and Consumer Services, Emergency Program Division
- North Carolina State Parks Police
- North Carolina Radiological Emergency Volunteer Corps

Risk Jurisdictions:

Wake County:

- Division Emergency Management
- Department Fire Service
- Finance Department
- General Service and Engineering Branch
- Mass Care Branch
- Sheriff's Office
- Public School System
- Emergency Medical Services Branch
- Department of Social Services
- Public Health Department
- Human Services Department
- Environmental Services
- Fuquay-Varina Police Department
- Fuquay-Varina Fire Department
- Fuquay-Varina Public Information
- Apex Police Department
- Apex Fire Department
- Raleigh Fire Department Hazardous Materials Team
- Garner Volunteer Fire Department

Radiological Emergency Preparedness Program

After Action Report

2019 Harris Nuclear Plant

Chatham County:

Emergency Management Agency
Sheriff's Office
Fire Marshal's Office
Public School District
Health Department
Environmental Health
Social Services
Human Resources
911 Communications
Community Emergency Response Team
Auxiliary Emergency Communication Unit
North Chatham Volunteer Fire Department

Harnett County:

Office of Emergency Management
Department of Social Services
Emergency Medical Services
Fire Marshal
Commissioner's Office
Department of Social Services
Regional Water
Damage Assessment
Schools Transportation
Finance
General Service
Veteran's Affairs
Development Services
Library
Agriculture
Schools
Police Department
Sheriff's Office
Health Department
Fire Department
Buies Creek Volunteer Fire Department

Lee County:

Emergency Management
Manager's Office
Planning Department
Attorney

Radiological Emergency Preparedness Program

After Action Report

2019 Harris Nuclear Plant

Management Information Systems Department
Emergency Services Department
Cooperative Extension Department
Environmental Health
Department of Social Services
Emergency Medical Services
Fire Marshal
Sheriff's Office
Geographical Information Services Department
Finance
Health Department
E-9-1-1 and Warning Point
Police Department
Health Department
Schools
Public Utilities
Volunteer Resource
Area Transportation Coordinator
Northview Fire Department
Sanford Fire Department
Tramway Fire Department

Private Organizations:

Amateur Radio Emergency Services
American Red Cross
Carolina Healthcare System University Medical Center
Duke Energy

Federal Jurisdictions:

United States Army Corps of Engineers
United States Department of Commerce, National Oceanic and Atmospheric Administration

Section 2: Exercise Design Summary

2.1 Exercise Purpose and Design

The Federal Emergency Management Agency administers the Radiological Emergency Preparedness Program pursuant to the regulations found in Title 44 Code of Federal Regulations parts 350, 351, 352, 353, and 354. Title 44 Code of Federal Regulations 350 codifies sixteen planning standards that form the basis for radiological emergency response planning for state, tribal, and local governments impacted by the emergency planning zones established for each nuclear power plant site in the United States. United States Nuclear Regulatory Commission regulations also codify the sixteen planning standards for the licensee. Title 44 Code of Federal Regulations 350 sets forth the mechanisms for the formal review and approval of state, tribal, and local government radiological emergency response plans and procedures by the Federal Emergency Management Agency. One of the Radiological Emergency Preparedness Program cornerstones established by these regulations is the biennial exercise of offsite response capabilities. During the biennial exercise, affected state, tribal, and local governments demonstrate the ability to implement plans and procedures to protect public health and safety in the event of a radiological emergency at a nuclear plant.

The results of this exercise, together with review of the radiological emergency response plans, and verification of the periodic requirements set forth in NUREG-0654/FEMA-REP-1, along with supplements through the annual letter of certification and staff assistance visits, enabled the Federal Emergency Management Agency Region IV to provide a statement with the transmission of this final after action report to the United States Nuclear Regulatory Commission, that the state and local plans and procedures are: (1) adequate to protect the health and safety of the public living in the vicinity of the nuclear power facility by providing reasonable assurance that appropriate protective measures can be taken offsite in the event of a radiological emergency; and (2) capable of being implemented.

The federal approval of the formal submission of the radiological emergency response procedures for the Harris Nuclear Plant by the State of North Carolina was granted on March 28, 1989, and the qualifying emergency preparedness exercise was conducted on September 14, 1989.

2.2 Exercise Core Capabilities and Objectives

Core capabilities-based planning allows for exercise planning teams to develop exercise objectives and observe exercise outcomes through a framework of specific action items. Using the Homeland Security Exercise and Evaluation Program methodology, the exercise objectives meet the Radiological Emergency Preparedness Program

requirements and encompass the emergency preparedness evaluation areas. The critical tasks to be demonstrated were negotiated with the State of North Carolina and participating counties. The core capabilities demonstrated during this exercise were:

Operational Coordination: Establish and maintain a unified and coordinated operational structure and process that appropriately integrates all critical stakeholders and supports the execution of core capabilities.

Public Information and Warning: Deliver coordinated, prompt, reliable, and actionable information to the whole community through the use of clear, consistent, accessible, and culturally and linguistically appropriate methods to effectively relay information regarding any threat or hazard and, as appropriate, the actions being taken, and the assistance being made available.

Situational Assessment: Provide all decision makers with decision-relevant information regarding the nature and extent of the hazard, any cascading effects, and the status of the response.

Environmental Response/Health and Safety: Conduct appropriate measures to ensure the protection of the health and safety of the public and workers, as well as the environment, from all-hazards in support of responder operations and the affected communities.

On-Scene Security, Protection, and Law Enforcement: Ensure a safe and secure environment through law enforcement and related security and protection operations for people and communities located within affected areas and for response personnel engaged in lifesaving and life-sustaining operations.

Critical Transportation: Provide transportation (including infrastructure access and accessible transportation services) for response priority objectives, including the evacuation of people and animals, and the delivery of vital response personnel, equipment, and services into the affected areas.

Mass Care Services: Provide life-sustaining and human services to the affected population, to include hydration, feeding, sheltering, temporary housing, evacuee support, reunification, and distribution of emergency supplies.

The core capabilities, when successfully demonstrated, meet the exercise objectives. The objectives for this exercise were:

Objective 1: Demonstrate the ability to alert, notify, and mobilize response personnel and facilities; provide direction and control, make precautionary and protective action decisions and implement those decisions.

Objective 2: Demonstrate the ability to manage radiological field monitoring teams and perform plume-phase field measurements and analysis.

Objective 3: Demonstrate the ability to activate the prompt alert and notification system and provide accurate emergency information and instructions to the public and news media in a timely manner.

Objective 4: Demonstrate the ability to receive, monitor, decontaminate, register and provide for the temporary care of evacuees and emergency workers.

2.3 Exercise Scenario

The following is a summary of the scenario developed by Duke Energy to drive exercise play. All scenario events were simulated and times are approximate.

The exercise began at 0800. At 0804, workers inside containment making repairs attempted to close the outer emergency containment airlock door and discovered that the door malfunctioned in the open position.

At 0820, there was a catastrophic failure of the 1A Reactor Coolant Pump with a shear of the reactor coolant system piping and a Loss of Coolant Accident. There were indications of failed fuel, an automatic reactor trip, and safety injection. At 0835, an Alert was declared based on Emergency Action Level FA1.1 (loss of fuel cladding or reactor coolant system).

At 1021, containment radiation levels rose to the threshold for a Site Area Emergency, which was declared by 1036, based on emergency action level FS1.1 (loss of two fission barriers). At 1150, the inner emergency containment airlock door seal failed with a radiological release path into the environment through the unit vent. At 1205, a General Emergency was declared based on emergency action level FG1.1 (loss of the third fission barrier) or RG1.2 (dose assessment greater than Protective Action Guides beyond the site boundary).

For this scenario, there were two protective action recommendations options. If the dose assessments were available prior to the notification of the General Emergency, the protective action recommendation would be based on a rapidly progressing severe accident. The protective action recommendation would be to evacuate two-miles around and 10-miles downwind in Subzones A, I, J, K, and M, and to administer potassium

iodide. If the dose assessments were not available prior to notification, the protective action recommendations would be to evacuate two miles around and five miles downwind in Subzones A, and K, and no administration of potassium iodide.

The exercise terminated at 1445.

Section 3: Analysis of Capabilities

3.1 Exercise Evaluation and Results

This section contains the results and findings of the evaluation for all jurisdictions and functional entities that participated in the April 30, 2019 full scale exercise and April 15-18, 2019 out of sequence activities.

Each jurisdiction and functional entity were evaluated based on the demonstration of core capabilities, capability targets, critical tasks, and the radiological emergency preparedness criteria as delineated in the FEMA REP Program Manual dated January 2016.

3.2 Summary Results of Exercise Evaluation

The Homeland Security Exercise and Evaluation Program evaluation methodology is an analytical process used to assess the demonstration of specific capabilities during an exercise. A capability provides a means to perform one or more critical tasks under specified conditions and performance standards. Core capabilities form the foundation of the FEMA Region IV REP Program. The core capability summaries below provide an overall combined assessment of state and local jurisdictions and functional entities based upon their collective demonstrated performance as it relates to the respective core capability. Each jurisdiction's and functional entities standalone capability summaries are listed in Section 3.3 of this report.

Operational Coordination: Key leadership personnel from participating agencies and organizations established and maintained a unified and coordinated operational structure that provided effective and responsive direction and control. The overall decision-making process integrated critical stakeholders, enabling protective actions and subsequent decisions to be made in a responsible manner without undue delay. The coordination between state and risk counties throughout the exercise allowed them to make protective action decisions to protect the citizens in the 10-mile emergency planning zone.

Public Information and Warning: This exercise was used to validate a new public information approach which incorporated a joint information system that transitioned into a joint information center when needed. The new approach allowed more flexibility with the state and risk counties to provide coordinated information early in the incident. The procedures more closely reflect how public information officers respond to other types of incidents and incorporates newer technology. The approach worked well during the exercise.

Situational Assessment: North Carolina Department of Health and Human Services, Division of Health Service Regulation, Radiation Protection Section staff successfully demonstrated the ability to assess radiological and plant conditions and provide appropriate recommendations to decision makers in response to a radiological incident at the Harris Nuclear Plant.

Environmental Response/Health and Safety: Field monitoring activities were coordinated from the State Emergency Operations Center. The field team coordinator monitored meteorological conditions and directed field team plume traverses, surveys, and sampling at appropriate downwind locations to verify and quantify the radiological release. Field monitoring teams demonstrated use and supply of equipment, the ability to define and sample the radiological plume, and monitoring of radiological exposure. The mission was well coordinated between the field teams, the field team coordinator, and decision makers at the State Emergency Operations Center. Risk counties demonstrated their abilities to monitor and decontaminate evacuees and emergency workers. Those operations were conducted in a manner that minimized cross contamination and radiological exposure.

On-Scene Security, Protection, and Law Enforcement: Evacuation traffic and access control was discussed with state and local law enforcement agencies and organizations. They were provided appropriate equipment and instructions to effectively implement traffic and access control. They were knowledgeable of their responsibilities during this type of incident as well as radiological exposure control equipment.

Critical Transportation: School administrators from Wake and Chatham counties validated their ability to implement protective actions and safeguard students, staff, and faculty in response to a radiological incident at the Harris Nuclear Plant. Protective actions were well defined, and there was enough transportation resources available to relocate students and faculty from the affected schools.

Mass Care: Wake, Chatham, Harnett, and Lee counties demonstrated the ability to provide services and accommodations for evacuees during out of sequence activities. These counties were capable of registering evacuees, providing them with food and shelter, and addressing medical needs. Sufficient supplies of potassium iodide were available for distribution to evacuees if needed. Many of these capabilities were demonstrated during their response to Hurricane Florence.

3.3 Jurisdictional Summary Results of Exercise Evaluation

3.3.1 State of North Carolina

3.3.1.1 State Emergency Operations Center

Operational Coordination Capability Summary:

North Carolina State Emergency Response Team and emergency management officials in the State Emergency Operations Center successfully demonstrated the ability to respond to a radiological incident at the Harris Nuclear Plant, ensuring the safety of the public and emergency workers. State Emergency Response Team members were notified and mobilized by the state warning point through an automated notification system. The State Emergency Operations Center had enough equipment and communication capabilities for conducting operations and coordinating response actions with stakeholders.

The State Emergency Response Team leader functioned as a key element of the unified command. He gathered information from support staff to make informed and appropriate recommendations and decisions. Staff, composed of representatives from various state agencies, volunteer organizations, and federal liaisons were organized using a modified Incident Command Structure. The radiological emergency program manager used emergency classification specific checklists to track all response actions and confirmed each were addressed. Frequent staff briefings ensured everyone was informed of incident status and response actions. Conference calls with the risk counties facilitated resource coordination in support of on-scene efforts.

Following the declaration of a General Emergency, the protective action recommendation from Duke Energy was discussed among the unified command. State representatives and subject matter experts provided valuable input to the discussion and assisted with the decision-making process. Throughout the exercise, the State Emergency Response Team leader and staff remained proactive and implemented procedures without delay.

North Carolina State Highway Patrol officers successfully established appropriate traffic and access control points and provided accurate instructions to responding officers during the exercise. They delegated and coordinated for additional resources to manage traffic control points in the affected counties.

For this capability the following radiological emergency preparedness criteria were met:
1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.2, 3.a.1, 3.d.1, 3.d.2.

- a. **Level 1 Finding:** None
- b. **Level 2 Finding:** None
- c. **Not Demonstrated:** None
- d. **Prior Level 2 Findings – Resolved:** None
- e. **Prior Level 2 Findings - Unresolved:** None
- f. **Plan Issues:** None

Public Information and Warning Capability Summary:

North Carolina State Emergency Operations Center staff demonstrated the ability to support activities associated with primary alert and notification of the public, as well as provide accurate emergency information and instructions to the public and news media.

During the exercise, there were two activations of the North Carolina Emergency Alert System. The messages were prepared by the state public information officer, approved by the director, and concurred upon over the decision conference call line with the risk counties. The messages were transmitted to emergency alert system stations and the National Weather Service office in Raleigh for broadcast. Both messages contained information and instructions that accurately reflected decisions made by the unified incident command. Wake County served as the lead county for two siren activations.

Two state news releases were generated from the State Emergency Operations Center during this exercise. Media messaging, including nine news releases and two media briefings were coordinated at the joint information center once activated. The State Emergency Response Team Director reviewed and approved all news releases generated by public information officers located in both the State Emergency Operations Center and the joint information center.

Public inquiry staff responded to over 30 public inquiry calls. Public inquiry staff used an emergency information booklet, a public inquiry binder, emergency alert system messages, news releases, and other briefing information to provide accurate and timely information to the public. Trends and other subject matter were shared with command staff and the state public information officer located at the joint information center.

For this capability the following radiological emergency preparedness criteria were met:

5.a.1, 5.b.1.

- a. **Level 1 Finding:** None
- b. **Level 2 Finding:** None
- c. **Not Demonstrated:** None
- d. **Prior Level 2 Findings – Resolved:** None
- e. **Prior Level 2 Findings - Unresolved:** None
- f. **Plan Issues:** None

3.3.1.2 Central Branch Office/Regional Coordination Center- Central

Operational Coordination Capability Summary:

The Central Branch Office staff in an interview discussed the capability to activate and manage the Regional Coordination Center. The Central Branch Manager and his staff were pre-positioned in accordance with the extent of play, but he utilized established plans and procedures to alert, notify, and mobilize key emergency response personnel in a response to an event at Harris Nuclear Plant. He deploys his staff to liaison with the utility, support the joint information effort, and coordinate jurisdictional response requirements.

The Central Branch manager demonstrated the capability to manage the Regional Coordination Center. A staff roster was established for 24-hour operations in the branch tactical plan, which included Eastern and Western Branch staff in supporting roles. The Central Branch manager successfully demonstrated direction and control by providing timely staff updates, considering staff input for decision making, and making timely and informed decisions throughout the exercise. The branch staff maintained internal coordination and situational awareness all while notifying external stakeholders of the incident.

The primary communication system initially malfunctioned. The audio was unintelligible. This failure was remedied by completing a system reset and did not adversely affect the outcome of the exercise the alternate communication system, the conference line, was successfully tested and incurred no failures. The Central Branch manager directed setup of the state conference line while the primary communication system was inoperable. The Central Branch was well equipped with supplies and equipment to facilitate emergency response.

For this capability the following radiological emergency preparedness criteria were met:

1.a.1, 1.c.1, 1.d.1, 1.e.1.

- a. **Level 1 Finding:** None
- b. **Level 2 Finding:** None
- c. **Not Demonstrated:** None
- d. **Prior Level 2 Findings – Resolved:** None
- e. **Prior Level 2 Findings - Unresolved:** None
- f. **Plan Issues:** None

3.3.1.3 Dose Assessment

Situational Assessment Capability Summary:

North Carolina Department of Health and Human Services, Division of Health Service Regulation, Radiation Protection Section staff successfully demonstrated the ability to assess radiological and plant conditions and to provide appropriate recommendations to decision makers in response to a radiological incident at the Harris Nuclear Plant. All Radiation Protection Section positions were filled at the State Emergency Operations Center. A roster was provided for 24-hour coverage of all functions and included some shift positions filled by designees from the Southern Mutual Radiation Assistance Plan. The State Emergency Operations Center had enough equipment, communications, and supplies to support emergency operations.

The dose assessment leader calculated projected doses at various distances downwind from the plant based on release data supplied by the Emergency Operations Facility liaison and data from the emergency notification forms. During the exercise, the Emergency Response Data System did not transmit data from the Harris Nuclear Plant simulator. Despite numerous attempts to resolve, the system failure continued throughout the exercise. The failure of the system inhibited participant performance but did not adversely affect the outcome of the exercise. The dose assessment leader demonstrated the ability to accurately assess the radiological release based on radiation monitor data, radiological release rates, and field team results. The dose assessment leader compared the state dose projections to the utility dose projections with excellent agreement.

The Radiation Protection Section director advised appropriate protective action recommendations in a concise written format to the State Emergency Response Team lead based on dose assessment results and plant status. The Radiation Protection Section director worked with the state health director to recommend potassium iodide ingestion for state emergency workers and the evacuating public based on the dose projections.

Throughout the exercise, the Radiation Protection Section team demonstrated a questioning attitude and determination for continuous improvement. The team was actively engaged in cross-training team members for new positions.

For this capability the following radiological emergency preparedness criteria were met: 1.a.1, 1.d.1, 1.e.1, 2.a.1, 2.b.1, 2.b.2.

- a. **Level 1 Finding:** None
- b. **Level 2 Finding:** None
- c. **Not Demonstrated:** None
- d. **Prior Level 2 Findings – Resolved:** None
- e. **Prior Level 2 Findings - Unresolved:** None
- f. **Plan Issues:** None

3.3.1.4 Field Monitoring Team Management

Environmental Response/Health and Safety Capability Summary:

North Carolina Department of Health and Human Services, Division of Health Service Regulation, Radiation Protection Section staff successfully demonstrated the ability to coordinate field monitoring activities from the State Emergency Operations Center. Communication capabilities, displays, and supplies were adequate to support emergency operations. The field team coordinator successfully performed communication checks with the field survey teams, mobile laboratory, and the designated sample courier. He gave a detailed briefing to team members before they were deployed and ensured they were kept up to date as plant conditions changed.

The field team coordinator and the State Emergency Response Team coordinator were knowledgeable of the administrative dose limits for emergency workers and the process to authorize radiation exposure in excess of those limits. Ingestion of potassium iodide was authorized by the Radiation Protection Section director for field team members upon notification by the utility that a radiological release was occurring. Field team measurements, including air sample results were promptly shared with dose assessment staff and Radiation Protection Section leadership. The field team coordinator monitored meteorological conditions and directed field team plume traverses, surveys, and sampling at appropriate downwind locations to verify and quantify the radiological release.

Radiation Protection Section staff were pre-positioned in accordance with the extent-of-play agreement. The field team coordinator described the call-down process used by the Radiation Protection Section to activate personnel.

For this capability the following radiological emergency preparedness criteria were met:

1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 4.a.2.

- a. **Level 1 Finding:** None
- b. **Level 2 Finding:** None
- c. **Not Demonstrated:** None
- d. **Prior Level 2 Findings – Resolved:** None
- e. **Prior Level 2 Findings - Unresolved:** None
- f. **Plan Issues:** None

3.3.1.5 Field Monitoring Team Operations

Environmental Response/Health and Safety Capability Summary:

The State of North Carolina field teams successfully demonstrated team activation, use and supply of equipment, the ability to define and sample the radiological plume, and monitor radiological exposure. The two teams consisted of staff from the North Carolina Department of Health and Human Services, Division of Health Service Regulation, Radiation Protection Section. The field monitoring teams rallied at the Radiation Protection Section headquarters. The field monitoring teams were prepositioned and explained their call-down activation process.

The teams were supplied with communication equipment prior to deployment. Much of the equipment and supplies were stored in the response vehicles. Radiological meters were stored at the Radiation Protection Section's office in Raleigh. The teams inventoried, prepared, and checked all equipment, dosimetry and radiological survey instruments prior to field deployment. Each team was equipped with sufficient supplies and equipment to perform field monitoring and sampling. The teams were briefed on plant status, traffic alerts, meteorological conditions, and dosimetry issues by the field team coordinator via the state's radio system. Each team described and demonstrated proper use of dosimetry, exposure monitoring, record-keeping, and the use of potassium iodide. Permanent record dosimeters were simulated during the exercise. Actual response permanent record dosimeters were stored at the headquarters office.

Once deployed, the field teams traversed the plume and obtained air samples as directed by the field team coordinator. One team had some challenges initially locating the centerline of the plume but did return to the centerline to obtain an air sample.

Monitoring and sampling results were forwarded to the field team coordinator stationed with the State Emergency Response Team. Each team closely followed their procedures in demonstrating the collection of a proper air sample. The samples were transported to a background location and counted, and results were transmitted to the field team

the coordinator. The two teams delivered samples to the sample courier and demonstrated proper chain-of-custody procedures.

For this capability the following radiological emergency preparedness criteria were met: 1.a.1, 1.d.1, 1.e.1, 3.a.1, 4.a.3.

- a. **Level 1 Finding:** None
- b. **Level 2 Finding:** None
- c. **Not Demonstrated:** None
- d. **Prior Level 2 Findings – Resolved:** None
- e. **Prior Level 2 Findings - Unresolved:** None
- f. **Plan Issues:** None

3.3.1.6 Mobile Radiological Laboratory

Environmental Response/Health and Safety Capability Summary:

The North Carolina Department of Health and Human Services, Division of Health Service Regulation, Radiation Protection Section mobile laboratory personnel demonstrated the capability to perform the required radiological analyses to support emergency operations. The mobile laboratory and sample control teams were pre-positioned at the Radiation Protection Section's office in Raleigh.

The mobile laboratory team consisted of a mobile laboratory coordinator, assistant laboratory coordinator, gamma spectroscopy analyst, and two dosimetrist/security and contamination control specialists. The sample control team consisted of a sample control supervisor and a sample control technician. The mobile radiological laboratory and sample control areas were equipped and capable of supporting their emergency response function of sample receipt, preparation, and radiological analysis of field samples. The mobile laboratory was also capable of providing communication support and field team coordination operations, as needed.

The field team coordinator, located in the State Emergency Operation Center, provided a radiological briefing to laboratory and field personnel prior to operations. The briefing was thorough and included information on protective equipment, communications, dosimetry, potassium iodide, and general safety. The mobile laboratory and sample control personnel were provided appropriate dosimetry for their intended function. Staff members were knowledgeable of the exposure limits listed on the personal radiation exposure record card.

The mobile laboratory staff performed the required radiological analyses to support protective action decisions. The gamma spectroscopy analyst successfully conducted background and quality control checks, and these checks were determined to be within the recommended parameters for system operation. Two air filters and cartridges were successfully analyzed and reported. The mobile lab and sample control personnel conducted their sample receipt, preparation, and analysis functions in a competent and professional manner.

For this capability the following radiological emergency preparedness criteria were met:

1.a.1, 1.d.1, 1.e.1, 3.a.1, 4.c.1.

- a. **Level 1 Finding:** None
- b. **Level 2 Finding:** None
- c. **Not Demonstrated:** None
- d. **Prior Level 2 Findings – Resolved:** None
- e. **Prior Level 2 Findings - Unresolved:** None
- f. **Plan Issues:** None

3.3.2 Joint Operations

3.3.2.1 Joint Information Center

Public Information and Warning Capability Summary:

Public information officers from Wake, Chatham, Harnett, and Lee counties and the State of North Carolina successfully collaborated to form the Harris Task Force Joint Information System, which provided coordinated and accurate information to the public surrounding the 10-mile emergency planning zone. The offsite organizations used appropriate procedures to notify and mobilize public information staff to initiate activation of the joint information system. Public information staff coordinated with the utility to activate the joint information center in an expedient manner.

Redundant communications systems were available in both the joint information center and the designated media briefing room. Members of the joint information system were observed using multiple means of communication to interact with their state and/or county counterparts, including web-based emergency management and tracking software, cellular telephones, and electronic mail. All communications systems operated without failure; however, some challenges were observed in using the landline telephones within the joint information center.

Radiological Emergency Preparedness Program

After Action Report

2019 Harris Nuclear Plant

Equipment, displays, maps, and supplies were sufficient to support emergency operations in the joint information center. The joint information center workroom had ample space with tables and chairs for state, county, and utility. Laptop computers, cellular telephones, mobile cellular devices, etc., were supplied by the state and counties and brought to the joint information center. Multiple charts and status boards were displayed for situational awareness.

A total of 30 news releases were sent throughout the duration of the exercise. Emergency information provided to the public and news media was accurate and aligned with protective action decisions. There were lapses of time ranging from three to 42 minutes observed in the coordination process for release of public information to the media. Though messages were coordinated properly, inconsistency was observed in the release of some information. The inconsistencies did not have an impact on the successful demonstration of this core capability.

Social media monitoring and posting, as well as rumor control, was handled at the county and state levels. Public inquiry trends were shared amongst the Harris Task Force members and addressed accordingly in media briefings.

Two media briefings were conducted during the exercise; both were accomplished in an expedient manner that delivered prompt and timely information to the media and public. Wake County represented the Harris Task Force, while Duke Energy's site vice president represented the utility. Both individuals provided accurate and concise information. Mock media questions were answered by the appropriate agencies.

For this capability the following radiological emergency preparedness criteria were met: 1.a.1, 1.d.1, 1.e.1, 5.b.1.

- a. **Level 1 Finding:** None
- b. **Level 2 Finding:** None
- c. **Not Demonstrated:** None
- d. **Prior Level 2 Findings – Resolved:** None
- e. **Prior Level 2 Findings - Unresolved:** None
- f. **Plan Issues:** None

3.3.2.2 Waterway Clearance- Lake Jordan**On Scene Security, Protection, and Law Enforcement Core Capability Summary:**

The demonstration for the evacuation of Lake Jordan and the associated portions of the Haw and Deep Rivers was performed by representatives of the North Carolina Wildlife Resources Commission, North Carolina State Parks Police, North Carolina State Highway Patrol, and the U.S. Army Corps of Engineers. A Chatham County Sheriff's Office supervisor described the duties as incident commander, including establishing an incident command post at the Lake Jordan Visitors Center and overseeing waterway clearance operations. The Sheriff's Office provided three patrol boats, the North Carolina Wildlife Resources Commission provided three patrol boats, the North Carolina Highway Patrol Special Operations/Aviation Unit provided rotary aviation support, and the North Carolina State Parks Police ensured evacuation of the Lake Jordan Visitor Center, campgrounds, boat ramps, and other public access areas on land. All personnel were well versed on emergency worker dosimetry use, their mission requirements, and demonstrated their ability to warn the public on Lake Jordan.

For this capability the following radiological emergency preparedness criteria were met: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.d.1.

- a. **Level 1 Finding:** None
- b. **Level 2 Finding:** None
- c. **Not Demonstrated:** None
- d. **Prior Level 2 Findings – Resolved:** None
- e. **Prior Level 2 Findings - Unresolved:** None
- f. **Plan Issues:** None

3.3.2.3 Traffic Control Points**On-Scene Security, Protection, and Law Enforcement Capability Summary:**

North Carolina State Highway Patrol officers discussed their ability to establish and maintain nine traffic control points through via interview. The officers were well versed in establishing and maintaining traffic control point establishment and management. Maps with locations were used to explain how they would manage the evacuation successfully.

The officers were well trained and exhibited sufficient knowledge of dosimetry, personal protective measures, and pertinent aspects related to the ingestion of potassium iodide. They similarly were equipped with information to assist in responding to queries from evacuees regarding location of shelters and reception centers.

They discussed appropriate methods for resolving traffic impediments. This included notifying a supervisor of any impediments and requesting the appropriate equipment be dispatched to the impacted area. The interviewee noted that some impediments can be cleared by a North Carolina State Highway Patrol officer using his/her vehicle to push the impediment to the side of the road. Another option discussed was the ability to request assistance from the Chatham County Transportation Office.

For this capability the following radiological emergency preparedness criteria were met: 1.e.1, 1.d.1, 3.a.1, 3.d.1, 3.d.2.

- a. **Level 1 Finding:** None
- b. **Level 2 Finding:** None
- c. **Not Demonstrated:** None
- d. **Prior Level 2 Findings – Resolved:** None
- e. **Prior Level 2 Findings - Unresolved:** None
- f. **Plan Issues:** None

3.3.3 Risk Jurisdictions

3.3.3.1 Wake County, North Carolina

3.3.3.1.1 Emergency Operations Center

Operational Coordination Capability Summary:

The capability to establish and maintain a unified and coordinated operational structure and process to support a radiological incident at Harris Nuclear Plant was successfully demonstrated by Wake County Emergency Management leadership and staff.

The Wake County warning point successfully received notification of an emergency at the plant, notified key staff, and activated their emergency operations center in accordance with their plans and procedures. The emergency operation center had sufficient equipment, displays, and communications equipment to support emergency response activities and ensured staff had situational awareness. All communications equipment was functional; no communication failures were observed.

The emergency operations center was organized in a manner that allowed staff to effectively coordinate response efforts. Staff section leaders and the public information section were collocated with the command group allowing for immediate emergency operation center decision making and initial approval of messages. The emergency manager and deputy emergency manager were positioned together to ensure decision making and coordination were conducted in an expedient manner.

The deputy emergency manager received and reviewed all emergency notification forms. He initiated and coordinated decision line calls with other counties as well as the state. The deputy emergency manager used checklists and worksheets to ensure consistency in staff briefings and documentation. Most decision line coordination calls were followed by emergency operations center briefings resulting in situational awareness for the staff and the assignment of key tasks to the command staff as well as the logistics, operations and planning sections. The deputy emergency manager ensured precautionary and protective action decisions were coordinated and concurred upon amongst the counties and state. The deputy emergency manager also ensured all relevant, available information was considered before making protective action decisions.

The Wake County Emergency Operations Center manager ensured open verbal communications with operations and health department staff to confirm exposure control actions for emergency workers was timely and necessary. The operations chief rapidly transmitted protective action decisions to area commands by electronic mission tasks and telephone. Verification of radiological protection equipment occurred through a previous staff assistance visit. The emergency medical services, health department, and human services staff confirmed that protective action decisions affecting persons with disabilities or access and functional needs were implemented. Lists of facilities and individuals were reviewed early to ensure transportation needs were available and met. School officials were proactive with early dismissal planning and the conversion of three schools into reception and congregate care centers.

For this capability the following radiological emergency preparedness criteria were met: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.2, 2.c.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2.

- a. **Level 1 Finding:** None
- b. **Level 2 Finding:** None
- c. **Not Demonstrated:** None
- d. **Prior Level 2 Findings – Resolved:** None
- e. **Prior Level 2 Findings - Unresolved:** None
- f. **Plan Issues:** None

Public Information and Warning Capability Summary:

The Wake County public information officer demonstrated the ability to deliver coordinated, reliable and actionable information to the public using clear, consistent, and accessible means.

Following the first protective action decision, sirens were activated by Wake County staff for the entire 10-mile emergency planning zone. The Emergency Alert System and the National Weather Service tone alert radio system was activated by staff in the State Emergency Operations Center. Electronic polling of the siren system indicated no failures within Wake County. The deputy emergency manager stated that in the event of a siren failure, notification to the public in that coverage area would have been carried out with resources sent from the command group to perform backup route alerting.

During the operation of the joint information system, Wake County news releases were approved by the unified command and issued by the public information officer. Pre-scripted news release selection required the approval of the Wake County emergency manager and participants on the decision line. The decision was made to activate the joint information center and transition the public information and instruction efforts to the appropriate location. A total of four news releases were issued from the joint information system out of Wake county. All news releases were reviewed and approved by the deputy director prior to approval from the other risk counties and the State Emergency Operations Center. Each release contained accurate information, and most were published at the appropriate time.

The phone bank personnel fielded numerous calls that demonstrated their ability to track any possible rumors and coordinated with the public information officer to ensure that information was accurate and specific to the county residents within the affected zones.

For this capability the following radiological emergency preparedness criteria were met: 5.a.1, 5.a.3, 5.b.1.

- a. **Level 1 Finding:** None
- b. **Level 2 Finding:** None
- c. **Not Demonstrated:** None
- d. **Prior Level 2 Findings – Resolved:** None
- e. **Prior Level 2 Findings - Unresolved:** None
- f. **Plan Issues:** None

3.3.3.1.2 Area Command Post**Core Capability: Operational Coordination Summary**

The Fuquay-Varina Area Command Post and staging area staff successfully established a unified and coordinated operational structure and process that supported the implementation of the Wake County response. The area command post was responsible for staging resources, equipment distribution, and the establishment and management of traffic control points.

Area command post staff were notified and mobilized in an efficient manner using a call tree. The area command post and staging area had sufficient equipment and communication capabilities for conducting operations and coordinating response actions with the Wake County Emergency Operations Center. Law enforcement representatives established and managed traffic and access control during the emergency to support evacuation. Emergency workers were well coordinated to ensure appropriate resources were available to accomplish the mission.

The Fuquay-Varina Fire Chief was in command of the facility and provided clear guidance and direction throughout the exercise. Frequent staff briefings were conducted as the situation dictated. The fire chief coordinated mission taskings with Wake County and followed up with each relevant agency to ensure actions were being worked and completed. Area command post staff were professional and knowledgeable of their duties and responsibilities.

For this capability the following radiological emergency preparedness criteria were met: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.d.1, 3.d.2.

- a. **Level 1 Finding:** None
- b. **Level 2 Finding:** None
- c. **Not Demonstrated:** None
- d. **Prior Level 2 Findings – Resolved:** None
- e. **Prior Level 2 Findings - Unresolved:** None
- f. **Plan Issues:** None

3.3.3.1.3 Protective Actions for Schools

Critical Transportation Capability Summary:

The Wake County Public School System discussed their ability to execute protective measures for schools through interview with the principals of at-risk schools, representatives of Wake County School System, and Wake County Emergency Management Agency staff. The interview identified that there was close coordination between county agencies and schools, and that plans and procedures at each level were compatible and consistent. School system representatives discussed their processes for training school faculty on their individual and collective responsibilities. Wake County School District uses a computer base call back system to alert parents when children are being re-located to a school outside the emergency planning zone. This system helps to coordinate parents with students by notifying the parents to travel to the alternate school for pick up. The school system has adequate resources to relocate students and to implement any of the other protective action decisions identified in their plans. The designated county agencies and school system are prepared to safeguard students, staff, and faculty of at-risk schools in the event of a nuclear incident at the Harris Nuclear Plant.

For this capability the following radiological emergency preparedness criteria were met:
3.c.2.

- a. **Level 1 Finding:** None
- b. **Level 2 Finding:** None
- c. **Not Demonstrated:** None
- d. **Prior Level 2 Findings – Resolved:** None
- e. **Prior Level 2 Findings - Unresolved:** None
- f. **Plan Issues:** None

3.3.3.1.4 Waterway Clearance – Lake Harris

On Scene Security, Protection, and Law Enforcement Core Capability Summary:

Wake County Sheriff's Office deputies successfully demonstrated this core capability by running the designated routes on Lake Harris and simulating clearing all boats from the waterways in response to a radiological incident at Harris Nuclear Plant.

Wake County Sheriff's Office deputies and the incident commander demonstrated knowledge of plans, procedures, and protocols. From the Lake Harris boat ramp, two deputies prepared two identical boats for the mission. They were outfitted with appropriate equipment for lake clearing operations including audible sirens for alerting

boaters, 800-Megahertz radios for communicating with incident command, lights, sonar, and towing capability for stranded boaters. Deputies demonstrated familiarity of the operation, reporting, and documentation of exposure control equipment. They knew their administrative dose limits for reporting and turn back. They also discussed their procedures for decontamination if needed. Communications systems were functional and worked throughout the exercise to report and coordinate operations with command staff.

Deputies shot red flares at each checkpoint along with verbal warnings to the public to clear the lake. The deputies navigated the lake using global positioning system to ensure all pre-planned checkpoints were covered. Throughout the demonstration, they coordinated with the command post to make sure the lake was properly cleared. The route was completed in a timely fashion.

For this capability the following radiological emergency preparedness criteria were met: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.d.1, 3.d.2

- a. **Level 1 Finding:** None
- b. **Level 2 Finding:** None
- c. **Not Demonstrated:** None
- d. **Prior Level 2 Findings – Resolved:** None
- e. **Prior Level 2 Findings - Unresolved:** None
- f. **Plan Issues:** None

3.3.3.1.5 Emergency Worker & Vehicle Monitoring & Decontamination

Environmental Response/Health and Safety Capability Summary:

Wake County personnel successfully demonstrated the capability to monitor and decontaminate emergency workers, their vehicles and equipment. They coordinated with relevant agencies to ensure situational awareness and support of the operation was maintained. The demonstration was conducted by Wake County Emergency Management, City of Raleigh Fire Department Hazardous Materials Team, and Wake County Fire Prevention.

The Raleigh Fire Department Hazardous Material Program Manager conducted a safety briefing to ensure participants were aware of all safety items, including exposure control equipment and administrative dose limits. All emergency workers in the decontamination operations wore appropriate dosimetry and personal protective equipment. They checked their dosimeter readings every 15 minutes and reported their results. There was adequate signage in the facility which identified station locations and direction of travel for vehicles and personnel. Procedures were read aloud while staff

performed operations to ensure they were done in accordance with plans. Facility staff used good monitoring techniques and decontamination practices throughout the operation. All operations were conducted with a focus on minimizing the spread of contamination. Appropriate records were maintained for all workers reporting to the facility.

For this capability the following radiological emergency preparedness criteria were met:
1.e.1, 3.a.1, 6.b.1

- a. **Level 1 Finding:** None
- b. **Level 2 Finding:** None
- c. **Not Demonstrated:** None
- d. **Prior Level 2 Findings:** None
- e. **Prior Level 2 Findings- Unresolved:** None
- f. **Plan Issues:** None

3.3.3.1.6 Reception and Congregate Care Center

Environmental Response/Health and Safety Capability Summary:

Garner Volunteer Fire Department, Wake County Environmental Services and Radiological Emergency Volunteer Corps personnel successfully demonstrated the ability to perform radiological monitoring and decontamination of evacuees at the Garner Magnet School reception center. The facility was well laid out, minimizing the chance for cross contamination. Reception center workers simulated the wear of appropriate protective clothing and dosimetry, were familiar with dosimeter reading and recording requirements, and were knowledgeable of administrative dose limits. Workers properly set up and used portal monitors and handheld instruments to detect radiological contamination. Responders were knowledgeable of contamination action levels and decontamination procedures and provided information and instructions to evacuees.

The facility was large enough to accommodate additional portal monitors for evacuee monitoring. The state had plans in place to supply additional portal monitors to the reception center. This would be necessary if a significant percentage of those evacuees reporting to the reception center were contaminated.

For this capability the following radiological emergency preparedness criteria were met: 1.e.1, 3.a.1, 6.a.1.

- a. **Level 1 Finding:** None
- b. **Level 2 Finding:** None
- c. **Not Demonstrated:** None
- d. **Prior Level 2 Findings – Resolved:** None
- e. **Prior Level 2 Findings - Unresolved:** None
- f. **Plan Issues:** None

Mass Care Capability Summary:

Wake County Human Services personnel successfully demonstrated the ability to provide services and accommodations for evacuees at the Garner Magnet School shelter. The high school campus had adequate space, sufficient resources, and utilities to support the assigned mission. Cross contamination of the shelter was prevented by use of green colored armbands distributed by the monitoring and decontamination staff. Only evacuees who had been monitored for contamination and decontaminated as necessary, were allowed in the shelter area. Evacuees wishing to stay at the shelter would be registered, with meals, clothing, health services, and sleeping accommodations. Following a decision by the State health director to provide potassium iodide to the public, human services staff would provide proper instructions and dosages to evacuees.

For this capability the following radiological emergency preparedness criteria were met: 1.e.1, 3.b.1, 6.c.1.

- a. **Level 1 Finding:** None
- b. **Level 2 Finding:** None
- c. **Not Demonstrated:** None
- d. **Prior Level 2 Findings:** None
- e. **Prior Level 2 Findings- Unresolved:** None
- f. **Plan Issues:** None

3.3.3.2 Chatham County, North Carolina

3.3.3.2.1 Emergency Operations Center

Operational Coordination Capability Summary:

The Chatham County emergency operations center manager successfully established and maintained a unified and coordinated operational structure that integrated critical stakeholders. Appropriate emergency personnel were mobilized to the emergency operations center and the facility was activated in a timely manner. All personnel were pre-positioned for this exercise.

The Chatham County emergency operations center had ample equipment to support the emergency response and enough rostered personnel to carry out 24-hour operations. Multiple communications systems were established and operated properly throughout the exercise. Maps, displays, monitoring instrumentation, and other supplies were sufficient to support emergency operations. The position specific procedures, the county status board, and the protective actions display provided staff with all of the information and situational awareness needed to effectively carry out their missions and support the response.

The emergency operations center manager was in charge of direction and control at this location. He maintained a proactive approach to managing the incident and included support staff on discussions about response actions. Position-specific procedures and checklists were used to guide discussions with personnel about actions that should be taken if conditions worsened. Appropriate and timely protective action decisions were made as a group within the unified command. The unified command consisted of the four risk counties and North Carolina Emergency Management. Discussions among the risk counties and state concerning protective actions were coordinated and then concurred upon using the decision line. The emergency operations center manager provided frequent briefings to staff to keep them informed of emergency information and protective actions. The briefings were followed by round table discussions with section chiefs to identify actions they were taking and to encourage proactive planning.

Dosimetry, potassium iodide, and associated procedures were distributed to emergency workers by their responsible agency. Agency representatives in the emergency operations center ensured emergency workers performing route alerting and waterway clearance and operating traffic control points and security roadblocks received dosimetry and a radiological briefing before being dispatched. The radiation safety officer kept the emergency operations center staff updated on radiological conditions and reminded the staff to pass on information to emergency workers in the field. The county health department representative stated that potassium iodide had been pre-distributed to the public, and that plans were in place to distribute potassium iodide to evacuees at the reception centers. Individuals with disabilities or access and functional needs who had registered with the county were contacted and provided assistance as required. The

school representative kept the school principals updated on conditions at the Harris Nuclear Plant. He described the procedures to ensure the safety and welfare of students and staff and to keep parents updated.

For this capability the following radiological emergency preparedness criteria were met: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.2, 2.c.1, 3.a.1, 3.b.1, 3.c.1.

- a. **Level 1 Finding:** None
- b. **Level 2 Finding:** None
- c. **Not Demonstrated:** None
- d. **Prior Level 2 Findings – Resolved:** None
- e. **Prior Level 2 Findings - Unresolved:** None
- f. **Plan Issues:** None

Public Information and Warning Capability Summary:

The Chatham County Emergency Operations Center staff successfully demonstrated the ability to deliver coordinated, and reliable information to the public. The Chatham County Emergency Operations Center Manager worked with risk counties, and North Carolina Emergency Operations Centers to coordinate siren sounding, Emergency Alert System activation, and tone alert radio activation. The Chatham County public information staff coordinated with Harnett County, Lee County, Wake County and North Carolina public information staff to draft, approve, and disseminate news releases related to protective actions. Rumor control was effectively managed by the Chatham County Community Emergency Response Team and logs were maintained. The staff ensured accurate information and instructions were delivered to callers. Backup route alerting was effectively discussed by the operations section fire group. Moncure Fire Department had adequate staffing and resources to deliver a message to their assigned area without undue delay.

For this capability the following radiological emergency preparedness criteria were met: 5.a.1, 5.a.3, 5.b.1.

- a. **Level 1 Finding:** None
- b. **Level 2 Finding:** None
- c. **Not Demonstrated:** None
- d. **Prior Level 2 Findings – Resolved:** None
- e. **Prior Level 2 Findings - Unresolved:** None
- f. **Plan Issues:** None

3.3.3.2.2 Protective Actions for Schools**Critical Transportation Capability Summary:**

The Chatham County Public School District staff discussed their ability to provide for the protection of students at Moncure School in an interview with the school district representative in the Chatham County Emergency Operations Center. The representative was knowledgeable of the plans and procedures in place to provide for the safety and security of students and staff. The representative maintained communications with all the school principals in the district to keep them informed of the situation at the Harris Nuclear Plant. The school district representative discussed the procedures in place to notify the parents of actions taken by the school district. The school district representative stated there were sufficient buses and bus drivers on the school campus to accomplish relocation of the students if necessary.

For this capability the following radiological emergency preparedness criteria were met:
3.c.2

- a. **Level 1 Finding:** None
- b. **Level 2 Finding:** None
- c. **Not Demonstrated:** None
- d. **Prior Level 2 Findings – Resolved:** None
- e. **Prior Level 2 Findings - Unresolved:** None
- f. **Plan Issues:** None

3.3.3.2.3 Reception and Congregate Care Center**Environmental Response/Health and Safety Capability Summary:**

Chatham County reception and congregate care was demonstrated as an out of sequence activity on April 18, 2019 at the Northwood High School in Pittsboro, North Carolina. With this demonstration, it was shown that Chatham County had adequate space, resources and supplies to receive, monitor, and decontaminate the public in an event involving the Harris Nuclear Plant. Chatham county elected to exercise their adverse weather procedures which demonstrated their flexibility of the operation. Vehicles entering the facility were quickly directed into parking areas and people exiting the vehicles were properly monitored for contamination and decontaminated if necessary.

Staff members from the North Chatham Volunteer Fire Department and the North Carolina Radiological Emergency Volunteer Corps ensured evacuees were free of contamination while also taking appropriate steps to minimize cross contamination. There were signs, tape, and barricades located throughout the facility to assist with the organized flow of evacuees. All survey meters had been calibrated and were operationally checked prior to use. Emergency workers were knowledgeable of exposure control equipment and knew their administrative limits. During the exercise the workers were reminded via radios to periodically check their dosimeters and report the readings to the Safety Officer.

Facility staff members were well trained and worked well together. They communicated well with the evacuees throughout the exercise and took steps to minimize the anxiety that may be caused by the process.

For this capability the following radiological emergency preparedness criteria were met: 1.e.1, 3.a.1, 6.a.1.

- a. **Level 1 Finding:** None
- b. **Level 2 Finding:** None
- c. **Not Demonstrated:** None
- d. **Prior Level 2 Findings – Resolved:** None
- e. **Prior Level 2 Findings - Unresolved:** None
- f. **Plan Issues:** None

Mass Care Capability Summary:

The shelter services that were performed during response operations to Hurricane Florence in September 2018 demonstrated the county's ability to shelter the public in difficult conditions and therefore, no further demonstration of shelter operations were required. The designated Shelter Manager at Northwood High School provided a walkthrough of the facility during the reception center demonstration.

Chatham County representatives submitted a detailed letter describing the actions that were taken that demonstrated their ability to shelter the population during any type of incident. They described the prompt and timely mobilization of key response organizations, staff, and providers, which are the same organizations that are tasked in the radiological emergency plans. They described the activation of the facility and the establishment of communication links among responding organizations.

Distribution of potassium iodide at the shelter was discussed with the Chatham County public health representative. The Health Department had a sufficient supply of potassium iodide for the expected 10-mile emergency planning zone population. They were very knowledgeable about potassium iodide issuance, ingestion, and adverse reaction symptoms. Eight registered nurses would be available for the shelter staffing for 24 hours operations.

Chatham County was able to effectively demonstrate their ability to provide life-sustaining services to affected populations through real world emergencies and interviews with agencies that have radiological incident specific roles.

For this capability the following radiological emergency preparedness criteria were met: 1.e.1, 3.b.1, 6.c.1.

- a. **Level 1 Finding:** None
- b. **Level 2 Finding:** None
- c. **Not Demonstrated:** None
- d. **Prior Level 2 Findings – Resolved:** None
- e. **Prior Level 2 Findings - Unresolved:** None
- f. **Plan Issues:** None

3.3.3.3 Harnett County, North Carolina

3.3.3.3.1 Emergency Operations Center

Operational Coordination Capability Summary:

Harnett County Emergency Services personnel and county agencies' staff demonstrated the ability to establish and maintain a unified and coordinated operational structure and process that appropriately integrated all critical stakeholders. The emergency services director and staff-maintained communications and coordination with the other counties and the state and made protective actions to protect county residents.

Harnett County Emergency Services used effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner. Although personnel were prepositioned, the director demonstrated how the reverse 911 callout system worked and how the backup process would work. The county had more than two communication systems available and all systems worked throughout the exercise. The emergency operations center had more than enough space, supplies, and equipment to

support operations. Each staff position had a position book that contained the county plans and checklists. The checklists were very extensive and helped personnel who may be unfamiliar with operations to perform their tasks and know what actions to take for different emergency classifications.

The emergency services director and the emergency management coordinator demonstrated good direction and control throughout the exercise. They ensured county agencies were kept informed of changes in plant status and took proactive actions to protect the residents. The county manager and assistant county manager actively participated in the decision-making process throughout the exercise. When the recommendation to administer potassium iodide was made, the director ensured he knew what personnel in Harnett County would need to take it and notified the proper agencies of the decision. Since the evacuation actions did not affect any zones in Harnett County, the director ensured that potassium iodide was not necessary for the residents. He coordinated with the county public health personnel to ensure potassium iodide would be available at the reception centers for evacuees.

The director coordinated with emergency medical services personnel, school officials, and transportation officials concerning the movement of residents with access and/or functional needs and students and staff at affected schools. He simulated taking precautionary actions to relocate students at a school that was outside of the 10-mile emergency planning zone due to many students living inside the affected zone. He would also transport residents with mobility issues as a precaution to ensure that there was not a problem moving them if an evacuation was ordered.

School officials coordinated the early dismissal of a middle school used as a relocation center, as well as the relocation of an elementary school's staff and students to the relocation school. They would coordinate actions with the emergency services director, law enforcement, public health, and the American Red Cross to ensure the location was able to accept the students.

North Carolina Highway Patrol officers coordinated the simulated establishment of traffic control points. The emergency services director discussed that North Carolina Wildlife Rangers would close and clear the Raven Rock Park early due to the size of the park and the difficulty in ensuring all areas of the park were cleared in a timely manner.

For this capability the following radiological emergency preparedness criteria were met: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.2, 2.c.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2.

- a. **Level 1 Finding:** None
- b. **Level 2 Finding:** None
- c. **Not Demonstrated:** None
- d. **Prior Level 2 Findings – Resolved:** None

e. **Prior Level 2 Findings - Unresolved:** None

f. **Plan Issues:** None

Public Information and Warning Capability Summary:

The county emergency operations center staff and the public information officer coordinated with their counterparts in the three other risk counties and the joint information center to ensure the public was notified of protective action decisions. The county public inquiry function was conducted at the county emergency operations center. Two public information support personnel answered the public inquiry telephone line. They periodically consulted with other emergency personnel to ensure they provided accurate information in response to public inquiries. Public inquiries were logged, and trends were noted and discussed with the public information officer. Updated information was included in news releases and social media updates.

Although primary notifications to the public via siren activation and issuance of the Emergency Alert System messages were demonstrated at the lead risk county, Harnett County communications' staff monitored the activations and would notify county personnel of any failures. Emergency workers were interviewed and explained how they would perform backup route alerting if a siren failed. Harnett County had a notebook with standard operating guidelines for backup alert routing, mobile route alerting, and complete loss of siren system capability to guide decision making. Routes would be driven using a public address system to notify the public using a pre-scripted message to announce that an emergency existed at the Harris Nuclear Plant with instructions regarding where to obtain additional information. Placards would also be available for the hearing impaired.

The Emergency Alert System was activated twice. At a Site Area Emergency, the Emergency Alert System was activated for public notification of the emergency. A follow up news release was issued by the county public information officer advising county residents of the emergency. The second Emergency Alert System notification to the public was at a General Emergency. A protective action decision was made to evacuate zones A, I, J, K, L, and M; none of the evacuated zones were in Harnett County. The use of potassium iodide was included as a supplementary action to be taken by the evacuating public. A follow up news release was issued by the county public information officer advising residents of Harnett County that no protective measures were required.

The emergency operations center public information officer successfully developed six news releases for distribution to the public. Once approved by the emergency services director, they were forwarded electronically to the state's web-based automated tracking system. County news releases would be distributed to a pre-defined list of local media outlets. The public information officer described how applicable emergency information would be further disseminated using various social media outlets. Media briefings were conducted at a designated media briefing center located near the joint information center.

For this capability the following radiological emergency preparedness criteria were met: 5.a.1, 5.a.3, 5.b.1.

- a. **Level 1 Finding:** None
- b. **Level 2 Finding:** None
- c. **Not Demonstrated:** None
- d. **Prior Level 2 Findings – Resolved:** None
- e. **Prior Level 2 Findings - Unresolved:** None
- f. **Plan Issues:** None

3.3.3.3.2 Traffic Control Points

On-Scene Security, Protection, and Law Enforcement Capability Summary:

The North Carolina State Highway Patrol officers were interviewed at the emergency operations center concerning the activation and operation of traffic control points and security road blocks. The North Carolina State Highway Patrol would be responsible for ten traffic control points and five security road blocks as specified in the traffic control point and security road block standard operating guidelines.

When the Alert was announced, the trooper notified area troopers by cellular telephone to simulate reporting to Troop B Headquarters and to standby. The officer stated the troopers would receive a dosimetry kit with potassium iodide upon arrival. The emergency worker and informational briefings for the troopers would be conducted by State Highway Patrol personnel at the Troop B Headquarters. The State Highway Patrol would also manage all dosimetry and potassium iodide records. Evacuating waterways, lakes, and rivers, and restricting rail and air traffic would be the responsibility of the State Highway Patrol and managed at its Headquarters. When a General Emergency was declared, the State Highway Patrol representative simulated dispatching the troopers to staff the traffic control points and notifying them to ingest potassium iodide in accordance with protective action decisions.

During the interview, the officer explained how an impediment to evacuation would be resolved. The officer stated he would dispatch a trooper to the impediment site to assess the situation. The trooper would then collaborate with the Harnett County Sheriff's Department, Harnett County Transportation Department, and the radiological officer to plan an alternate route, with care being taken to not establish a detour route through the plume. If a detour was necessary, he would inform the public information officer and provide details for an announcement to alert the public.

For this capability the following radiological emergency preparedness criteria were met:

- 1.e.1, 3.a.1, 3.d.1, 3.d.2
- a. **Level 1 Finding:** None
- b. **Level 2 Finding:** None
- c. **Not Demonstrated:** None
- d. **Prior Level 2 Findings – Resolved:** None
- e. **Prior Level 2 Findings - Unresolved:** None
- f. **Plan Issues:** None

3.3.3.3 Reception and Congregate Care Center

Environmental Response/Health and Safety Capability Summary:

Harnett County reception and congregate care was demonstrated as an out of sequence activity on April 16, 2019, at the Harnett Central Middle School campus in Angier, North Carolina. It was demonstrated that Harnett County had adequate space, resources, and supplies to receive, monitor, and decontaminate the public in an event involving the Harris Nuclear Plant. Vehicles entering the facility were quickly directed into parking areas with space between the vehicles to avoid evacuee contact. People exiting the vehicles were properly monitored for contamination and decontaminated if necessary.

Staff members from the Harnett County Emergency Medical Services and the Buies Creek Volunteer Fire Department took great care to ensure evacuees were free of contamination while taking appropriate steps to minimize cross contamination. There were signs, tape, and barricades located throughout the facility to assist with the organized flow of evacuees. All survey meters had been calibrated in accordance with manufacturer's recommendations and were operationally checked prior to use. Emergency workers were knowledgeable of exposure control equipment and were aware of their administrative limits. During the exercise, the workers were reminded via radios to periodically check their dosimeters and report the readings to the safety officer.

Facility staff members used appropriate monitoring techniques and decontamination measures to protect the health of the public. They were well trained and worked together effectively. They communicated well with the evacuees throughout the exercise and took steps to minimize the anxiety that may be caused by the process.

For this capability the following radiological emergency preparedness criteria were met:

- 1.e.1, 3.a.1, 6.a.1
- a. **Level 1 Finding:** None
- b. **Level 2 Finding:** None

- c. **Not Demonstrated:** None
- d. **Prior Level 2 Findings – Resolved:** None
- e. **Prior Level 2 Findings - Unresolved:** None
- f. **Plan Issues:** None

Mass Care Capability Summary:

Harnett County was able to effectively demonstrate its ability to provide life-sustaining services to affected populations through real world emergencies and interviews with agencies that have roles specific to a radiological incident. The shelter services performed during response operations to Hurricane Florence in September 2018 demonstrated the county's ability to shelter the public in difficult conditions; therefore, no further demonstration of shelter operations was required. The designated shelter manager at Harnett Central Middle School provided a walkthrough of the facility during the reception center demonstration.

Harnett County representatives submitted a detailed letter describing the actions that were taken that demonstrated their ability to shelter the population during any type of incident. They described the prompt and timely mobilization of key response organizations, staff, and providers, which were the same organizations tasked in the radiological emergency plans. They described the activation of the facility and the establishment of communication links among responding organizations. Distribution of potassium iodide at the shelter was discussed with the Harnett County Public Health representative in the emergency operations center.

For this capability the following radiological emergency preparedness criteria were met: 1.e.1, 3.b.1, 6.c.1.

- a. **Level 1 Finding:** None
- b. **Level 2 Finding:** None
- c. **Not Demonstrated:** None
- d. **Prior Level 2 Findings – Resolved:** None
- e. **Prior Level 2 Findings - Unresolved:** None
- f. **Plan Issues:** None

3.3.3.4 Lee County, North Carolina

3.3.3.4.1 Emergency Operations Center

Operational Coordination Capability Summary:

Lee County emergency management officials successfully demonstrated the ability to respond to a radiological emergency at the Harris Nuclear Plant to ensure the safety of the general population and emergency workers. Lee County Emergency Operations Center staff used effective procedures when alerting and notifying emergency personnel. The emergency operations center was activated in a timely manner. The county warning point received the first notification from the utility, which was an Alert Emergency Classification Level. The emergency operations center staff were prepositioned in accordance with the extent of play agreement.

The emergency operations center had sufficient communications capabilities, space, equipment, supplies and resources to respond to an event at the Harris Nuclear Plant. The utility's dedicated notification and decision line was the primary communication used to notify the emergency operations center of each Emergency Classification Level declared. During the exercise the commercial telephone system in the emergency operations center did not work and the staff used cellular telephones as a backup. An 800-Megahertz-2-way radio system was also available as alternative means of communication. The loss of the commercial telephones did not impact the exercise. Operational checks were made with all communication systems prior to the exercise and were used throughout this exercise. Supplies of radiological exposure control equipment were adequate to provide to emergency workers.

The Lee County Emergency Management Director effectively directed the county's response to the incident at the Harris Nuclear Plant. He participated on all decision line calls and coordinated with Chatham, Harnett and Wake Counties and the North Carolina State Emergency Operations Center staff. The decision line was used to confirm receipt of emergency notification forms and to make coordinated decisions on precautionary actions, protective action decisions, news releases, siren sounding, Emergency Alert System messages, and tone alert radio activations. He conducted briefings to the Lee County leadership, who included the county manager, the county attorney and the town manager. He ensured the emergency operations center staff's situational awareness through frequent briefings as warranted by changes in emergency classification levels and other significant events. He also reviewed and approved coordinated Emergency Alert System messages and joint news releases.

Following the declaration of the General Emergency and the notification of a radiological release, the director was involved in the coordinated decision to recommend the ingestion of potassium iodide for emergency workers within the 10-mile emergency planning zone and to the public who resided in the evacuated zones. Lee County's emergency workers had been issued potassium iodide as part of the radiological exposure control kits prior to being deployed to their assigned locations within the 10-mile emergency planning zone.

One of the decisions made was to protect people with disabilities, access and or functional needs. Although Lee County did not have schools, private childcare facilities, nursing homes, hospitals, jails, and other special facilities within their portion of the 10-mile emergency planning zone, all special facilities within the county were notified at Site Area Emergency and directed to prepare to implement their emergency plans. Direct notification to the four Lee County residents living within the 10-mile emergency planning zone who had self-identified as having disabilities, access and or functional needs were made at Site Area Emergency.

Lee County had enough current quantities of potassium iodide stored at the emergency operations center for use by the emergency workers. The state previously distributed potassium iodide for institutionalized individuals and the public in the county. Special populations would have also received their potassium iodide from the state.

The Emergency Management Director and his staff demonstrated the ability to effectively plan and implement their mission during the exercise. All actions taken by the emergency operations center staff during the exercise reflected their plans and procedures. Personnel were experienced and demonstrated that they were well trained and familiar with their responsibilities.

For this capability the following radiological emergency preparedness criteria were met: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.2, 2.c.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2.

- a. **Level 1 Finding:** None
- b. **Level 2 Finding:** None
- c. **Not Demonstrated:** None
- d. **Prior Level 2 Findings – Resolved:** None
- e. **Prior Level 2 Findings - Unresolved:** None
- f. **Plan Issues:** None

Public Information and Warning Capability Summary:

Lee County successfully demonstrated activities associated with primary alerting and notification of the public following the initial decision by authorized offsite emergency officials to notify the public of the emergency at the Harris Nuclear Plant. The initial instructional message to the public was initiated in the State Emergency Operations Center and included the elements required by current guidance. Lee County Public Information Officers in the emergency operations center and the joint information center assisted in the coordination of several Emergency Alert System messages.

The capability to develop, coordinate and disseminate accurate alerts and emergency information to the media and the public was also successfully demonstrated by the emergency operations center staff. The emergency management director maintained a presence on the decision line and coordinated with the State Emergency Operations Center staff, other risk counties, and other responding agencies which assisted in the activation of the public alert and warning system. The county staff concurred on all decisions, including the timing of notifications. Wake County emergency operations center staff simulated the activation of the sirens, while State Emergency Operations Center staff activated the Emergency Alert System and the National Weather Service tone alert radios. Although no siren failures were identified in Lee County, the process of initiating backup and mobile route alerting in the event of a failure was discussed.

The public information officer successfully demonstrated the ability to provide accurate information to the public through the joint information center and to coordinate the development and subsequent release of joint news releases with the risk counties and the State Emergency Operations Center staff. This was completed through the joint information system and continued upon activation of the joint information center. Lee County did not issue a news release or hold a media briefing from their emergency operations center.

Public inquiries were quickly and accurately answered by rumor control staff stationed in the emergency operations center. All inquiries were well coordinated within the center and shared with the public information officers at the joint information center. There were no trends identified by the rumor control staff during this exercise. Social media was not demonstrated during the exercise.

For this capability the following radiological emergency preparedness criteria were met: 5.a.1, 5.a.3, 5.b.1.

- a. **Level 1 Finding:** None
- b. **Level 2 Finding:** None
- c. **Not Demonstrated:** None

d. **Prior Level 2 Findings – Resolved:** None

e. **Prior Level 2 Findings - Unresolved:** None

f. **Plan Issues:** None

3.3.3.4.2 Emergency Worker Decontamination

Environmental Response/Health and Safety Capability Summary:

Staff from the Northview Fire Department and the Sanford Fire Department demonstrated their ability to perform radiological monitoring and decontamination of emergency workers and their vehicles at the Northview Fire Station. Team members were familiar with their duties and worked well together to accomplish the mission.

Signs and cones helped to facilitate traffic flow into the facility. As vehicles entered, they were greeted by facility workers and appropriate documentation was initiated. The interior and exterior of the vehicles were monitored for radiological contamination. The vehicle monitoring team used good monitoring practices to thoroughly survey the vehicle and document its contamination levels. Once all vehicle contamination areas were identified, the vehicle was impounded, and a team member drove the vehicle to the impound parking area.

Monitoring team members surveyed the vehicle occupant multiple times for contamination with both a portal monitor and hand-held survey meters. Portable decontamination shower tents were used to remove the contamination from the emergency worker. The decontamination team member provided adequate supplies and instructions to the emergency worker prior to directing him into the decontamination tent. His personal belongings were bagged and set aside for separate screening. Upon exiting the shower, he was monitored again to ensure contamination had been removed. His belongings were returned to him and transportation was arranged to bring him home.

Team members demonstrated that they were familiar with their survey instruments, dosimetry, and their roles. They took appropriate steps to minimize the spread of contamination within the facility. The team also thoroughly documented the process for record.

For this capability the following radiological emergency preparedness criteria were met: 1.e.1, 3.a.1, 6.b.1

a. **Level 1 Finding:** None

b. **Level 2 Finding:** None

c. **Not Demonstrated:** None

d. **Prior Level 2 Findings – Resolved:** None

- e. **Prior Level 2 Findings - Unresolved:** None
- f. **Plan Issues:** None

3.3.3.4.3 Reception and Congregate Care Center

Environmental Response/Health and Safety Capability Summary:

The out of sequence demonstration for the Lee County reception and congregate care center was conducted on April 18, 2019. Personnel were prepositioned at Southern Lee High Campus, 2301 Tramway Road, Sanford, NC which served to facilitate and adequately accommodated reception and congregate care center operations. The facility layout was consistent with diagrams contained in the All County Standard Operating Guideline for the Reception Center and Congregate Care Facility and had sufficient space, restrooms, and shower facilities. The monitoring and decontamination team was staffed with personnel from Lee County Public Health, Tramway Fire Department, and Sanford Fire Departments.

The safety officer provided a radiological safety briefing to facility staff. Along with the operation section chief, he reviewed procedures and responded to staff questions. Emergency workers were provided adequate equipment and supplies for monitoring and decontaminating evacuees and wore personal protective equipment. They conducted operational checks of radiological monitoring equipment, all of which was recently calibrated. Equipment was issued and tracked by the safety officer. He also provided guidance on exposure control, contamination control, administrative dose limits, and the distribution and use of potassium iodide.

All emergency workers were familiar with the facility setup, equipment, and their roles and responsibilities. Decontamination team members knew how to monitor evacuees, instruct evacuees to properly decontaminate themselves, and what actions to take if they could not be decontaminated. Additionally, Lee County Animal Service provided guidance for accommodating companion pets and animals who accompany evacuees or who might be housed at the site. All procedures were conducted in accordance with established plans and procedures.

For this capability the following radiological emergency preparedness criteria were met:
1.e.1, 3.a.1, 6.a.1.

- a. **Level 1 Finding:** None
- b. **Level 2 Finding:** None
- c. **Not Demonstrated:** None
- d. **Prior Level 2 Findings – Resolved:** None
- e. **Prior Level 2 Findings - Unresolved:** None

f. Plan Issues: None**Mass Care Capability Summary:**

Lee County is capable of providing evacuees shelter, security, food, water, sleeping space, sanitation facilities, and medical care. Shelter for evacuees from the 10-mile emergency planning zone surrounding the plant within the county would be established at Site Area Emergency Classification Level. Preparation to open the shelters would be initiated at Emergency Classification Level Alert. Lee County Public Health services was responsible for the coordination of all government and non-government agencies involved with sheltering. Southern Lee High School is an American Red Cross certified shelter with capacity for 320 evacuees. The high school campus has adequate space, sufficient resources, and utilities to support the assigned mission. Cross contamination of the shelter was prevented by use of green colored armbands distributed by the monitoring and decontamination staff. Only evacuees with armbands who had processed through the reception desk and monitoring station were allowed inside the shelter facility. In accordance with county plans, potassium iodine is stored with the County Health Department and would be moved to the shelter and distributed by the Health Department when ordered to do so.

For this capability the following radiological emergency preparedness criteria were met: 1.e.1, 3.b.1, 6.c.1.

- a. **Level 1 Finding:** None
- b. **Level 2 Finding:** None
- c. **Not Demonstrated:** None
- d. **Prior Level 2 Findings – Resolved:** None
- e. **Prior Level 2 Findings - Unresolved:** None
- f. **Plan Issues:** None

Section 4: Conclusion

Officials and representatives from the State of North Carolina; the risk counties of Wake, Chatham, Harnett, and Lee, and Duke Energy, as well as many other agencies and volunteers participated in the exercise. The cooperation and teamwork of all participants was apparent throughout the exercise. The State of North Carolina and the risk counties activated their emergency operations centers in a timely manner and provided effective direction, control, and coordination of response activities. All offsite response organizations demonstrated knowledge of their emergency response plans and procedures and successfully implemented them.

This exercise was used to validate a new public information approach that would allow more flexibility with the state and risk counties to provide coordinated information early in the incident. The new procedures more closely reflect how public information officers respond to other types of incidents and incorporate newer technology. The new approach worked well during the exercise and should be continued in the future.

The Federal Emergency Management Agency would like to acknowledge the efforts of the many individuals who planned, prepared for, and participated in this exercise.

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Radiological Emergency Preparedness Program

After Action Report

2019 Harris Nuclear Plant

Appendix A: Exercise Timeline

Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received or Action Was Taken							
		SERT/SEOC	RPS Dose Assessment	Central Branch	Wake County	Chatham County	Harnett County	Lee County	JIC
Unusual Event	-	-	-	-	-	-	-	-	-
Alert	0827	0835	0835	0836	0837	0838	0838	0837	-
Site Area Emergency	1017	1024	1024	1034	1024	1024	1024	1025	1025
General Emergency	1203	1215	1215	1215	1214	1214	1215	1214	1215
Simulated Rad. Release Started		1215	1155	1220	1214	1214	1215	1214	1215
Simulated Rad. Release Ended		Ongoing	Ongoing	Ongoing	Ongoing	Ongoing	Ongoing	Ongoing	Ongoing
Facility Declared Operational		0925	0830	0930	0846	0845	0900	0845	0950
Exercise End		1338	1338	1413	1346	1337	1322	1341	1347
Declaration of State of Emergency									
Local		-	-		0932	0900	0900	0930	1032
State		0930	0930	0930	0930	0930	0930	1016	1032
11040									
1st Protective Action Decision: Stay Tuned		1040	1040	1040	1040	1040	1040	1040	1045
1st Siren Activation		1053	-	1053	1053	1053	1053	1053	1053
1st EAS Message		1058	-	1058	1058	1058	1058	1058	-
1st Tone Alert		1108	-	1108	1108	1108	1108	1108	-
2nd Protective Action Decision: Evacuate Zones: A, I, J, K, L, M		1235	1235	1235	1235	1235	1235	1235	1240
2nd Siren Activation		1247	-	1247	1247	1247	1247	1247	1247
2nd EAS Message		1253	-	1253	1253	1253	1253	1253	-
2nd NWS Message		1258	-	1258	1258	1258	1258	1258	-
KI Ingestion Decision:									
Field Teams		-	1205	-	-	-	-	-	-
State Emergency Workers		1219	1219	-	-	-	-	-	-
County Emergency Workers and General public in zones: A, I, J, K, L, M		1235	1235	1235	1235	1235	1235	1235	1254

Radiological Emergency Preparedness Program

After Action Report

2019 Harris Nuclear Plant

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Radiological Emergency Preparedness Program

After Action Report

2019 Harris Nuclear Plant

Appendix B: Exercise Key Leaders and Evaluators

Location/Venue	Evaluation Team	Core Capability Evaluated at each Venue
State of North Carolina: NCEM Director/SERT Leader: Mike Sprayberry		
SEOC	*Mike Dolder Walt Cushman Bruce Swiren Charles Williams (OJT)	Operational Coordination, Public Information and Warning
Central Branch Office	Gerald McLemore	Operational Coordination
Dose Assessment FMT Management	Jill Leatherman John Fill	Situational Assessment Environmental Response/Health and Safety
FMT Operations (FT 1, 2 & drone)	Deb Blunt Bart Ray	Environmental Response/Health and Safety
Mobile Radiological Laboratory	Keith Earnshaw	Environmental Response/Health and Safety
JIC Duke Building Raleigh	*Libby Adkins Henry Christiansen	Public Information and Warning
Lake Jordon Waterway Clearance (OOS) and TCP Interview	Robert Nash	Public Information and Warning On-Scene Security, Protection & Law Enforcement
Wake County: Director- Josh Creighton		
EOC	*Quintin Ivy PJ Nied Brenda Rembert	Operational Coordination, Public Information and Warning
Fuquay-Varina Area Command Post	Robert Nash	Operational Coordination
Apex Area Command Post Training only	Lorenzo Lewis	Operational Coordination
Wake County School May 1, 2019 TBD	Lorenzo Lewis	Critical Transportation
Lake Harris Waterway Clearance (OOS)	Robert Nash	On-Scene Security, Protection & Law Enforcement
Garner High School RCCC (OOS)	John Fill Michael Dolder JT Ackermann Matt Bradley	Environmental Response/Health and Safety Mass Care
Wake County Emergency Worker and Vehicle Decontamination (OOS)	Robert Nash	Environmental Response/Health and Safety
Chatham County: Director- Steve Newton		
EOC	*Matt Bradley James Greer Rosemary Samsel	Operational Coordination, Public Information and Warning
Chatham County School	James Greer	Critical Transportation
Northwood High School RCCC (OOS)	Matt Bradley John Fill Michael Dolder JT Ackermann	Environmental Response/Health and Safety Mass Care

Radiological Emergency Preparedness Program

After Action Report

2019 Harris Nuclear Plant

Location/Venue	Evaluation Team	Core Capability Evaluated at each Venue
Harnett County: EM Director – Larry Smith		
EOC	*Joe Harworth Deshun Lowery Marcy Campbell Clark Duffy	Operational Coordination, Public Information and Warning
Emergency Worker and Vehicle Decontamination (OOS- training only)	Lorenzo Lewis Michael Dolder JT Ackermann	Environmental Response/Health and Safety
Harnett Middle School RCCC (OOS)	Matt Bradley Lorenzo Lewis JT Ackermann	Environmental Response/Health and Safety Mass Care
Lee County: EM Director- Shane Seagroves		
EOC	*Glenda Bryson Danny Loomis Roy Smith David Ortman	Operational Coordination, Public Information and Warning
Southern Lee High School RCCC (OOS)	*Robert Nash John Fill Lorenzo Lewis Michael Dolder JT Ackermann Matt Bradley	Environmental Response/Health and Safety Mass Care
Emergency Worker Decon Northview Fire Station	*Matt Bradley Robert Nash John Fill	Environmental Response/Health and Safety
Backup Route Alerting Training Only	Robert Nash	Public Information and Warning

Appendix C: Extent of Play Agreement

Purpose

This Extent of Play Agreement (XPA) identifies the conditions to guide the development, conduct, control, and evaluation of the Harris Nuclear Plant (HNP) Graded Exercise, as agreed to by the members of the Harris Task Force and the Exercise Director for the North Carolina Division of Emergency Management.

Overview

All scheduled activities are expected to be demonstrated in accordance with respective plans, policies, standards, and procedures, as they would be in an actual event except where indicated and follow the 2016 Radiological Emergency Preparedness (REP) Manual. If an activity is not an exception, the activity is to be demonstrated as described in the plans, standards or suggested operating guides (SOGs) and/or procedures (SOPs). Any issue or discrepancy arising during exercise play may be re-demonstrated if allowed by the RAC Chair or as listed herein. Re-demonstration of activities may occur when determined not to disrupt exercise play. Activity re-demonstration is determined and approved by NCEM lead controller and designated FEMA person.

The State of North Carolina and Duke Energy have prepared goals addressing respective obligations. Both reflect the necessary interactions between the State and local governments as well as Duke Energy as set forth in the North Carolina Radiological Emergency Response Plan for Nuclear Plants.

Standards & References

Exercise Evaluation Criteria

Capability: Operational Coordination

Establish and maintain a unified and coordinated operational structure and process that appropriately integrates all critical stakeholders and supports the execution of core capabilities.
Capability Target: Emergency Operations Management

Participants: *State, Wake, Chatham, Harnett and Lee Counties*

Critical Task: OROs use effective procedures to alert, notify, and mobilize emergency personnel to activate facilities in a timely manner (Criterion 1.a.1).

Performance Measure: Responsible OROs must demonstrate the capability to receive notification from the licensee or alternate sources to determine a course of action and communicate that action to key emergency personnel, within a timely manner, in accordance with existing plans, policies, and/or procedures.

The state may exercise their Continuity of Operations Plan (COOP) and alternative Emergency Operations Center facilities during this exercise. Further details will be included on an addendum to this XPA.

NOTE: Participants will be pre-positioned.

NOTE: PIOs will pre-position at Wake County Administration Building
337 South Salisbury Street
Room G31 Raleigh, NC 27601

Agree

Critical Task: Key personnel with leadership roles for the Offsite Response Organizations (ORO) provide direction and control to that part of the overall response effort for which they are responsible (Criterion 1.c.1).

Performance Measure: Leadership personnel must demonstrate the ability to carry out essentials management functions as identified in local plans, policies, and/or procedures.

The state may exercise their Continuity of Operations Plan (COOP) and alternative Emergency Operations Center facilities during this exercise. Further details will be included on an addendum to this XPA.

Agree

Critical Task: At least two communications systems are available and communication links are established and maintained with appropriate locations. Communications capabilities managed in support of emergency operations (Criterion 1.d.1).

Performance Measure: Responsible OROs must demonstrate that a primary or back-up communications systems is functional at all times for use by emergency response personnel, licensee and other agencies as outlined in existing plans, policies, and/or procedures.

Agree

Critical Task: Equipment, maps, displays, signage, monitoring instruments, dosimetry, KI, and other supplies are sufficient to support emergency operations (Criterion 1.e.1).

Performance Measure: Responsible OROs should use display maps and other media, which depicts clear evacuation routes, preselected radiological sampling and monitoring points, evacuation areas, decontamination facilities, reception, and congregate care centers, shelters all in accordance with existing plans, policies and/or procedures.

State of North Carolina
Location: State EOC
1636 Gold Star Dr
Raleigh, NC 27607

Wake County
Location: WCEM 13th Floor
337 S. Salisbury Street
Raleigh, NC 27601

Date: April 30, 2019
Time: 0800

Lee County
Location: Lee County Emergency Service
204 West Courtland Drive
Sanford, NC 27330
Date: April 30, 2019
Time: 0800

Chatham County
Location: Chatham County EOC
297 West Street
Pittsboro, NC 27312
Date: April 30, 2019
Time: 0800

Date: April 30, 2019
Time: 0800

Harnett County
Location: Harnett County ESC
1005 Edwards Brothers Drive
Lillington, NC 27546
Date: April 30, 2019
Time: 0800

The state may exercise their Continuity of Operations Plan (COOP) and alternative Emergency Operations Center facilities during this exercise. Further details will be included on an addendum to this XPA.

Agree

Capability Target: Protective Action Decision Making

Participants: *State, Wake, Chatham, Harnett and Lee Counties*

Critical Task: OROs use a decision-making process, considering relevant factors and appropriate coordination, to ensure that an exposure control system, including the use of KI (if appropriate), is in place for EWs including provisions to authorize radiation exposure in excess of administrative limits or PAGs (Criterion 2.a.1).

Performance Measure: OROs must demonstrate the capability to make decisions concerning authorization of exposure levels in excess of pre-authorized levels, and the decision-making process for recommending pre and post radiological protective measures and medications, within the guidelines of existing plans, policies and/or procedures.

Agree

Critical Task: A decision-making process involving consideration of appropriate factors and necessary coordination is used to make PADs for the public (including the recommendation for the use of KI, if ORO policy) (Criterion 2.b.2).

Performance Measure: OROs must demonstrate the decision-making process to analyze information and make initial protective action decisions in a timely manner appropriate to the incident, based upon provided information from multiple external sources (e.g. incident

command, plant) PARs from the utility and ORO staff. Decision-makers must demonstrate the capability to change protective action decisions based on changes to the ongoing threat, the response, and/or site conditions. Processes should follow existing plans, policies and/or procedures.

Agree

Critical Task: Development, activation and communication of protective action decisions for groups of persons with disabilities and access/functional needs (Criterion 2.c.1).

Performance Measure: OROs must demonstrate the decision-making process to determine and/or implement PADs for people with disabilities, functional needs, institutional individuals, and schools based upon situational information received. This decision-making process should follow existing plans, policies and/or procedures.

Agree

Capability Target: Protective Action Implementation

Participants: *State, Wake, Chatham, Harnett and Lee Counties*

Critical Task: OROs issue appropriate dosimetry, KI, and procedures, and manage radiological exposure to EWs in accordance with the plans/procedures. EWs periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. OROs maintain appropriate record keeping of the administration of KI to EWs (Criterion 3.a.1).

Performance Measure: OROs must demonstrate the capability to provide emergency workers with appropriate direct-reading and permanent record dosimetry, dosimetry chargers, KI, and instructions for using and storing these items, in accordance with existing plans, policies and/or procedures (Staff Assistance Visit)

Wake County
Location: WCEM 13th Floor
Services
337 S. Salisbury Street
Raleigh, NC 27601
Date: April 15, 2019
Time: 1000

Harnett County
Location: Harnett County Emer.

1005 Edwards Brothers Drive
Lillington, NC 27546
Date: April 16, 2019
Time: 1000

Lee County
Location: Lee County Emergency Services
204 West Courtland Drive
Sanford, NC 27330
Date: February 28, 2019
Time: 1000
Meeting)

Chatham County
Location: Chatham County EOC
Street: 297 West Street
City: Pittsboro, NC 27312
Date: April 15, 2019
Time: 1230 (AFTER Task Force

Agree

Critical Task: KI and appropriate instructions made available in case a decision to recommend use of KI is determined. Appropriate record keeping of the administration of KI for institutional individuals and the public to be maintained (Criterion 3.b.1).

Performance Measure: OROs must demonstrate the capability to record required information related to the ingestion of radio protective medications, including the date and time, for institutional individuals, general public, and/or emergency workers, using guidelines found in plans, policies and/or procedures.

Agree

Critical Task: Implementation of Precautionary and/or protective action decisions for persons with disabilities and access/functional needs other than schools within areas subject to protective actions. (Criterion 3.c.1).

Performance Measure: OROs must demonstrate the decision-making process to alert and protect those persons that may be impaired due to institutional or other confinement. This should include shelter-in-place and evacuation with consideration for transportation for these groups of people, following guidance found in existing plans, policies and/or procedures.

Agree

Critical Task: OROs/School officials implement protective actions and/or protective actions for schools (Criterion 3.c.2).

Performance Measure: OROs and/or school officials must demonstrate the ability to implement precautionary and/or protective action decisions for students and staff for all levels of education, according to existing plans, policies, and/or procedures.

*Chatham County
Location: Chatham County EOC
297 West Street
Pittsboro, NC 27312
Date: April 30, 2019
Time: On-scenario*

NOTE: Chatham County's School Representative that responds to the EOC during the exercise will be interviewed for this performance measure; not the school staff.

Interviews with Counties Only

Agree

Critical Task: Appropriate traffic and access control process to be determined and accurate instructions provided to traffic and access control personnel. (Criterion 3.d.1).

Performance Measure: OROs must demonstrate the decision-making process to select, establish a plan of action and staff appropriate traffic and access control points, including alternative routes, using current conditions and PADS within a timely manner, following existing plans, policies and/or procedures.

Agree

Critical Task: Impediments to evacuation identified, communicated, and resolved (Criterion 3.d.2).

Performance Measure: An inject creating an impediment will be created and provided by a minimum of one (1) county, remaining in place during the evacuation long enough that re-routing of traffic is required and will also result in decision-making and coordination of public messaging to communicate alternate routes of evacuation as applicable.

Agree

Capability: Situational Assessment

Provide all decision makers with decision-relevant information regarding the nature and extent of the hazard, any cascading effects, and the status of the response.

Capability Target: Protective Action Decision Making

Participants: **Radiation Protection Service**

Critical Task: OROs use a decision-making process, considering relevant factors and appropriate coordination, to ensure that an exposure control system, including the use of KI, is in place for EWs including provisions to authorize radiation exposure in excess of administrative limits or PAGs (Criterion 2.a.1).

Performance Measure: OROs authorized to send emergency workers into plume exposure pathway (EPZ) areas, must demonstrate a capability to comply with emergency worker exposure limits based upon existing plans, policies and/or procedures.

Agree

Critical Task: A decision-making process involving consideration of appropriate factors and necessary coordination is used to make PADs for the public (including the recommendation for the use of KI, if ORO policy) (Criterion 2.b.2).

Performance Measure: Decision-makers to demonstrate the capability to establish and/or change protective actions based upon situational information provided regarding the magnitude of the ongoing threat, the response, and/or site conditions, following existing plans, policies, and/or procedures.

Agree

Participants: *NC Radiation Protection Service*

Critical Task: Appropriate PADs are determined from available information on plant condition, field monitoring data, and licensee and ORO dose projections, as well as knowledge of onsite and offsite environmental conditions (Criterion 2.b.1).

Performance Measure: 1) ORO must demonstrate the capability to use the appropriate means described in existing plans, policies, and/or procedures providing information for the development of PARs for decision-makers, based upon available information and recommendations provided by the licensee, as well as field monitoring data when available. ORO must also consider any release and meteorological data provided by the licensee.

OROs must demonstrate the capability in describing acceptable methods to validate and communicate actual or potential doses, dependent upon scenario.

Agree

Capability: Public Information and Warning

Deliver coordinated, prompt, reliable, and actionable information to the whole community with clear, consistent, accessible, culturally and linguistically appropriate methods to relay information regarding any threat or hazard, as appropriate, the actions taken and the assistance available, dependent on scenario.

Capability Target: Emergency Notification and Public Information

Participants: *NCEM, Wake, Chatham, Harnett and Lee Counties*

Critical Task: OROs use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner (Criterion 1.a.1).

Performance Measure: Responsible OROs must demonstrate the capability to receive notification from the licensee or alternate sources to determine a course of action and communicate that action to key emergency personnel, within a timely manner, in accordance with existing plans, policies, and/or procedures.

*NOTE: PIOs will pre-position at Wake County Administration Building
337 South Salisbury Street
Room G31
Raleigh, NC 27601*

Agree

Critical Task: Equipment, maps, displays, signage, monitoring instruments, dosimetry, KI, and other supplies are sufficient to support emergency operations (Criterion 1.e.1).

Performance Measure: Responsible OROs should use maps and other display media, which provides a clear image to support any/all messages or information. This should include any communication for transient population, institutional individuals, people with disabilities, functional needs population, the public and others, to help them understand the problem and the determined protective measures, following existing plans, policies, and/or procedures.

Messages need to depict clear evacuation routes, preselected radiological sampling and monitoring points, evacuation areas, decontamination facilities, reception, and congregate care centers, shelters all in accordance with existing plans, policies and/or procedures.

The state may exercise their Continuity of Operations Plan (COOP) and alternative Emergency Operations Center facilities during this exercise. Further details will be included on in an addendum to this XPA.

Agree

Critical Task: Impediments to evacuation identified, communicated, and resolved (Criterion 3.d.2).

Performance Measure: An inject creating an impediment will be created and provided by a minimum of one (1) county. This impediment is to remain in place during the evacuation, long enough that re- routing of traffic is required which will cause the coordination and dissemination of a message to the public to communicate alternate routes of evacuation.

NOTE: Chatham County will provide message to Controller for dissemination.

Agree

Critical Task: Activities associated with primary alerting and notification of the public are completed in a timely manner following the initial decision by authorized offsite emergency officials to notify the public of an emergency. The initial instructional message to the public must include, as a minimum, the elements required by current FEMA REP Guidance (Timely: The responsible ORO personnel/representatives demonstrate actions to disseminate the appropriate information/instructions with a sense of urgency and without undue delay) (Criterion 5.a.1).

Performance Measure: Responsible OROs must demonstrate the message-sharing process for sending crafted messages to the public through Emergency Alerting System (EAS), local and national news outlets and any other common information sharing systems as identified in existing plans, policies, and/or procedures.

Agree

Capability Target: Waterway Warning

Participants: Wake and Chatham Counties, Chatham County Sheriff's Office, NC Wildlife Resources Commission, NC State Parks-- Jordon Lake, Wake County Sheriff's Office, State Highway Patrol-Aviation Unit, B. Everett Jordon Dam & Lake-Army Corps of Engineers

Critical Task: Backup alert and notification of the public is completed within a reasonable time following detection by the ORO of a failure of the primary alert and notification system (Criterion 5.a.3).

Performance Measure: Responsible OROs must demonstrate the ability to provide instructional messages to the public located in open waterways of all types regarding the impending situation as identified in existing plans, policies and/or procedures.

Wake County
 Location: Holleman's Crossing
 4420 Bartley-Holleman Road
 Holly Springs, NC 27529
 Date: April 17, 2019
 Time: 0900 (Training)

Chatham County
 Location: Chatham EOC
 297 West Street
 Pittsboro, NC 27312
 Date: April 17, 2019
 Time: 0800

Chatham County
 Location: Jordan Lake
 297 West Street
 Pittsboro, NC 27312
 Date: April 17, 2019
 Time: 1300 (Demonstration)

- Wake County Sheriff's Office, Chatham County Sheriff's Office, NC Wildlife Resources will put boats on the water
- NCSHP aviation support will demonstrate activities and be evaluated dependent upon weather conditions and operational availability.
- State Parks will demonstrate two vehicles in the park of their choice.
- The Chatham County EOC is the back-up Incident Command Post.
- Communications with Wake County will be simulated, due to times and locations.

Agree

Capability Target: Backup Route Alerting

Participants: *Wake, Chatham, Harnett, and Lee Counties*

Critical Task: Back-up alert and notification of the public in completed within a reasonable time following detection by the ORO of a failure of the primary alert and notification system (Criterion 5.a.3).

Performance Measure: Responsible OROs must demonstrate the back-up physical means of alerting and notifying the general public in exception area or areas of system alerting failure, according to existing plans, policies, and/or procedures.

Designated counties below are to demonstrate Backup Route Alerting as scheduled during out of sequence activities. Designated counties will receive scenario information at the time of the demonstration.

Note: Each county will provide the most current siren status report.

Participants: *Lee County (Demonstration), Wake, Chatham and Harnett Counties (Interview)*

Wake County - Interview

Location: Wake County Emergency Mgmt.
Department 337 S. Salisbury Street
Raleigh, NC 27601
Date: April 30, 2019
Time: 0800

Lee County - Demonstration

Location: Deep River Fire
5107 Deep River Road
Sanford, NC 27330
Date: April 16, 2019
Time: 1900

Chatham County - Interview

Location: Chatham County EOC
297 West Street
Pittsboro, NC 27312
Date: April 30, 2019
Time: 0800

Harnett County - Interview

Location: Harnett Co EMS
1005 Edwards Brother Drive
Lillington, NC 27546
Date: April 30, 2019
Time: 0800

Agree

Capability Target: Public Information

Participants: *NCEM, Wake, Chatham, Harnett, and Lee Counties*

Critical Task: Ensure OROs provide accurate emergency information and instructions to the public and the news media in a timely manner (The responsible ORO personnel/representatives demonstrate actions to disseminate the appropriate information/instructions with a sense of urgency and without undue delay) (Criterion 5.b.1).

Performance Measure: 1) Responsible OROs must demonstrate the capability to activate and maintain a coordinated messaging process involving key jurisdictions and organizations. OROs to demonstrate the ability to communicate with local and/or national news outlets and common local information sharing systems, as identified in existing plans, policies, and/or procedures.

2) News conferences will be conducted as necessary based on the exercise scenario. At least one news conference must be demonstrated for evaluation purposes.

NOTE: *Messages developed during the exercise will not be released to the public or news media. Release of public information will be simulated by posting of news releases to the PIO board in NCSPARTA and through demonstration of exercise news conferences.*

Agree

Capability: Environmental Response/Health and Safety

Ensure the availability of guidance and resources to address all hazards including hazardous materials, acts of terrorism, and natural disasters in support of the responder operations and the affected communities.

Capability Target: Field Team Management, Measurement and Analysis

Participants: *NC Radiation Protection*

A prop to be used for Permanent Record Dosimetry and KI issuance throughout the exercise.

Critical Task: Equipment, maps, displays, monitoring instruments, dosimetry, KI, and other supplies are sufficient to support emergency operations (Criterion 1.e.1).

Performance Measure: Responsible OROs must demonstrate and/or provide agency methodology regarding all inventories of KI. Methodology and demonstration should focus on location(s) of assigned items, inspections, operational checks, calibration, replacement schedules, maintenance and repairs along with any other additional information. Existing plans, policies, and/or procedures are to provide guidance.

Agree

Critical Task: Field teams (two or more) are managed to obtain sufficient information to help characterize the release and to control radiation exposure (Criterion 4.a.2).

Performance Measure: Responsible OROs must demonstrate the capability to brief FMTs regarding predicted plume location/direction, travel speed, and exposure control procedures prior to deployment. Briefing will include determined location(s) to take measurements and/or samples and times as necessary to provide sufficient information to characterize the plume and its impacts, following existing plans, policies, and/or procedures.

Agree

Critical Task: OROs issue appropriate dosimetry, KI, and procedures, and manage radiological exposure to Field Teams in accordance with the plans/procedures. Field Teams periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. OROs maintain appropriate record keeping of the administration of KI to EWs (Criterion 3.a.1).

Performance Measure: Responsible OROs must demonstrate the capability to provide emergency workers with appropriate direct-reading and permanent recording dosimetry, dosimeter chargers, radio protective medications, and instructions for using listed items, as outlined in existing plans, policies, and/or procedures.

Agree

Critical Task: Field teams (two or more) are managed to obtain sufficient information to help characterize the release and to control radiation exposure (Criterion 4.a.2).

Performance Measure: Responsible OROs must demonstrate the capability to brief FMTs regarding predicted plume location/direction, travel speed, and exposure control procedures prior to deployment. Briefing will include determined location(s) to take measurements and/or samples and times as necessary to provide sufficient information to characterize the plume and its impacts, following existing plans, policies, and/or procedures.

Agree

Critical Task: Ambient Radiation measurements taken and recorded for appropriate or designated locations, radioiodine, and particulate samples are collected. Teams will move to an appropriate low-background location to determine whether any significant (as specified on the plan and/or procedures) amount of radioactivity has been collected on the sampling media (Criterion 4.a.3).

Performance Measure: Responsible FMTs must demonstrate the capability to take and report measurements of ambient radiation to field team coordinator, dose assessment team, or other appropriate authority, following direction provided within existing plans, policies, and/or procedures.

Agree

Critical Task: The laboratory is capable of performing required radiological analyses to support PADs (Criterion 4c1).

Performance Measure: Laboratory staff must demonstrate the capability to follow appropriate policies and/or procedures for receiving samples, including logging information, preventing contamination of laboratory (ies), preventing build-up of background radiation due to stored samples, preventing cross contamination of samples, preventing samples that may spoil (e.g.

milk), and keeping track of sample identity. In addition, the laboratory staff must demonstrate the capability to prepare samples for conducting measurements.

NC Radiation Protection Services
Location Lab
5505 Creedmoor Road
Suite 100
Raleigh, NC 27612

Agree

Capability Target: Emergency Worker Decontamination

Participants: *Wake, Chatham, Harnett and Lee Counties*

Critical Task: Equipment, maps, displays, monitoring instruments, dosimetry, KI, and other supplies are sufficient to support emergency operations (Criterion 1.e.1).

Performance Measure: Responsible OROs must demonstrate and/or provide agency methodology regarding all inventories of KI. Methodology and demonstration should focus on location(s) of assigned items, inspections, operational checks, calibration, replacement schedules, maintenance and repairs along with any other additional information. Existing plans, policies, and/or procedures are to provide guidance.

Agree

Critical Task: OROs issue appropriate dosimetry, KI, and procedures, and manage radiological exposure to Emergency Workers in accordance with the plans/procedures. Emergency Workers periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. OROs maintain appropriate record keeping of the administration of KI to EWs (Criterion 3.a.1).

Performance Measure: Responsible OROs must demonstrate the capability to provide emergency workers with appropriate direct-reading and permanent recording dosimetry, dosimeter chargers, radiodine protective medications, and instructions for using listed items, as outlined in existing plans, policies, and/or procedures.

NOTE: Radiation Protection Field Team members will not wear PPE during the exercise (i.e., no donning or doffing to be evaluated).

Agree

Critical Task: The facility/ORO had adequate procedures and resources to accomplish monitoring and decontamination of emergency workers and their equipment and vehicles (Criteria 6.b.1).

Performance Measure: Responsible OROs must demonstrate the capability to conduct radiological monitoring and decontamination operations on workers, equipment, and vehicles in accordance with existing plans, policies, and/or procedures.

Wake County

Location: PNC Arena
Dept.

1400 Edwards Mill Road
Raleigh, NC 27607

Date: April 18, 2019

Time: 1200

Harnett County

Location: Angier Black River Fire

309 N. Broad Street, E
Angier, NC 27501

Date: April 15, 2019

Time: 1900

Lee County

Location: Northview Fire Dept.

104 Perkinson Road
Sanford, NC 27330

Date: April 15, 2019

Time: 1830

Agree

Capability: Critical Transportation

Provide transportation (including infrastructure access and accessible transportation services) for response priority objectives, including the evacuation of people and animals, and the delivery of vital response personnel, equipment, and services into the affected areas.

Capability Target: Protective Action Implementation

Participants: *Wake and Chatham Counties*

Critical Task: OROs/School officials implement protective actions and/or protective actions for schools (Criterion 3.c.2). *Include public and private schools, kindergartens, and preschools.*

Performance Measure: OROs and/or public school officials must demonstrate the ability to implement precautionary and/or protective action decisions for students and staff for all levels of education, according to existing plans, policies, and/or procedures.

Wake County

Location: Fuquay High School
201 Bengal Boulevard

Fuquay-Varina, NC 27526

Date: May 1, 2019

Time: TBD

Chatham County

Location: Chatham County EOC
297 West Street

Pittsboro, NC 27312

Date: April 30, 2019

Time: On-scenario

NOTE: Chatham County's School Representative that responds to the EOC on-scenario will be interviewed for this performance measure; not the school staff.

Agree

Capability: On-Scene Security, Protection and Law Enforcement

Ensure a safe and secure environment through law enforcement and related security and protection operations for people and communities located within affected areas and traditional and atypical response personnel engaged in lifesaving and life-sustaining operations.

A prop to be used for Permanent Record Dosimetry and KI issuance throughout the exercise.

Participants: *NCDPS, NC SHP, NC Wildlife Resources Commission, Wake, Chatham, Harnett, and Lee Counties (Interview)*

Capability Target: *Traffic Control Points / Access Control / Waterway Clearance*

Critical Task: At least two communications systems are available, at least one operates properly, and communication links are established and maintained with appropriate locations. Communications capabilities managed in support of emergency operations (Criterion 1.d.1).

Performance Measure: Responsible OROs must demonstrate that a communications system is fully functional at all times with/between emergency response personnel, licensee and other agencies as outlined in existing plans, policies, and/or procedures.

Agree

Critical Task: Equipment, maps, displays, signage, monitoring instruments, dosimetry, KI, and other supplies are sufficient to support emergency operations (Criterion 1.e.1).

Performance Measure: 1) Responsible OROs should use display maps and other media during briefings, which depicts clear evacuation routes, waterway routes, preselected radiological sampling and monitoring points, evacuation areas, decontamination facilities, reception centers, and shelters all in accordance with existing plans, policies and/or procedures.

2) Responsible OROs must provide methodology regarding all inventory of monitoring equipment (Dosimetry, KI, etc.). This is to include, but not limited to inspection, operational checks, calibration, replacement schedule, locations assigned, maintenance and repairs, as outlined in existing plans, policies and/or procedures.

The state may exercise their Continuity of Operations Plan (COOP) and alternative Emergency Operations Center facilities during this exercise. Further details will be included on an addendum to this XPA.

Agree

Critical Task: OROs issue appropriate dosimetry, KI, and procedures, and manage radiological exposure to EWs in accordance with the plans/procedures. EWs periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. OROs maintain appropriate record keeping of the administration of KI to Field Teams (Criterion 3.a.1).

Performance Measure: Responsible OROs must demonstrate the capability to provide emergency workers with appropriate direct-reading and permanent recording dosimetry, dosimeter chargers, KI, and instructions for using listed items, as outlined in existing plans, policies, and/or procedures.

Agree

Critical Task: Determined appropriate traffic and access control measures with accurate instructions provided to traffic and access control personnel (Criterion 3.d.1).

Performance Measure: OROs must understand the process to select, establish a plan of action and staff appropriate traffic and access control points, including alternative routes, using current conditions and PADS within a timely manner, following existing plans, policies and/or procedures.

Agree

Capability: Mass Care

Provide life-sustaining services to the affected population with a focus on hydration, feeding and sheltering to those who have the most need as well as support for reunifying families.

A prop to be used for Permanent Record Dosimetry and KI issuance throughout the exercise.

KI will not be issued/given to evacuee role players during the demonstration

Participants: *State, Wake, Chatham, Harnett and Lee Counties*

Capability Target: Support Operations and Facilities

Critical Task: Equipment, maps, displays, signage, monitoring instruments, dosimetry, KI, and other supplies are sufficient to support emergency operations (Criterion 1.e.1).

Performance Measure: Responsible OROs must demonstrate the capability to provide means to communicate to possible evacuees the locations within reception centers, specific care locations, congregate care activities and actions the evacuees should take, using life-like or electronic displays to help with understanding the message. All displays should be consistent with existing plans, policies, and/or procedures.

Agree

Critical Task: OROs issue appropriate dosimetry, KI, and procedures, and manage radiological exposure to EWs in accordance with the plans/procedures. EWs periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. OROs maintain appropriate record keeping of the administration of KI to EWs (Criterion 3.a.1).

Performance Measure: Responsible OROs must demonstrate the capability to provide and recommend consumption of KI to emergency workers and institutional individuals, in accordance with existing plans, policies, and/or procedures.

Agree

Critical Task: Provide KI with appropriate instructions for its recommended use to those required to ingest KI. Appropriate record keeping of the administration of KI for institutionalized individuals and the public initiated and maintained (Criterion 3.b.1).

Performance Measure: Responsible OROs must demonstrate the decision-making process to determine which jurisdictional people are to have and take specific recommended radio protective medications, based upon information provided in accordance with existing plans, policies, and/or procedures.

Agree

Critical Task: The reception center facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees (Criterion 6.a.1).

Performance Measure: Responsible OROs must demonstrate the capability to mobilize personnel and adequate resources to maintain the necessary elements of reception center operations, utilizing existing plans, policies, and/or procedures.

Wake County

Location: Garner High School

2101 Spring Drive

Garner, NC 27529

Date: April 17, 2019

Time: 1300

Wake County

Location: Northwood High School

310 Northwood High School Road

Pittsboro, NC 27312

Date: April 18, 2019

Time: 1300

Lee County

Location: Southern Lee High School

2301 Tramway Road

Sanford, NC 27332

Date: April 17, 2019

Time: 1800

NOTE: Chatham County Public Health Department will be performing a separate exercise during the Out of Sequence activities at the Northwood High School Reception Center. "Operation Potassium Iodide (KI) Dispensing" exercise will ongoing while the Reception Center is being evaluated by FEMA. This is a "no fault" exercise.

NOTE: Chatham County has received an exemption letter for Congregate Care demonstration. The Shelter Manager will be available for a walkthrough of facility evaluation during the out of sequence timeframe. The Public Health representative will be evaluated on-scenario for potassium iodide (KI) questions.

NOTE: Harnett County has received an exemption letter for Congregate Care demonstration. The Shelter Manager will be available for a walkthrough of facility evaluation during the out of sequence timeframe. The Public Health representative will be evaluated on-scenario for potassium iodide (KI) questions.

Agree

Critical Task: Managers of congregate care facilities demonstrate that the centers have resources to provide services and accommodations consistent with planning guidelines. Managers demonstrate the procedures to assure the activation of a screening-decontamination process for evacuees before they enter congregate care facilities (Criterion 6.c.1).

Performance Measure: Responsible OROs must demonstrate protection action measures to determine safe environment for people (all categories), animals and workers. This includes but not limited to monitoring, decontamination (people, vehicles, and items), evaluation, and other actions as determined by existing plans, policies, and/or procedures.

Agree

Critical Task: The reception center facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees (Criterion 6.a.1).

Performance Measure: Responsible OROs must demonstrate the capability to provide radiological monitoring for people, and vehicles during an activation of jurisdiction reception center(s), in accordance with existing plans, policies, and/or procedures.

Agree

Capability: Public Health, Healthcare and EMS

Provide lifesaving medical treatment via Emergency Medical Services and related hospital operations to avoid additional diseases and injury by providing targeted public health, medical, and decontamination support and products to all affected populations.

KI will not be issued or given to evacuee role players during the demonstration

Participants: *Wake, Chatham, Harnett and Lee Counties*

Capability Target: Transportation and Treatment of Contaminated Injured Individuals

Critical Task: OROs use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner (Criterion 1.a.1).

Performance Measure: Demonstrate the ability to staff and maintain a 24-hour response, primary and back-up communications systems, personnel notification systems, facilities, and operate within developed local plans, policies and/or procedures.

Wake County-Site
 Location: Shearon Harris Road &
 New Hill Holleman Road
 Apex, NC
 Date: April 18, 2019
 Time: 0900

Harnett County-Site
 Location: Harnett Middle School
 2529 Harnett Central Road
 Angier, NC 27501
 Date: April 16, 2019
 Time: 1830

Chatham County
 Location: Northwood High School
 310 Northwood High School Road
 Pittsboro, NC 27312
 Date: April 18, 2019
 Time: 1330
 Injured to be treated at site

Lee County
 Location: Southern Lee High School
 2301 Tramway Road
 Sanford, NC 27332
 Date: April 17, 2019
 Time: 1830
 Injured to be treated at site

NOTE: Chatham County's First Health of the Carolinas EMS assigned to the facility will respond to a contaminated and injured evacuee, treat injured at site, package the patient and load into awaiting ambulance. Evaluation will be complete at this point.

NOTE: Chatham County will issue dosimetry to all required emergency workers.

NOTE: Chatham County will have only one person demonstrate donning and doffing of the PPE.

Agree

Capability Target: Treatment of Contaminated Injured Individuals

Critical Task: Facilities are sufficient to support the emergency response (Criterion 1.b.1).

Performance Measure: Responsible OROs must demonstrate the ability to activate emergency operations within the medical facilities for use by mobilized medical personnel upon their arrival, following existing plans, policies and/or procedures.

Agree

Critical Task: Key personnel with leadership roles for the Offsite Response Organizations (ORO) provide direction and control to that part of the overall response effort for which they are responsible (Criterion 1.c.1).

Performance Measure: Leadership personnel must demonstrate the ability to carry out essential management functions as identified in local plans, policies, and/or procedures.

Agree

Critical Task: At least two communications systems are available, at least one operates properly, and communication links are established and maintained with appropriate locations. Communications capabilities managed in support of emergency medical operations (Criterion 1.d.1).

Performance Measure: Responsible OROs must demonstrate that a communications system is fully functional at all times with/between emergency response personnel, licensee and other agencies as outlined in existing plans, policies, and/or procedures.

Agree

Critical Task: OROs issue appropriate dosimetry, KI, and procedures, and manage radiological exposure to EWs in accordance with the plans/procedures. EWs periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. OROs maintain appropriate record keeping of the administration of KI to EWs (Criterion 3.a.1).

Performance Measure: OROs must demonstrate the capability to provide emergency medical workers with appropriate direct-reading and permanent record dosimetry, dosimetry chargers, radio protective medications, and instructions for using and storing these items, in accordance with existing plans, policies and/or procedures.

Agree

Critical Task: The emergency medical treatment facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and treatment injured persons (Criterion 6.a.1).

Performance Measure: Responsible OROs must demonstrate the capability to mobilize medical personnel and adequate resources to maintain the necessary elements of emergency medical treatment facility, utilizing existing plans, policies, and/or procedures.

Agree

Critical Task: The facility/ORO has the appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and medical services to contaminated injured individuals (Criterion 6.d.1).

Performance Measure: 1) Responsible OROs must demonstrate the capability to receive, monitor, decontaminate, and treat an exposed; injure person(s) occurring during a radiological release, following existing plans, policies, and/or procedures.

2) Responsible OROs must demonstrate the capability of primary and back-up medical treatment staff and local medical treatment facilities by identifying locations, staff specifications, facility procedures, dosimetry use, and other critical elements as identified in existing plans, policies, and/or procedures.

Wake County-Treatment
Location: Wake Med Health Hospital
3000 New Bern Avenue
Raleigh, NC 27502
Date: April 18, 2019
Time: 1000

Harnett County-Treatment
Location: Betsy Johnson Hospital
800 Tilghman Drive
Dunn, NC 28334
Date: April 16, 2019
Time: 1930

Agree