# After Action Report

Harris Nuclear Plant

Radiological Emergency Preparedness Exercise

Exercise Date: April 25, 2023

Final

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# Executive Summary

On April 25, 2023, the offsite response organizations for the Harris Nuclear Plant 10-mile emergency planning zone participated in a hostile action-based exercise. FEMA Region 4 Radiological Emergency Preparedness Program staff evaluated that exercise, which also included out of sequence activities conducted from April 3 through April 7, 2023. This report outlines that exercise and out of sequence activities.

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 FEMA policies and guidance concerning the exercise of state and local radiological emergency response plans and procedures. 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.

Officials and representatives from participating agencies and organizations demonstrated knowledge of their emergency response plans and procedures, and successfully implemented them during the exercise and out of sequence activities. All jurisdictions met their exercise objectives and successfully demonstrated the corresponding core capabilities identified in Section 2.2 of this report. There were no level 1 or level 2 findings identified during this exercise or the out of sequence activities.

It was apparent that a great deal of training and practice was conducted by the offsite response organizations to successfully demonstrate their ability to protect the health and safety of the public. All participating agencies provided the necessary support and resources to respond to an incident at the Harris Nuclear Plant. FEMA wishes to acknowledge the efforts of the many individuals who participated in the exercise and made it a success.

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# Section 1: Exercise Overview

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|---|---|---|
| Exercise Name | 2023 Harris Nuclear Plant Radiological Emergency Preparedness Exercise | |
| Type of Exercise | Full Scale Exercise | |
| Exercise Date | April 25, 2023 | |
| Out of Sequence Date | April 3 – April 7, 2023 | |
| Program | Radiological Emergency Preparedness Program | |
| Mission Area | Response | |
| Scenario Type | Hostile Action Based Exercise | |
| Participating Organizations | See Appendix C for the list of participating organizations | |
| Locations | See Appendix D for the extent of play agreement and exercise locations | |
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# Section 2: Exercise Design Summary

## 2.1 Exercise Purpose and Design

FEMA administers the Radiological Emergency Preparedness Program pursuant to the regulations found in Title 44 CFR parts 350, 351, 352, 353 and 354. CFR 350 codifies 16 planning standards that form the basis for radiological emergency response planning for the licensee, state, local, tribal, and territorial 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 16 planning standards for the licensee. 44 CFR 350 sets forth the mechanisms for the formal review and approval of state, local, tribal, and territorial government radiological emergency response plans and procedures by FEMA. One of the Radiological Emergency Preparedness Program cornerstones established by these regulations is the biennial exercise of offsite response capabilities. During these exercises, affected state, local, tribal, and territorial governments demonstrate their abilities to implement their plans and procedures to protect the health and safety of the public in the event of a radiological incident at a nuclear plant.

The results of this exercise, together with reviews of the radiological emergency response plans and verification of the periodic requirements set forth in NUREG-0654/FEMA-REP-1, Rev 2, the annual letter of certification, and staff assistance visits, enabled FEMA to provide a statement with the transmission of the final after-action report to the United States Nuclear Regulatory Commission. This statement verifies that the affected state and local plans and preparedness 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 incident; and (2) capable of being implemented.

## 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 Radiological Emergency Preparedness Program requirements and objectives. The capability targets to be demonstrated were negotiated with the state of North Carolina and risk counties. The core capabilities scheduled for demonstration 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.
- 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.
- Public Information and Warning: Deliver coordinated, prompt, reliable, and actionable information to the whole community using clear, consistent, accessible, and culturally and linguistically appropriate methods to effectively relay information regarding any threat or hazard, as well as the actions being taken and the assistance being made available, as appropriate.

- 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.
- 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.
- 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.
- Public Health, Healthcare, and Emergency Medical Services: Provide lifesaving medical treatment via Emergency Medical Services and related operations and avoid additional disease and injury by providing targeted public health, medical and behavioral health support, and products to all affected populations.

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

- Objective 1: Emergency Operations Management - 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: Exposure Control - Demonstrate the ability to manage radiological exposure and dose to emergency workers.
- Objective 3: Alert and Notification - 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. Provide and maintain reliable communication with emergency personnel.
- Objective 4: Detect, Measure, Sample, Analyze, and Assess - Demonstrate the ability to perform plume phase measurements and sampling, field monitoring teams' management, plume-phase analysis and dose assessment, and laboratory operations.
- Objective 5: Operate – Demonstrate the ability to establish appropriate traffic and access controls; provide monitoring, decontamination, sheltering, and registration of evacuees.

## 2.3 Exercise Scenario

The following is a summary of the scenario developed by Duke Energy to drive exercise play.

The Control Room receives a call from the Nuclear Regulatory Commission of a probable airborne threat. When the aircraft impacts the fuel handling building, a fuel bundle that was previously being moved within the spent fuel pool drops into the fuel storage racks causing a release to the environment. The newest fuel in the spent fuel pools is approximately 30 days old. The aircraft impact damages the spent fuel pool liners causing a large leak.

Fire and injuries are reported to the Control Room.

As part of a coordinated attack on the site, an active shooter is discovered on Shearon Harris Road.

The water level in the spent fuel pool continues to drop and radiation levels continue to rise eventually to levels that are too dangerous to allow personnel near the area. The Control Room declares a General Emergency ECL with PARs to shelter zones A and K (two miles around and five miles downwind).

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# Section 3: Analysis of Capabilities

## 3.1 Exercise Evaluation and Results

This section contains the results and findings of the evaluation of all jurisdictions and functional entities that participated in the April 25, 2023, plume exposure pathway exercise and out of sequence activities from April 3 through April 7, 2023.

Each jurisdiction and functional entity were evaluated based on the demonstration of core capabilities, Radiological Emergency Preparedness Program objectives, and capability targets as delineated in the FEMA Radiological Emergency Preparedness Program Manual dated December 2019. Capability targets are listed by number and the demonstration status.

## 3.2 Summary Results of Exercise Evaluation

The Homeland Security Exercise and Evaluation Program 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 capability targets under specified conditions and to specific performance standards. Core capabilities form the foundation of the FEMA Region 4 Radiological Emergency Preparedness Program evaluations. Each jurisdiction's standalone capability summaries are provided below.

## 3.3 Jurisdictional Summary Results of Exercise Evaluation

### 3.3.1 State Jurisdiction

#### 3.3.1.1 State of North Carolina

Operational Coordination Capability Summary:

The North Carolina State Emergency Response Team successfully demonstrated and maintained a unified and coordinated operational structure in support of the risk counties throughout the simulated response to a hostile action-based incident at the Harris Nuclear Plant.

State staff established communication with federal, state, and county agencies to facilitate requests for information and resources. 24-hour watch point staff successfully completed the alert, notification, and mobilization of emergency operations center staff. Staffing rosters were available to support 24-hour operations. The emergency operations center personnel were notified to respond to their assigned work location via email and text messages. The emergency operations center was declared operational after key staff arrived at the facility. The facility had sufficient space, supplies, and equipment to support emergency response operations. State Emergency Response Team leaders were able to establish and maintain communication links with various state agencies and maintained continuously and redundant communication links throughout the exercise. The primary communications system was the utility notification system. The secondary was facsimile, cellular phone, e-mail, text messaging, and internet systems.

Utilizing the North Carolina Emergency Management Standard Operating Guide for a Rapidly Escalating Event, the state emergency response leader coordinated the state activities and

decisions required for the hostile action-based emergency at Harris Nuclear Plant. The planning leader coordinated and facilitated facility briefings; and the operations leader ensured that team members and personnel were completing assigned tasks at each increase in emergency classification levels. The decision line was used to maintain situational awareness and conduct briefings amongst the state and four risk counties. Along with key state agency staff, the state emergency response team leader; and the four risk county directors participated in timely conference calls after receipt of each new emergency notification form from the plant. Emergency notification form information was discussed, and protective action decisions were agreed upon by all counties and agencies.

The protective action decision to shelter in place all zones A through N, sound sirens, and provide an Emergency Alert System message was concurred upon by all stakeholders. Additional precautionary actions included a stay tuned message, agricultural message, waterway clearance, park closures, school closures, and rail/flight restrictions. As the radiation release increased and plant conditions deteriorated, the decision was made to evacuate zones A and K while continuing to shelter in place all remaining zones. North Carolina Department of Health and Human Service, Radiation Protection Section, also recommended all emergency workers within the 10-mile emergency planning zone ingest potassium iodide. Ingestion for the general public was not recommended since the type and levels of radiation were below protective action guidelines as determined by the state radiation protection section.

Following each decision line call or approximately every hour, state emergency operations center briefings were conducted by the planning section chief. The briefings included incident updates, plant status, and meteorological conditions. During these briefings, agency activities and other critical information was shared by team members.

The radiation protection section and public health staff helped manage emergency workers exposure and dose. They assessed the need for emergency workers to ingest potassium iodide and managed exposure data for all emergency workers that were issued permanent record dosimeters. All emergency workers in the 10-mile emergency planning zone were instructed to ingest potassium iodide because the calculated value for iodine exceeded the state's trigger level. The recommendation was discussed, and the state public health officer completed the "Recommendation for use of Potassium Iodide" form that included the impacted zones and the basis for the decision.

For this core capability the following radiological emergency preparedness capability targets were met: 1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, and 3.1.

Public Information and Warning Capability Summary:

The North Carolina Emergency Management Public Information Officers and support staff activated their portion of the alert and notification system and provided accurate emergency information and instructions to the public and media in a timely manner.

Following each of the two protective action decisions, the outdoor warning system and Emergency Alert System were activated. Wake County was the lead agency for siren activation, and the state was the lead agency for the Emergency Alert System activation. The Emergency Alert System messages were pre-scripted and contained information on all possible protective action decisions; however, the state warning point officers modified each emergency notification message to include only the protective action decision for accuracy.

The first Emergency Alert System message identified a release of radioactive material, the affected zones, and shelter-in-place instructions. The second message was issued due to a General Emergency and instructed residents in zones A and K to evacuate and all other zones to shelter-in-place. The state simulated broadcasting the Emergency Alert System messages and sending the message to the National Weather Service in Raleigh, for broadcast. The Emergency Alert System messages included the four FEMA required elements.

The lead public information officer coordinated public information activities between the joint information system, the joint information center, and the state emergency operations center. The state, county, and utility public information officers maintained communication through the joint information system and the use of a public information conference line. North Carolina Emergency Management issued one press release before the joint information center activation. After activation of the joint information center, press releases were issued by the Harris Task Force Regional Emergency Response Team, representing Chatham, Harnett, Lee, and Wake Counties, and the state of North Carolina. The public information officer at the state participated in one joint media briefing.

The 2-1-1 Center handled rumor control and public inquiries for the state at their facility. The public information officer said a 2-1-1 liaison would be at the state emergency operations center. The liaison would obtain information from the lead public information officer and provide the information to the 2-1-1 call takers. The information would be provided through the 2-1-1 web-based system. The information included the Harris Nuclear Plant 2023 Emergency Preparedness Information Booklet, press releases, Emergency Alert System messages, and press conference information. The liaisons would also be able to monitor trends and rumors via the web-based system and provide that information to the public information officers to address in press releases or media briefings.

For this core capability the following radiological emergency preparedness capability targets were met: 3.2 and 3.3.

#### 3.3.1.2 Central Branch Office

Operational Coordination Capability Summary:

The North Carolina Emergency Management Central Branch Office's Regional Coordination Center staff successfully demonstrated the capability to mobilize staff, maintain direction and control, support protective actions, and communicate effectively. The regional coordination center was activated in a timely manner by mobilizing appropriate response support personnel using an electronic notification system. The Central Branch Manager was notified of the incident by the North Carolina Emergency Management 24-hour watch. All personnel were prepositioned in the alternate facility in accordance with the extent of play agreement.

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

Primary communication was a video conference system. Communications systems were redundant and functional. The alternate communication system, the conference line, was successfully tested and incurred no failures. The Branch Manager directed the setup of the state conference line while the primary communications system was inoperative. The Branch was well equipped with supplies and equipment to facilitate emergency response

For this core capability the following radiological emergency preparedness capability targets were met: 1.1, 1.2, 1.3, and 3.1.

#### 3.3.1.3 Dose Assessment

Situational Assessment Capability Summary:

The North Carolina Department of Health and Human Services, Radiation Protection Section personnel successfully demonstrated the ability to collect and analyze data, project doses to members of the public and emergency workers, and provide protective action recommendations to decision-makers in response to a radiological incident at the Harris Nuclear Plant. Team members assessed plant conditions and field data and effectively communicated the results.

The radiation protection section director had the overall responsibility for dose assessment and radiation protection section protective action recommendations to the state of North Carolina and risk counties. The state emergency response team coordinator provided direction to dose assessment and field team coordination personnel. The dose assessment technical advisor provided leadership to two dose assessment team members. Radiation protection section personnel were prepositioned at the state emergency operations center per the extent of play agreement.

Team members also included two personnel responsible for continuously monitoring meteorological data and plant parameters via a computer link to obtain real time (simulated) plant status. The team followed trends for rising unit vent effluent release rates. The dose assessment team used two different computer models to perform calculations of projected radiation dose at varied downwind distances. Liaisons at the emergency operations facility provided utility dose projections to the state dose assessment technical advisor. The dose assessment team made comparisons with utility calculations with acceptable agreement and all dose projections were below protective action guidelines for both total effective dose and thyroid dose for adults and children.

The state emergency response team coordinator used the utility radioiodine release data to calculate an iodine activity level beyond the site boundary. The calculated value exceeded the state's trigger level for recommending potassium iodide to emergency workers. Based on the calculated iodine activity, the state health director and radiation protection section director recommended that all emergency workers in the 10-mile emergency planning zone ingest potassium iodide. The recommendation was discussed on the group decision line and was communicated to the field team coordinator for dissemination to field team personnel.

Following the declaration of a General Emergency, the state emergency response team coordinator and radiation protection section director evaluated the utility's recommended protective actions for sheltering of downwind protective action zones. Although there were no protective action guidelines exceeded, the decision-makers determined that downwind zones

would be evacuated, and all other zones would be sheltered. Protective action decisions were made by the risk counties.

After field data was available from the two field teams, the dose assessment technical advisor performed a dose projection using iodine air sample results with acceptable agreement to the dose projections calculated using release rate data. The state emergency response team coordinator demonstrated the calculation of an incident-specific dosimeter correction factor, which remained unchanged from the default value of two. Several computer applications were available to aid the team including an alternate method of manually calculating dose projections in addition to the two computer models.

The state emergency response team coordinator and radiation protection section director reviewed dose projections for child thyroid dose and determined that potassium iodide was not necessary for the evacuating public. The child thyroid dose threshold, used by the state of North Carolina, did not exceed protective action guidelines beyond the site boundary. Throughout the exercise, information obtained by the dose assessment and field monitoring coordination team members was promptly communicated to the radiation protection section director for input in decision-making processes.

For this core capability the following radiological emergency preparedness capability targets were met: 1.3, 1.4, and 4.5.

#### 3.3.1.4 Field Monitoring Team Management

Environmental Response/Health and Safety Capability Summary:

The North Carolina Department of Health and Human Services, Radiation Protection Section field team coordinators successfully demonstrated the ability to provide direction and control for field monitoring teams, the sample courier, and provided mobile laboratory oversight. They used a collaborative exposure control decision-making process and managed field team radiation exposure ensuring appropriate measures were taken to protect the health and safety of the emergency workers. The field team coordinators were located at the state emergency operation center and ensured appropriate radiation survey data was collected for use by dose projection personnel. The field team coordinator managed and deployed two field monitoring teams, the sample courier, and mobile laboratory staff.

The field team coordinators were prepositioned at radiation protection headquarters. The radiation protection section typically was activated through mass communication from the section director or designee via cellular phones and redundant notification using text and email. The radiation protection section staff set up laptops and maps once onsite at the state emergency operations center. The field team coordinator explained the capability of 24-hour staffing using multiple state employees, civil support teams, and support from neighboring states.

The state emergency operations center was equipped with supplies, computers, satellite radio/phones, cellular telephones, landline telephones, and printer/facsimile machines. There were no communication failures observed between the field team coordinators and the field teams. Communication was verified via “repeat back” methods to ensure accurate transfer of information. There were communication system delays, but they did not impact emergency operations; disruptions were quickly rectified with alternate means. They also had maps, charts, procedure books, and an incident management software program for monitoring the field monitoring teams’ radiation survey and air sample information.

Prior to the deployment of the field teams to field survey staging areas, the mobile emergency response laboratory supervisor issued dosimetry/survey instrumentation and a safety briefing Additionally the field team coordinator provided an exposure control briefing and established radio communication with the field teams. The field team coordinator used meteorological data to characterize the plume direction, plume edges, and plume centerline to determine the appropriate areas to preposition the field teams. Two field monitoring teams were deployed to locations approximately two and seven miles downwind at the projected plume centerline and instructed to traverse both plume edges. There was coordination with law enforcement on safety and security of field team personnel considering the hostile action events.

Radiation surveys and air samples were taken at assigned locations in accordance with the standard operating procedures at locations that showed greater than two times a normal background radiation level. When surveys and air samples were completed, the field team coordinator instructed teams to go to low background locations, purge iodine air sample media, then meet with the sample courier to transfer samples to the mobile laboratory for sample media analysis. Ambient radiation measurements were entered into the incident management software program that could be viewed by designated personnel.

The field team coordinator informed the radiation protection section director of field survey measurements for use by dose assessment personnel. Field survey data was compared for projected dose assessments. The incident management software program was successfully integrated as a management tool for this operation.

The field team coordinator requested field team dosimetry readings to track radiation exposure and ensured that the field team doses were within administrative radiation exposure limits. The field team coordinator was able to explain the process for approving a worker to exceed their administrative radiation exposure limit. The decision to ingest potassium iodide was implemented for the field team personnel based on the radioiodine source term.

For this core capability the following capability targets were MET: 1.1, 2.1, 2.2, 3.1, 4.1

#### 3.3.1.5 Field Monitoring Team Operations

Environmental Response/Health and Safety Capability Summary:

The North Carolina Department of Health and Human Services, Radiation Protection Section field monitoring team personnel successfully demonstrated the capability to mobilize, communicate effectively, and control exposures, and to detect, measure, and sample a radioactive plume for an emergency at Harris Nuclear Plant. Each team consisted of two staff members and were deployed from the section headquarters in Raleigh, North Carolina.

The field team personnel were prepositioned at radiation protection headquarters. Typical activation would be through mass communication from the section chief or designee. Each field monitoring team prepared equipment, performed operational checks on radiation survey instruments, took necessary background radiation measurements, prepared dosimeters, and conducted communication checks prior to deployment. The field monitoring teams received a briefing on the emergency, safety precautions, and exposure control and were assigned initial deployment locations from the field team director via the state radio system and data entry and tracking program.

The briefing from the field team coordinator included information on proper use of dosimetry, exposure limits, dose reporting, and the use, record keeping, and safety information regarding radioprotective drugs (potassium iodide). Each team member was equipped with two direct reading dosimeters, a simulated permanent record dosimeter, potassium iodide, and exposure records. During the briefing, dose limits for reporting, turn back values, and the frequency of when to record accumulated dose were provided. Team members were advised that more frequent checks were needed once a minimal amount of dose was obtained. Throughout the exercise, the field teams read and recorded dose when advised to do so by the field team. When the field teams received instruction to ingest potassium iodide, each team member simulated taking the required dose, recorded the time and date of ingestion, and informed the field team coordinator the medicine had been taken.

Once deployed, the teams used survey instruments while traversing areas downwind of the Harris Nuclear Plant. Instruments were constantly monitored as the teams attempted to locate and sample the radiological plume. The teams were able to determine the centerline of the plume by determining the highest radiation level as they traversed their assigned locations. An air sample was collected at the centerline to determine iodine concentration in the plume. Survey readings were conducted at the beginning, midpoint, and end of the sample collection to verify the teams remained in the plume during the sample collection. Proper techniques were used to collect, measure, and package the samples. The teams transferred the samples to a courier for transport to the mobile laboratory utilizing proper chain of custody procedures. Once completed the teams communicated with the field team coordinator that the samples were transferred.

Multiple communication systems were used during the exercise. The primary communication was via the state radio system. One team could not transmit via radio and utilized the backup communications of the chat function on the data entry program and called on the cellular telephone. Satellite telephones were available and would be activated in an actual emergency.

For this core capability the following radiological emergency preparedness capability targets were met: 1.1, 2.2, 3.1, and 4.2.

#### 3.3.1.6 Mobile Laboratory

Environmental Response/Health and Safety Capability Summary:
During the Harris Nuclear Plant exercise, the North Carolina Department of Health and Human Services, Radiation Protection Section mobile laboratory personnel demonstrated effective and efficient receipt, preparation, and analysis of field samples. The radiation protection section provided six personnel and staffed all required functions at the mobile laboratory site located at the North Carolina Radiation Protection Section Headquarters in Raleigh, North Carolina. Three additional radiation protection section staff participated as trainees. The mobile laboratory, related equipment, and personnel were prepositioned per the extent of play agreement. Alert, notification, and mobilization of personnel were evaluated by interview, and in accordance with related procedures. Trained staff members were available for 24-hour staffing on 12-hour shifts.

The mobile laboratory was adequately equipped for the assigned functions to receive, prepare, and analyze plume and post-plume field samples. The setup of the mobile laboratory adjacent to the radiation protection section offices enabled prompt response and backup equipment and supplies. There were ample stores of contamination monitors, dose

rate devices, and dosimetry available as backup equipment, as needed. The setup included sample receipt, sample preparation for analysis, and the mobile laboratory to conduct gamma spectral analyses of prepared samples. Prepared samples were pre-staged at the mobile laboratory including particulate and cartridge air sample media. These samples were processed through sample control, sample preparation, and sample analysis. Chain of custody paperwork for each sample was effectively utilized throughout the process.

Equipment included contamination monitoring and dose rate devices, as well as a gamma spectrometry system. All equipment was within current calibration dates and was operationally checked. Per the extent of play agreement, gamma spectroscopy system calibration was not demonstrated; however, quality assurance checks and background counts were successfully conducted. Backup contamination monitors and dose rate devices were available, as needed. Contamination control practices were used during all phases of sample processing to minimize the spread of radioactive contamination or cross-contamination of samples.

The field team coordinator in the state emergency operations center used a procedural checklist and provided a comprehensive briefing via radio for mobile laboratory and field monitoring team members. The briefing included the plant status and direction for the mobile laboratory and field monitoring teams to check inventory, conduct equipment operational checks, and verify communications systems operability. Other topics included general safety, field team operations requirements, dose limits, and potassium iodide usage.

Communications checks with the primary radio and backup cellular telephones were successfully conducted with radiation protection section staff at the state emergency operations center. During the exercise, some radio communications were not consistently clear, but cellular telephone calls were made in these cases. A landline telephone hookup was available as a backup system in the mobile laboratory but was not used.

Using timers for prompting, the mobile laboratory staff routinely checked and recorded exposure levels within the designated time limits. Potassium iodide ingestion was not required since the mobile laboratory location was outside the Harris Nuclear Plant 10-mile emergency planning zone. Throughout the exercise, the mobile laboratory successfully demonstrated management of exposure control for personnel.

For this core capability the following radiological emergency preparedness capability targets were met: 1.1, 3.1, and 4.4.

## 3.4 Joint Operations

### 3.4.1 Joint Information System/Center

Public Information and Warning Capability Summary:

Wake, Chatham, Harnett, and Lee Counties operated in a joint information system forming the Harris Task Force. Combined staff successfully demonstrated the capability to deliver coordinated, reliable, and actionable information to the public and media. The state and risk county public information officers were prepositioned in the local area per the extent of play agreement. The state and county public information officers were notified through their respective agency notification systems and mobilized following notification of an incident at the Harris Nuclear Plant. After a period simulating abbreviated travel times, the joint

information center was declared operational by the lead state public information officer. Position assignment guides were available to all the participants.

A Harris Task Force web-based virtual conference line, open throughout the exercise, was used to communicate between public information officers in the joint information center and those located in the various state or county emergency operations centers. The utility liaison moved the conference line from individual laptops to a large wall-mounted monitor, minimizing wireless access saturation. The joint information center had multiple redundant and operational communications systems, including telephone landlines, cellular telephones, electronic mail, internet-based information logging and document posting, and texting. A few technological challenges were quickly resolved, having no real impact on the joint information center's ability to communicate.

The Harris Task Force produced four press releases and one news advisory. All public information products received approval from the command staff at the state emergency operations center. The press releases were consistent with the protective action decisions. Sixteen additional press releases were available, produced, and disseminated by the four individual risk county emergency operation centers and the utility. Chatham County had all three of its press releases translated into Spanish to assist its unique population better.

One virtual press conference was conducted with a pre-conference caucus used to determine the speaking order and to cover key topics to be presented. There was no law enforcement spokesperson in attendance but may have been helpful for this type of incident. Talking points were assembled and printed to help ensure priority emergency information was shared during the press conferences. Information presented to the public and media was timely and accurate.

The virtual mock media then had the opportunity to question the presenters. All the questions, however, with multiple follow-ups centered on the attacks on the plant. None of the questions concerned the present plant status or steps the public should be taking due to the conditions at the plant. The Harris Task Force and utility public information officers deflected the law enforcement issues as best they could. The press conference emphasized the importance of having knowledgeable representatives of critical agencies available to speak with the media about their area of expertise when it is evident that that area must be addressed.

For this core capability, the following radiological emergency preparedness capability targets were met: 1.1, 3.1, and 3.3.

### 3.4.2 Emergency Operations Facility

Operational Coordination Capability Summary:

The North Carolina Emergency Management liaison and North Carolina Department of Health and Human Services, Radiation Protection Section liaisons at the emergency operations facility successfully demonstrated the ability to obtain and provide firsthand situational information to their respective agencies in support of the Harris Nuclear Plant.
The liaisons were allowed to pre-stage in the facility and upon receiving activation notifications they established multiple lines of communications with their parent agencies. These included cell phone, email, video web conferencing applications and access to their

agencies incident management software systems. The liaisons utilized several different virtual platforms to obtain and pass relevant information.
Working closely with the utility's personnel, they obtained the current plant conditions and provided that information in a timely manner to the critical stakeholders in the state emergency operations center. Likewise, they made sure that the utility was aware of the state and local activities and protective action decisions.

For this core capability the following radiological emergency preparedness capability targets were met: 1.1 and 1.3.

## 3.5 Risk Jurisdictions

### 3.5.1 Wake County Emergency Operations Center

Operational Coordination Capability Summary:

Wake County Emergency Operations Center staff successfully demonstrated critical tasks associated with operational coordination in response to an incident at the Harris Nuclear Plant. Participating agencies and personnel demonstrated knowledge of radiological emergency plans and procedures, collaborated effectively, and made informed decisions to protect the health and safety of the public.

In accordance with the extent of play agreement, responders were prepositioned in the emergency operations center prior to the start of the exercise. Emergency operations center staff were successfully notified and mobilized in a timely manner. Upon arrival staff members signed in, began setting up their work areas, and prepared for their assignments with no significant challenges. Just-in-time training was provided as needed. Staff had the necessary equipment, supplies, maps, technology, and other resources to support the operations. State-of-the-art technology, wall monitors, and other displays were used to create a common operating picture and provide situational awareness.

The Wake County Emergency Operations Center staff demonstrated sufficient communications capabilities to adequately respond to the simulated emergency at the Harris Nuclear Plant. The utility notification system was the primary means to notify the emergency operations center at each change to the plant's emergency classification level. In addition, a commercial conference call bridge system was established to communicate changes in emergency classification levels and provided a platform for unified command decision makers to discuss and agree on protective actions. Backup communications capabilities included landline and cellular telephones, text messaging, email, and an 800-megahertz radio system. An internet-based incident management software system was also utilized to share information, manage resources, and facilitate and document inter-agency coordination during the event. There were no communications delays or failures observed.

The Wake County Emergency Management Director provided overall direction and control of the county response activities while delegating various responsibilities to command staff. The director established a unified command with the state and risk counties and facilitated regular decision line calls to coordinate precautionary and protective action decisions. After each decision line call, the director or designee provided updates to the entire staff for overall situational awareness. The director utilized the knowledge and expertise of the staff, which included utility and municipal liaisons, in formulating county protective action decisions and public messaging. Although the space was limited, the emergency operations

center had adequate staff, equipment, and supplies to support the emergency response. Emergency operations staff used the limited space effectively to gather, analyze, and present emergency information to help facilitate and support critical decision making throughout the emergency.

The director facilitated regular decision line calls with the unified command group to establish concurrence on all precautionary and protective action decisions and associated public messaging, and coordinate alert and notification in accordance with plans and procedures. After receiving the Site Area Emergency notification, the unified command group discussed and concurred on multiple precautionary actions. The precautionary actions for Wake County included the closing of designated schools used as emergency reception centers; implementation of waterway warning; closure of public parks, lakes, and rivers; issuance of a livestock advisory for farmers; and instructions to shelter-in-place for all residents and businesses in Wake County zones A through G. The unified command group coordinated related messaging and primary alert and notification of the public. The unified command group routinely and appropriately demonstrated forward thinking. By the time the offsite response organizations received the notification that the plant had declared a General Emergency, the unified command group had pre-emptively discussed appropriate protective actions and associated public messaging. The unified command group quickly assessed the utility's protective action recommendations and implemented the decision to evacuate zones A and K and shelter in place all other zones, implement public alert and notification, and disseminate appropriate instructions to the public in a timely manner. Protective action decisions and other significant events were recorded to the county and state web-based incident management platforms, as appropriate.

Throughout the response, the Wake County command staff routinely considered the health and safety of emergency workers and those with access and functional needs when making precautionary or protective action decisions and subsequent messaging. The health and safety of children in schools were at the forefront of all decision making. The health and human services director also explained that individuals with disabilities and access and/or functional needs were pre-identified within the Wake County 10-mile emergency planning zone and any self-reported information was maintained by the Wake County emergency management staff. Group homes, day care centers, and private schools were also identified and considered. Wake County Emergency Medical Services were prepared to provide ambulance service as required. Additionally, Wake County leadership discussed and made the decision for emergency workers at the near-site incident command post to ingest potassium iodide at the recommendation of the county public health director. The decision for all emergency workers in the impacted areas to ingest potassium iodide was made after concurrence among the unified command group and state public health officials. Potassium iodide ingestion by the public was discussed but the decision to implement was not made.

Protective actions were implemented accordingly and without delay. Once protective action decisions were made, the emergency management director instructed the deputy emergency operations center manager and operations section chief to coordinate with the appropriate staff to implement the protective actions. Emergency management staff worked closely with supporting agencies to identify and resolve issues. Activities such as evacuation, traffic control, backup route alerting and emergency worker potassium iodide ingestion were successfully coordinated in this fashion during the simulated emergency. When needed, resources were identified and requested through the state's resource management system. There were no gaps in resources noted.

The Wake County Public School System representative in the emergency operations center was responsible for implementing protective action decisions that affected schools in Wake County. The school system representative explained that the school system operates its own emergency operations center at the school system headquarters and coordinates implementation of all protective action decisions that affect schools. The school system representative explained that if the decision to relocate or dismiss students early was made, parents/guardians would be notified by an automated school notification system and transportation of students would be coordinated by the school system transportation department.

The management of emergency worker exposure control was successfully implemented. The operations section chief explained that dosimetry equipment and potassium iodide are routinely pre-distributed to near site facilities, including the incident command post and local fire departments. Municipalities within the county are provided potassium iodide and dosimetry equipment for emergency workers as needed. County emergency management has additional supplies of dosimetry equipment and potassium iodide in secure storage at their warehouse. The operations section chief successfully described how local agency safety officers would provide dosimetry and potassium iodide briefings to emergency workers when needed. Just-in-time training materials are deployed with the dosimetry equipment and potassium iodide as well.

For this core capability the following radiological emergency preparedness capability targets were met: 1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, and 3.1.

Public Information and Warning Capability Summary:

The Wake County Public Information Officers assigned to the emergency operations center provided accurate and timely information to the public and the news media. Following the initial precautionary action decision by the four counties and the state, the Wake County Communications Officer failed to activate the sirens due to technical difficulties accessing the siren activation software. The officer immediately contacted the Chatham County Emergency Operation Center which successfully performed the siren activation in place of Wake County. Wake County's inability to activate the siren system did not negatively impact the exercise. This was followed by the simulated activation of the Emergency Alert System and the National Weather Service tone alert radios. According to the Wake County procedures, route alerting is to be performed when a General Emergency is declared. Due to the heavy law enforcement participation in this hostile action-based incident the route alerting responsibility was effectively transferred to local fire departments.

When directed by the Wake County Emergency Management Director, the Wake County Public Information Officers quickly and efficiently tailored the prescripted press releases for precautionary and protective actions. Press releases were circulated electronically to the other participating counties and the state emergency operation center for review and approval. All press releases were disseminated from the joint information center following its activation. A total of three press releases were disseminated from the emergency operations center prior to the joint information center activation. All press releases contained accurate and timely information.

For this core capability the following radiological emergency preparedness capability targets were met: 3.2 and 3.3.

### 3.5.2 Wake County Incident Command Post

Operational Coordination Core Capability Summary:

Wake County Incident Command Post staff successfully demonstrated operational coordination while responding to simulated hostile actions at the Harris Nuclear Plant. Upon notification of the incident, a Major with the Wake County Sheriff's Office established incident command at the near site incident command post. Integrated incident operations were supported by Wake County Emergency Management, Chatham County Sheriff's Office, Apex Police Department, Apex Fire Department, Federal Bureau of Investigation, and Duke Energy. Staff were pre-staged in accordance with the extent of play agreement.

Incident command post staff were notified and mobilized in a timely manner. Upon arrival, staff members signed in and began setting up their workstations. The mobile incident command post vehicle provided a workspace for staff, backup generator support, wall monitors, and other display boards. Facilities provided sufficient equipment, maps, and supplies to support initial response operations. The incident command post was functional upon arrival of staff. Redundant communication capabilities were available, which included 800-Megahertz radio, commercial phone, cell phone, and a myriad of other systems. There were no communication failures identified during the exercise and alternate communications systems were operational to support any unseen challenges.

The Wake County Sherriff's Office Incident Commander stayed in constant communication with decision makers at the Wake County Emergency Operations Center. A Wake County Emergency Management liaison in the incident command post facilitated the communication and coordination by utilizing tools such as the unified command decision line and incident management software. The incident commander leveraged staff and resources to implement informed and coordinated response actions. Utility liaisons from security and radiation protection helped on-site and off-site response resources work together effectively to accomplish the mission as safely as possible. All command staff verified and shared information as it became available. The incident commander provided periodic briefings to ensure a common operating picture.

The incident commander focused on the hostile action tactical response, and also maintained situational awareness providing input about protective action decisions for the public. Resources were requested as needed and were filled by agencies represented in the incident command post. Additional resources were available at multiple staging areas and were requested through the resource tracking system.

Responder dosimetry and just-in-time training provisions were available and would be provided by Wake County Emergency Management at predesignated staging areas. Incident command staff notified all near site responders to ingest potassium iodine immediately after receiving instructions from the Wake County Emergency Operations Center. If responders did not have potassium iodine, they were advised to report to their supervisor for dissemination.

For this core capability the following radiological emergency preparedness capability targets were met: 1.1, 1.2, 1.3, 1.4, 2.2, and 3.1.

### 3.5.3 Wake County Apex Area Command Post

Operational Coordination Core Capability Summary:

Operational Coordination was successfully demonstrated at the Wake County Apex Area Command Post staff during the hostile action-based exercise. Staff were pre-staged according to the extent of play agreement. The staff successfully demonstrated procedures to alert, notify, and mobilize personnel to staff the post, located near Apex, North Carolina.

Notification and activation of the area command post was done quickly as staff transformed the leisure area of a fire station into an emergency operations facility. The area command post was equipped with all essential maps, status boards, communication logs, and procedures to manage the response.

Two primary communications systems were used throughout the exercise. The first was commercial landlines and the second was cellular phones. Backup communications consisted of 800 MHz two-way radio system, a web-based emergency management information system, and email. There were no communications delays or failures observed.

The area command post staff demonstrated direction and control during the operation of the facility by coordinating closely with the Wake County Emergency Operations to ensure mission requests were fulfilled correctly. Frequent briefings were held with status brief outs for each agency represented in the area command post. The exercise scenario dictated the need for radiological protection for emergency workers deployed during the exercise as a release was indicated at site area emergency; and emergency workers working within the vicinity of the plant were ordered to ingest potassium iodide. Command for fire and law enforcement demonstrated they were able to check on the progress of missions in the field with constant radio contact.

Field supervisors or designees of each agency were responsible for managing exposure and maintaining exposure records for emergency workers. The staging area manager performed "just in time" training for police officers who subsequently issued dosimetry to personnel entering the Apex Area Command Post and performed background surveys. Department supervisors understood that if there was a need for personnel to receive exposure more than identified limits, the Wake County Emergency Operations Center would be contacted.

The area command post staff successfully demonstrated the ability to implement precautionary protective actions decisions. Law enforcement staff at the area command post coordinated the set-up of traffic control points to support public evacuations and worked with school resource officers to prepare to evacuate schools. The area command post staff also supported the logistics in the evacuation of medical alert and special needs residents. Water utilities were notified to take precautionary actions to keep water reserves safe were also carried out during the exercise. Staff at the area command post also notified day care and private schools listed on the county registry to take precautions and evacuate students. Due to a release at the plant, emergency workers were ordered to take potassium iodide during the exercise.

For this core capability the following radiological emergency preparedness capability targets were met: 1.1, 1.2, 1.3, 1.4, 2.2, and 3.1.

### 3.5.4 Wake County Medical Services Drill – Emergency Medical Services

Public Health, Healthcare, and Emergency Medical Services Capability Summary:

The APEX Fire Department, Holly Springs Fire Rescue, and Wake County Emergency Medical Services personnel demonstrated the capability to provide emergency medical treatment and transport services to a contaminated, injured individual while managing exposure during the Harris Nuclear Plant medical services drill. Upon arrival, the ambulance crew, supervisor, and fire department units established a staging area in a safe zone near the accident scene. After arriving, crews received a briefing from plant personnel on the accident cause, current scene conditions, scene safety and patient condition from members of the Harris Medical Emergency Response Team. Both the fire and ambulance crews successfully donned appropriate personal protective clothing and received a dosimetry briefing from the fire department radiological officer that included calibrating, reading, proper wearing and periodic reporting of readings of assigned permanent reading and direct reading dosimeters. Using road cones, fire crews then marked off appropriate hot, warm, and cold zone areas around the accident scene based on background level readings and guidance from their emergency response guidebook. Two (2) fire crew members then entered the accident area, conducted a proper transition with the plant's emergency medical response team, assessed the patient, treated any life-threatening injuries, performed a radiological survey and initial decontamination of the patient, and properly packaged the patient for transfer to the ambulance. The ambulance was staged in the cold zone where crews waited to receive the patient.

Once the patient had been safely removed from the accident area by the fire crew, the patient was carried by stretcher to the ambulance in the cold zone, where the fire crew transitioned patient care to the ambulance crew. The ambulance crew conducted a thorough patient assessment, treated any obvious injuries, conducted an additional radiological assessment of the patient, and with the assistance of the fire crew transferred the patient to an ambulance stretcher where the patient was appropriately re-wrapped in a double layer of sheets in a cocoon style wrapping before being loaded into the ambulance and secured for transport to the hospital.

Prior to transporting the patient, the ambulance crew contacted WakeMed Raleigh Hospital by radio and provided the hospital with a detailed summary of patient's injuries, radiation exposure and current readings, vital signs, current condition, plan of treatment and estimated time of arrival. A technician from the Harris Nuclear Plant rode in the ambulance and advised on radiological readings and related treatment of the patient The ambulance crew appropriately monitored the patient's vital signs, injuries, and general condition and provided periodic updates to the hospital. Upon arrival at the hospital, the ambulance crew met with hospital medical staff and provided a detailed update on current patient conditions before removing the patient from the ambulance for transfer to a hospital stretcher.

After transferring the patient to the hospital medical staff, the ambulance crew, with assistance from the Harris Radiological Preparedness Team member, surveyed the ambulance and stretcher for contamination. In addition, the ambulance crew members performed a whole-body radiological survey of each other using appropriate monitoring and surveying techniques. With the assistance of a hospital safety officer, the ambulance crew properly doffed their personnel protective equipment which was properly disposed of in containers marked for contaminated materials.

For this core capability the following radiological emergency preparedness capability target was met: 5.3.

### 3.5.5 Wake County Medical Services Drill – Hospital

Public Health, Healthcare, and Emergency Medical Services Capability Summary:

The WakeMed Raleigh Hospital personnel demonstrated the capability to provide emergency medical treatment services to a contaminated, injured individual while managing exposure and contamination control. Medical center staff performed medical support, radiation monitoring, and decontamination on a simulated patient from the Harris Nuclear Plant. Hospital communications, equipment, supplies, and protective clothing were sufficient to support emergency operations. Throughout the demonstration, urgent medical care took precedence over monitoring and decontamination.

The hospital had a locked, dedicated decontamination room with a separate entrance from the ambulance bay. Additional supplies on a large rolling storage cart were available for use by the staff. The equipment and supplies were organized to facilitate a timely set-up of the ambulance bay and decontamination room. The room was equipped with several shower areas, a reclining table with a drain at the bottom attached to a closed container, waste containers, and tables with medical and decontamination supplies. In addition, there were display boards for decontamination with action level limits and step-by-step instructions.

After notification from the Wake County Emergency Medical Services that a contaminated patient from Harris Nuclear Plant would be transported via ambulance, the charge nurse notified the team to prepare the radiological emergency area. Team members knew their designated roles and began preparing the decontamination room and ambulance bay. Personnel used floor tarps, ropes, stanchions, step-off pads, and signs to set up an appropriate walkway from the ambulance bay into the decontamination room. The decontamination room had tarps on the flooring with a step-off pad at the entrance.

Team members from the nuclear medicine department (monitors) performed operational checks of the calibrated handheld survey meters, using an appropriate check source and ensuring that the response was within the range specified on a sticker adhered to the meters. Both survey meters were wrapped in a cellophane material to reduce possible contamination of the probe. The monitors determined the background rate in the decontamination room. Some team members were assigned inside the decontamination room, with others outside the buffer zone. Team members inside the decontamination room were given a permanent record dosimeter and an electronic dosimeter appropriate for reading the hospital exposure limit. Dosimeter serial numbers were logged for each individual.

The ambulance was met by the medical team, including a physician, who received patient status from the ambulance crew. The patient arrived without clothing (simulated), wrapped within sheets on top of the stretcher. A clean gurney was used to transfer the patient from the ambulance gurney. The decontamination room team was comprised of the physician, two nurses, and a radiation monitor, all dressed in protective clothing. The team assessed the status of the patient as the patient was being transferred into the decontamination room. The physician determined that intravenous fluids and pain medication should be given to the

patient to begin the treatment for an open fracture of the left forearm. The physician ordered x-rays of the affected areas.

The radiation monitor began surveying the patient with contamination above action level limits found on the head, chest, arms, hands, and legs. The team made numerous attempts of decontamination using disposable wipes on all contaminated parts of the patient and using saline solution and disposable materials to irrigate the wound. Gross decontamination was completed by the disposable wipes which reduced the contamination only slightly. Additional decontamination of the wound was simulated with saline solution until the contamination level was below the threshold. Wastewater was collected in a designated container from the gurney. A final survey of the patient, including the underside, indicated background only counts. The radiation monitor used appropriate speed and distance from the patient during the survey process. The nursing staff dressed the patient's wounds with clean gauze.

Sample swabs were taken from the nostrils, mouth, and ears with results greater than the action level limit. The nursing staff used swabs to clean the nostrils and ears and a mouth rinse for the mouth. Subsequent swabs indicated background only (per controller inject). The patient was transferred to the clean area by rolling a clean gurney on paper floor covering inside the decontamination room and lifting the patient. After one team member demonstrated doffing protective clothing, the buffer zone monitor completed a whole-body survey on the staff members. Harris Nuclear Plant personnel would assist in decontamination of the room and waste disposal.

Throughout the exercise, the staff verbalized frequent glove changes and demonstrated excellent overall contamination control techniques. Electronic dosimeter checks were announced and recorded for each staff member in the room. Team members inside the decontamination room assisted each other with reading electronic dosimeters, so they would not need to use their hands and risk cross-contaminating the electronic dosimeters.

For this core capability the following radiological emergency preparedness capability targets were met: 5.3.

### 3.5.6 Wake County Waterway Warning

On-Scene Security, Protection, and Law Enforcement

The ability to safely provide Waterway Warning (alert, notification, and evacuation) of Lake Harris was demonstrated by representatives of the Wake County Sheriff's Office. An incident command post was established by Wake County Division of Emergency Management at the Shearon Harris boat launch. Together, the agencies discussed their procedures and coordination protocols for clearing Lake Harris following a Site Area Emergency declaration at the Harris Nuclear Plant. The deputies and emergency management staff demonstrated knowledge of the plans, as well as the resources that would be required to clear the lake under a variety of circumstances, including their back-up alerting activities in the event of siren failures.

When directed by the Wake County Emergency Operations Center to conduct waterway clearing, Sheriff's Office deputies would retrieve boats and pre-packaged equipment kits from the sheriff's office annex at Harris Nuclear Plant. The kits contained all the plans, maps,

dosimetry, reference guides and other equipment needed to accomplish the waterway clearance activities.

The deputies discussed the issuance of exposure control equipment, just-in-time training to those responding, and record-keeping forms. The deputies were familiar with the administrative dose limits, dosimetry reporting and the actions to take if the limits were exceeded. All responding deputies had access to interoperable communications and were able to coordinate operations with each other and emergency management on a common, shared radio channel. For waterway clearance, two boats would be launched into the lake to traverse predetermined routes. The deputies successfully demonstrated navigating the routes and making announcements over a public address system to alert boaters to an incident at Harris Nuclear Plant in a timely manner.

Following completion of lake clearing operations, the deputies would be directed to a designated location for monitoring and decontamination if required.

For this core capability the following radiological emergency preparedness capability targets were met: 1.1, 1.2, 2.2, 3.1, 3.2, and 5.4.

### 3.5.7 Wake County Reception Center and Congregate Care

Mass Care Services

Wake County Emergency Services personnel and many other supporting agencies successfully demonstrated the ability to provide monitoring, decontamination, and registration of evacuees prior to entry into the mass care shelter located at Garner Magnet High School.

Wake County Environmental Services staff met evacuees in the parking area, instructed them to park in every other space, exit the vehicle, and proceed towards the entrance of the facility. The defined parking area included approximately 550 spaces; however, personnel discussed the ability to use grassy areas, athletic fields, and adjacent bus lot for overflow parking, if needed. Parking area staff assigned evacuees a sequential number, recorded it, and wrote it on the rear window of their vehicle. Environmental services personnel greeted evacuees at the entrance, recorded the number of occupants and assigned vehicle number, and provided them with an informational leaflet before directing them inside. Parking area staff and greeters were outfitted with gloves, booties, and dosimetry.

Staff used electronic hand-held survey meters and portable portal monitors to screen evacuees, their belongings, and vehicles. Screening instruments were wrapped in a protective plastic film to prevent contamination. All hand-held survey meters were observed to be current in calibration and operationally checked against a range of readings, as indicated on affixed stickers, prior to issuance. Survey meter operators established background readings at assigned workstations.

Garners Fire Rescue staff were staged in the parking area for vehicle monitoring. Each responder wore a 0-20 roentgen direct reading dosimeter and a permanent record dosimeter. They explained that in a real world-emergency, they would be outfitted in full-body protective suits with seams taped and two sets of latex gloves and booties, in addition to dosimetry. If contamination was found on occupants of the vehicle during individual monitoring, vehicle monitoring personnel were notified via pre-programmed, hand-held radio.

Upon notification, fire personnel spot checked the vehicle by collecting a smear from the hood and sides of the vehicle using a thick, dust-free cloth, and then surveying the cloth with a digital, hand-held meter. Then operators surveyed the vehicle starting with the wheel wells and tires. If survey results were above 300 counts per minute, the vehicle was considered contaminated. Fire personnel discussed wrapping the mid-section of the contaminated vehicles in cellophane to limit cross-contamination from accidentally touching or brushing against the vehicles. In accordance with plans and procedures, the contaminated vehicles were not decontaminated and would remain in designated parking areas until resources became available for further inspection and possible decontamination, as recommended by officials.

Following vehicle monitoring, evacuees exited their vehicles and were directed inside the high school for population monitoring. Spacing for population monitoring and registration was adequate and scalable, with room for additional portal monitors and ancillary operations such as intake. Two portal monitors were set up and operational. Staffing consisted of two teams. Each team had a supervisor, background radiation surveyor, one portal monitor operator, one traffic control worker, and one escort for evacuees. The supervisor managed incoming flow and handled most communication and coordination with the other stations. Eight (8) evacuees were processed through the population monitoring station. The evacuees arrived carrying a vehicle slip with an assigned identification number. A handler directed evacuees to an available portal monitor. As the evacuees were surveyed by the portal monitor, a scribe noted their readings and the general location of the contamination. If the evacuee was deemed clean after passing through the monitor, they received a green band. If the evacuee alerted the monitor, the scribes directed the evacuee to step backwards off the step pad, provided them with a completed evacuee contamination form, and directed them to the decontamination station. The vehicle unit was alerted if the evacuees were contaminated so their car could be held. The portal monitor step off pad had covered clear wrapping and a blue step off pad was placed in front of the machine to prevent contamination from spreading.

To meet the metrics criteria for this capability, responders must demonstrate they could process 20% of their evacuating permanent residents census within 12 hours by demonstrating at least one third of their equipment during the exercise. Two portal monitors out of six were set up for the exercise to meet the one third requirement. The reception center anticipates receiving 20% of the 34,249 residents which would be 6,244 evacuees. Therefore, to meet the metrics requirement, responders must move an evacuee through the portal monitor process in less than 41 seconds. During the exercise, the eight evacuees were processed thru the portal monitors at rate of one 1 every 34 seconds, therefore the demonstrated rate of 34 seconds meets the metrics requirement less than 41 seconds.

Staff successfully demonstrated pet management procedures during the exercise at the Wake County Reception Center. Per interview with Wake County reception staff, Wake County Animal Control Services would be available at the reception center to help manage evacuees' pets. All pets will undergo screening for contamination and have washing space available for decontamination. The county has detailed job action sheets on outlining the handling of pets during screening for contamination and procedures to decontaminate pets.

A staff member within the Wake County Reception Center demonstrated full donning and doffing of personal protective equipment. The staff member was assisted by another staff member who used a job aid to read aloud each step for donning and doffing personal protective equipment as it was performed. All contaminated waste was disposed of in a

simulated radiological waste trash can. Staff members explained by interview the process for monitoring emergency workers using a handheld survey meter. Staff who were deemed contaminated would undergo decontamination at the reception center or be transported to a medical facility for further decontamination.

Evacuees who were deemed contaminated at the initial monitoring station were provided a contamination record card and directed to the contaminated evacuee holding area. Health educators greeted the evacuees and provided additional information. Male and female evacuees were directed to separate decontamination rooms for extensive contamination survey and decontamination. There was an adequate number of personnel available to perform monitoring and decontamination of evacuees.

Four (4) contaminated evacuees went through the male decontamination station. The station was in a locker room that had two showers and sufficient space for monitoring and decontamination. There was only one door, but the layout allowed for distinct clean and contaminated areas that minimized the risk of cross-contamination. Four (4) contaminated evacuees went through the female decontamination station as well; the female decontamination room differed from the men's decontamination room in that it had a separate entrance and exit so the traffic flow was continuous. Spot decontamination was performed initially if appropriate using a cleaning wipe and the area was resurveyed. If contamination exceeded 300 counts per minute, then the evacuee was directed to take a shower. After showering, the evacuee was sent though a portal monitor to verify successful decontamination. Once decontaminated, the evacuee was provided redressing garments and a wristband, and directed to exit the locker room and proceed to the shelter registration station. If an evacuee could not be decontaminated below 300 counts per minute, then the workers would notify the reception center to coordinate transportation to a medical facility.

The Wake County reception and congregate care center personnel demonstrated that facilities, equipment, and procedures were in place and utilized to provide temporary shelter, congregate care, and registration of evacuees in response to a radiological emergency at the Harris Nuclear Plant. This capability was successfully demonstrated at the Garner Magnet High School. The Wake County Health and Human Services department, in alignment with the Wake County Emergency Operations Center (EOC), volunteers, and supporting agencies were responsible for the registration and care of evacuees. Additional shelters are located at the high schools within Wake County and would be opened when deemed necessary by the shelter manager. Evacuees with a green wristband were registered using a web-based incident management platform inside the gymnasium area and given information from the shelter management team on services available including medical treatment, feeding, and mental health services. Evacuees would have the option of pre-registering prior to arrival using the ReadyWake.com website which also provides a quick response (QR) code. Potassium iodide tablets and appropriate instructions were made available to evacuees. Staff members maintained appropriate record keeping of the distribution of potassium iodide for the general public. The facilities had sufficient supplies of forms, cots, bedding, and comfort kits for evacuees.

For this core capability the following radiological emergency preparedness capability targets were met: 5.1.

### 3.5.8 Wake County Emergency Worker Decontamination

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

The City of Raleigh Fire Department and Wake County Emergency Management staff successfully demonstrated monitoring and decontamination of emergency workers and their vehicles at the North Carolina State fairground facility due to simulated incident at the Harris Nuclear Plant. There was adequate staff, space, signage, and supplies needed to guide emergency workers and through the site. Members of the City of Raleigh Fire Department were assigned as vehicle monitors and properly demonstrated donning of proper protective clothing including wearing of personal dosimetry devices and received just-in-time training on dosimetry, monitoring equipment, and vehicle monitoring techniques.

There were adequate quantities of handheld survey meters, direct reading dosimeters, and permanent record dosimeters for monitoring and decontamination activities. Survey instruments were within current annual calibration and instruments appropriately responded within a specified range of readings when exposed to a check source. Two portal monitors were set up for demonstration with another one available as needed. The portal monitors were operationally checked with a designated source at centerline levels. Each emergency worker was given a zeroed direct reading dosimeter with range appropriate for reading the administrative and turnback limits. All dosimeters were within the annual leak test dates. Responders were also provided a permanent record dosimeter.

Vehicles entered the site through a single entrance, where they were initially greeted and screened by vehicle monitoring workers. Following a checklist and other job aids, vehicle monitoring workers demonstrated appropriate initial emergency worker screening as well as vehicle monitoring of arriving vehicles. Using a pancake probe, workers successfully demonstrated a radiological survey of several vehicles by surveying the exterior and interior of the vehicles, paying close attention to areas most likely to be contaminated. The vehicle monitors informed the initial processing supervisor of all vehicle readings. If a vehicle and its occupants were determined to be “clean,” (non-contaminated), they were directed to a “clean” area of the site.

If radiation was detected on the vehicle or its occupants, it was directed to the vehicle decontamination area at the site. The initial processing supervisor recorded the vehicle readings and communicated, by radio, a vehicle exposure summary to the vehicle decontamination area. The occupants in each vehicle were provided booties and gloves to put on and asked to step outside each vehicle. Then the vehicle was monitored inside and out. Any vehicle with spot contamination above 300 counts per minute were directed to be cleaned using special disposable wipes, soap, and water. They were then rinsed and monitored again. Any spot contamination was washed repeatedly until all readings were below 300 counts per minute. Decontamination of vehicles was simulated in accordance with the extent of play agreement. Hoses and brushes were available. Vehicles that could not the cleaned below that level were then impounded. The driver would move the vehicle to the impound lot and then proceed to the monitoring area. If the vehicle was clean, the driver was directed to the clean area parking and onto the portal monitor area for monitoring.

Entry into the portal monitoring area was controlled by the monitoring staff. Emergency workers were instructed to step on the sticky mat at the entrance of the portal monitor then enter the portal monitor and stand until directed to step out (approximately three (3) seconds). Emergency workers who alarmed the portal monitor were then monitored using

handheld survey meters. Whole body surveys were completed using appropriate speed and distance from the body. Personal belongings or equipment were monitored on the ground near the portal monitor, bagged, and tagged with the information provided from the emergency worker. Contaminated emergency workers were directed to the decontamination shower trailer. The portal monitor floor area was cleaned, and the sticky mat was changed after each contaminated emergency worker. For this demonstration, four emergency workers were monitored with three emergency workers contaminated greater than the action level (simulated).

While full showers were available, removal of clothing and spot decontamination could also be used if contamination was not widespread. Prior to entering the decontamination trailer, staff provided instructions on disrobing, collection of personal effects, showering, and re-monitoring. The decontamination trailer provided sufficient privacy for individual male/female disrobing, showering, redressing (in modesty coverings) and further re-survey after exiting. If still contaminated, the emergency worker would shower again, redress, and be monitored. If still contaminated after the second shower, the worker would be wrapped and transported to either Rex Hospital or WakeMed Hospital in Raleigh, NC.

For this core capability the following radiological emergency preparedness capability targets were met: 5.2.

### 3.5.9 Chatham County Emergency Operations Center

Operational Coordination Core Capability Summary:

Chatham County Emergency Services established and maintained a unified and coordinated operational structure and process that appropriately integrated all critical stakeholders and supported the execution of core capabilities successfully during the Harris Nuclear Plant exercise.

The Chatham County Emergency Operations Center manager demonstrated the ability to alert, notify, and mobilize key personnel in response to a radiological event and to include a 24-hour staffing roster, and activate the facility in a timely manner. Because emergency operations center staff were prepositioned in accordance with the extent of play of play agreement, the facility was quickly staffed upon receipt of notification to report. The emergency operations center was declared operational once all key positions were staffed.

The initial notification of an Alert Emergency Classification Level was received from Duke Energy via the Chatham County 9-1-1 Center located next to the emergency operations center. The emergency operations center had all the equipment and supplies necessary to fulfill its function.

Chatham County Emergency Operations Center manager received and reviewed all emergency notification forms sent from the utility, participated in coordination conference bridge calls, and disseminated vital information to the operations chief to disseminate to the emergency operations center staff. All vital information was also shared with the Chatham County Board of Commissioners chairperson. The manager provided overall direction and control and decision-making for the incident from the emergency operations center. In contrast, the operations chief provided situation awareness to the emergency operation center staff. The operations chief coordinated with the emergency operations center manager and provided staff briefings to the emergency operations center as needed. The

entire staff worked well together. While responding to challenging exercise injects, the operations chief and the staff communicated and coordinated resolutions for each inject.

The implementation of precautionary protective actions was decided over the conference bridge line which was open thought out the exercise. All coordination calls were led by the Wake County Emergency Management Director with backup being the Chatham County Emergency Operations Center Manager. The manager provided input on the situation, listened to the other counties recommendations, and concur on a decision of implementation. The Chatham County Radiological Protection and Safety Officer upon receiving the emergency notification forms gave a detailed explanation of the situation at the plant with displays and diagrams to the emergency operations center staff. Precautionary actions were implemented during the site area emergency. Included in the precautionary actions were the relocations of two schools in the county, ordering all zones to shelter in place, placing animals on stored feed and water and waterway clearing.

During the emergency the Chatham County Assistance School Superintendent took proactive action to prepare Moncure Elementary School and Seaforth High School for relocating students out of the 10-mile emergency planning zone. Later the students were relocated prior to the potential for a radioactive release. Parents of relocated students were notified after relocation to avoid chaos.

Protective actions were implemented with a unified command among the state and the risk counties. The decision was to shelter-in-place except for the students within the 10-mile emergency planning zone. The Chatham County Emergency Operations Center Manager maintained a small list of special needs individuals. There were no hospitals or prisons/detention facilities within the Chatham County portion of the 10-mile emergency planning zone.

Following declaration of General Emergency, the utility's recommended protective actions were to, shelter in place zones A and K. On the conference bridge line lead by Wake County Emergency Management decided to take other actions of evacuating zones A and K and all other zones in the remainder of 10 Mile Emergency Planning Zone would shelter in place. All risk counties concur with this decision.

The Wake County Emergency Management announced the approval for the ingestion of potassium iodide for emergency workers over the conference bridge. The Chatham County Emergency Operations Center Manger requested that the operations chief announce to the emergency operations center staff the ingestion of potassium iodide to emergency workers in the 10 Mile Emergency Planning Zone. The announcement allowed for the department heads with emergency workers in the 10 Mile Emergency Planning Zone to inform them of the order. Earlier during the progression of the event those emergency workers assisting Wake County with onsite operations were informed they could ingest potassium iodide because of the proximity to the radiation release.

The Chatham County Emergency Operations Center was located outside of the 10-mile emergency planning zone so that the personnel in the emergency operations center were issued dosimetry kits. However, the Chatham Center Safety Director had a large box that contained twenty dosimetry kits. Emergency workers who entered the 10-mile emergency planning zone were required to obtain an emergency worker briefing prior to performing backup route alerting. Backup Route alerting was demonstrated at the North Chatham County Fire Department Station No. 2. The fire department captain, in his capacity as a

radiological safety officer provided the route alerting team with dosimetry, potassium iodide, and a radiological briefing prior to their dispatch to the field.

The radiological safety officer provided the driver and communicator each with a permanent record dosimeter and instructed them on zeroing and reading the instrument. They each filled out a dosimetry record sheet and were told to return their dosimetry to the radiological safety officer after their mission. The team was informed that they would be contacted by radio every half hour by the radiological safety officer for their dosimetry readings, and the reporting frequency of permanent record dosimeter readings would increase to every quarter hour in the event of a release from the plant. The workers were aware of their administrative reporting and turnback radiation values.

The Chatham County Emergency Management Agency demonstrated the capability to provide and maintain reliable communications with emergency personnel. The county emergency operations center staff was familiar with multiple communication systems, including the dedicated land-based telephone line and the secure, internet-based emergency information management application. They also demonstrated proficiency with the commercial cellular telephone system, personal computers, along with satellite and two-way radio systems which were independent of commercial landlines. The staff conducted periodic tests prior to and during the exercise to ensure efficiency of operations.

No communications failures were observed during the exercise. Staff effectively and efficiently reviewed and processed messages without delay or disruption. Message traffic was clear and concise and was verified by facsimile backup and cellular telephone confirmation. Staff from the emergency response organizations present at the EOC conducted communications checks within their respective organizations located elsewhere during mobilization and communicated frequently and effectively throughout the exercise.

For this core capability the following radiological emergency preparedness capability targets were met: 1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, and 3.1.

Public Information and Warning Core Capability Summary:

The North Chatham County Fire Department Station No. 2 staff successfully demonstrated the ability to conduct route alerting following a failure of a siren system/portion of a siren system within the allotted time. The initial Chatham County siren test also documented a single siren failure in that county. Route alerting procedures by the local fire department were initiated at the direction of the county emergency operations director. The fire chief ordered a team of two firefighters to be briefed, equipped, and to perform route alerting by emergency vehicle for the affected area. The fire department used a new web-based mapping system to direct the route alerting team with positive results. The team was alerted, mobilized, and completed its task within the allotted time as specified in the plan.

The Chatham County Emergency Management Agency sequentially provided an alert signal followed by an initial instructional message to populated areas. The county EOC provided emergency instructions to the public through the transmission of an alert signal which was followed by an initial emergency information message. A second emergency information message was transmitted that reflected deterioration of conditions at the plant. The pre-scripted messages were approved by the four risk counties, the utility, and the state emergency operations center.

An initial siren system test documented the failure of the Wake County siren system, which is the primary emergency information broadcast system for the Harris Nuclear Plant for public notification. In accordance with the plan, Chatham County as the designated backup county became responsible for activation of the four-county siren alert system.

The county communicator conducted a simulated test of the four-county siren warning system at the direction of the emergency operations center manager. Two emergency information messages were prepared with input from state and county public information officers and from pre-scripted messages. The approved written messages were converted to verbal messages through a text-to-message program at the state emergency operations center. Within several minutes of simulated siren activation, these messages would have been released in an actual emergency. In an actual release, the emergency siren activation and message cycle would be repeated as updates to the emergency response occurred.

The Chatham County Emergency Management Agency demonstrated the capability to disseminate emergency information and instructions to the public during all phases of an incident. The county public information officer and her assistant coordinated smoothly with their other risk county and state emergency operations center counterparts to produce and disseminate prompt, reliable, and actionable information in a timely manner. The state and county public information officers utilized an information sharing call line and electronic e-mail system, along with a state-county electronic message board. This coordination ensured that consistent, current information was prepared and presented to the media and the public. The county emergency operations director reviewed and approved the three press releases prepared and transmitted to local media by the county public information officers. All messages were shared through the state-county electronic message board.

A bilingual English-Spanish language communicator was present to aid in preparing multi-language press releases and answer any Spanish language public callers seeking information. The county public information officers efficiently prepared press releases consistent with protective action messages released by the state.

For this core capability the following radiological emergency preparedness capability targets were met: 3.2 and 3.3.

### 3.5.10 Chatham County Traffic Control Point

On-Scene Security, Protection, and Law Enforcement

On April 5, 2023, representatives from the Chatham County Sheriff's Office and North Carolina Highway Patrol participated in an interview to validate the capability to implement traffic and access control in response to a simulated emergency at the Harris Nuclear Plant. Participating law enforcement personnel identified 12 traffic control points and 17 security roadblocks in Chatham County. They confirmed that both agencies would establish incident command to coordinate traffic and access control operations in support of county evacuations. Additional support and resources would be provided by the Pittsboro Police Department.

Law enforcement representatives confirmed that they would receive notification of a nuclear plant incident at the "Alert" or "Site Area Emergency" emergency classification level through their normal reporting channels. They would respond to the county emergency operations center or other designated location to receive assignments, dosimetry, potassium iodide,

requisite forms and instructions, and just-in-time training, as necessary. Officers and troopers understood and discussed protocols for recording and reporting exposures, taking potassium iodide, requesting resources, and handling traffic impediments. They were familiar with administrative dose limits, actions to take if the limits were exceeded, and the site for emergency worker monitoring and decontamination. Law enforcement personnel described primary communications via 800-megahertz radio, with cell phones as backup. Traffic control personnel would request assistance or additional resources through law enforcement incident command to the county emergency operations center. Protective action decisions would be communicated from the county emergency operations center to traffic control personnel through law enforcement incident command.

All participating personnel were knowledgeable of agency responsibilities, resources, and protocols associated with traffic and access control in support of Chatham County radiological response operations.

For this core capability the following radiological emergency preparedness capability targets were met: 5.4.

### 3.5.11 Chatham County Waterway Warning

On-Scene Security, Protection, and Law Enforcement

Representatives from The Chatham County Sheriff's Office, North Carolina Wildlife Resources Commission, North Carolina Division of Parks and Recreation, and United States Army Corps of Engineers validated the capability to implement waterway warning protocols during out-of-sequence activities on April 5, 2023. Participating agencies demonstrated their ability to safely alert and notify the general public using the waterways, state parks, and other recreational areas associated with Jordan Lake in central North Carolina. All participating personnel were knowledgeable of agency responsibilities, resources, and waterway warning procedures in response to an incident at the Harris Nuclear Plant.

The Chatham County Emergency Management Agency established an Incident command post at the Chatham County Agricultural Center in Pittsboro, NC. Emergency management personnel provided just-in-time training and issued kits containing plans, maps, dosimetry, reference guides, potassium iodide (simulated), and other supplies needed to accomplish clearance activities. When directed to conduct waterway clearing, assigned deputies and wildlife officers retrieved pre-staged boats and launched from designated boat ramps. Park rangers and army corps personnel proceeded to assigned recreational areas. Personnel navigated assigned routes in a timely manner and demonstrated delivery of a pre-scripted emergency message by public address system for clearance of select waterways, parks, beaches, campgrounds, boat ramps, and other recreational areas.

Responding personnel had access to interoperable communications and coordinated operations primarily over a designated, shared 800-megahertz radio channel. Cellular telephones provided backup communications. Communications systems utilized were fully functional, continuously available, and redundant. No communications failures were observed.

Incident command staff-initiated dosimeter checks at regular intervals. Responders were familiar with the administrative dose limits, dosimetry reporting, and the actions to take if the limits were exceeded. Personnel would request assistance or additional resources by radio to

the incident command post. Upon completion of lake clearing operations, personnel would respond to a designated location for monitoring and decontamination, if directed.

The Chatham County Incident Command Post was mobilized and activated at the Chatham County Agriculture Center. The incident command post was declared operational at the alert emergency classification level due to the time of year and congestion in waterways and parks near Jordan Lake. A representative from the Chatham County Sheriff's Office served as incident commander and provided direction and control to Chatham County Sheriff Deputies, Army Corps of Engineers personnel, and North Carolina State Parks personnel who were responsible for clearing waterways on Jordan Lake and state parks surrounding the lake.

The incident commander issued a direct reading dosimeter, a simulated permanent record dosimeter, a simulated potassium iodide tablet, and provided a radiological safety briefing to all staff members prior to the start of their mission. The incident commander reminded staff to check their direct reading dosimeters multiple times during the demonstration. No changes in dosimetry readings were reported to the incident commander; however, the incident commander explained by interview that elevated dosimetry readings reported to the incident command post would be communicated to the emergency operations center for protective action decision-making discussions.

The incident command post contained sufficient supplies and equipment to assist emergency support function and functional area staff. Multiple internal and external communications systems were available and used to augment emergency operations. The primary means of communication between the incident command post and staff members in the field included an 800-megahertz radio over a dedicated channel. All systems used were operational with no communications failures.

For this core capability the following radiological emergency preparedness capability targets were met: 1.1, 1.2, 2.2, 3.1, 3.2, and 5.4.

### 3.5.12 Chatham County Reception Center and Congregate Care

Mass Care Services

Chatham County reception and congregate care center staff successfully demonstrated monitoring, decontamination, sheltering, and registration of evacuees during out-of-sequence activities on April 3, 2023. Participating agencies mobilized staff and resources to set-up and operate the Chatham Grove Elementary School reception center and shelter in response to a simulated radiological incident at the Harris Nuclear Plant.

Traffic control procedures were in place to direct evacuation traffic to the reception and congregate care center. The setup and traffic flow within the reception center parking area was clearly designated by signage, route markings, cones, and personnel directing evacuees to different functional stations. Contamination control supplies, protective clothing, and use of signage, mops, floor coverings, stanchions, and barrier tape were sufficient to minimize the spread of contamination and limit evacuee access to unauthorized areas of the facility. Staff wore gloves and shoe coverings during the demonstration but explained by interview that protective suits and face coverings would be worn as necessary in a real event. Staff assigned to the initial monitoring and decontamination stations were issued a self-reading dosimeter, a simulated permanent record dosimeter, a simulated potassium iodide tablet,

and were provided a radiological safety briefing by the radiation safety officer before reporting to their duty station.

Personnel used electronic hand-held survey meters and portable portal monitors to screen evacuees, their belongings, and vehicles. All hand-held survey instruments were observed to be current in calibration and select staff performed operational checks on each instrument using an appropriate check source in accordance with the manufacturer's specifications and industry recommendations. Survey meter operators established background readings at assigned workstations.

In accordance with the extent of play, monitoring personnel displayed had a direct reading dosimeter, a permanent record dosimeter, and a simulated dose of potassium iodide but limited personal protective equipment. Personnel explained that in a real world-emergency, they would be outfitted in full-body protective suits with seams taped and two sets of latex gloves and booties. Near the vehicle entrance, a four-person team of fire personnel (team leader, greeter, and two technical recorders) stopped evacuee vehicles, collected information from, and provided instructions to the evacuees. Recorders collected the vehicle owner's name and vehicle identifiers including make and model, color, and license plate number. The greeter provided the evacuees with information about the reception center process and directed them to a parking area. They also numbered each vehicle by either writing on the windshield or placing a form on the dash.

In the parking area, another team of fire personnel met and instructed evacuees to park in every other space, exit the vehicle, and proceed to personnel monitoring. The defined parking area was limited to about 80 spots; however, personnel identified numerous grassy areas, as well as an adjacent school and park for overflow parking. Fire personnel spot checked each vehicle by collecting a smear from the grill, wheel wells, and side of the vehicle using a thick, dust-free cloth, and then surveying the cloth with a digital, hand-held meter. If survey results were above 300 counts per minute, the vehicle was considered contaminated. Additionally, if contamination was found on occupants of the vehicle during individual monitoring, vehicle monitoring personnel were notified via radio that the vehicle was to be considered contaminated. In both circumstances, fire personnel wrapped the mid-section of the contaminated vehicles in cellophane to limit cross-contamination from accidentally touching or brushing against the vehicles. In accordance with plans and procedures, contaminated vehicles were not decontaminated and would remain in the designated parking area until resources became available for further inspection and possible decontamination.

Throughout the vehicle monitoring process, survey meter operators demonstrated proper technique and safe practices to avoid unnecessary exposure or cross-contamination. Limited touching or kneeling, glove changes, frequent surveying, dosimeter checks, and teamwork were regularly observed or discussed. Diagrams, procedures, and appropriate supplies were readily available. Personnel were well-trained and adequate in number to perform roles and responsibilities in accordance with plans and procedures.

Staff successfully demonstrated population monitoring procedures during the exercise at the Chatham Grove Elementary School reception center. Following vehicle monitoring, evacuees exited their vehicles to be screened for contamination. Population monitoring took place in an inflated triage tent which provided shelter from the elements. Spacing for personnel monitoring and registration was adequate and scalable, with room for additional portal monitors and ancillary operations such as registration. Staffing consisted of three portal monitor staff for each portal monitor, two individuals for initial registration, and one flow

manager, who directed evacuees to portal monitor stations or held them in line until portal monitors were available.

The personnel monitoring team used portal monitors and digital-hand-held survey meters. Operational checks on the portal monitor included side quartile and centerline checks, battery checks and a visual inspection. Staff demonstrated operational checks of the digital-hand-held survey meters. The digital-hand-survey meters were then wrapped in protective film to keep contamination off the equipment. Prior to issuance of direct-reading dosimetry, the dosimetry was zeroed out by the logistics unit. Emergency workers received a detailed safety briefing and were issued exposure management equipment as outlined in emergency plans.

Six (6) evacuees were processed through personnel monitoring. The evacuees arrived carrying a vehicle slip with an assigned identification number. The vehicle slip was provided to the intake clerks who noted the vehicle number, names of occupants, and cell numbers for each occupant onto a log sheet. Roped off waiting lanes led evacuees toa worker who directed evacuees to an available portal monitor. As the evacuees were surveyed by the portal monitor, a scribe noted their readings and the general location of any contamination. The scribe directed the contaminated evacuees to step backwards off the step pad and hand over the completed Evacuee / Emergency Worker Contamination Survey Meter Card form to them to continue further decontamination processing. The portal monitor operator wiped off the blue step off pad on the monitor and surveyed the bottom of the cloth used on the mop head for contamination before allowing the next evacuee to proceed through the monitor. Plans describe how monitors would be wiped down and surveyed had one of the six evacuees accidently touched the portal monitor sides.

To meet the metrics criteria for this capability, responders must demonstrate they could process 20% of their evacuating permanent residents and transient population census withing 12 hours by demonstrating at least one third of their equipment during the exercise. The reception center anticipates 4,721 residents and 7,921 transients would come to be processed, for 12,642 total evacuees. Twenty percent of that is 2,528. With four portal monitors in use, each monitor must monitor 632 evacuees in 12 hours, or one every 68 seconds. The six (6) evacuees were processed through the portal monitors in an average of 30. Two portal monitors out of four (4) were set up for the exercise to meet the one-third demonstration requirement.

Staff successfully demonstrated pet management procedures during the exercise at the Chatham Grove Elementary reception center. Per interview with county animal control, staff responding to the activation of the reception would transport kennels for animals on their companion animal management equipment trailer. During the initial response phase of the incident, staff would house pets in carriers as they entered the population monitoring intake station. The focus would be on screening and decontaminating owners. The county would send a resource request to the state for additional resources to screen and decontaminate pets. If both owners were screened and found to be free of contamination, the owners could continue to a designated shelter with their pets. Basic personal effects forms are used to identify and manage the custody of pets at the center.

Two (2) contaminated evacuees went through the decontamination stations (one male and one female). There was one decontamination tent for male evacuees and one decontamination tent for female evacuees. Each tent consisted of a separate entrance and exit point, separated areas that allowed for distinct clean and contaminated areas that

minimized the risk of cross-contamination. Emergency workers knew the contamination limits and decontamination procedures. If an evacuee could not be decontaminated below 300 counts per minute, the workers would notify the reception center to coordinate transportation to a medical facility.

Evacuees entered the decontamination areas with a form from the initial monitoring station that detailed the general location of contamination. An operator surveyed the evacuee using a handheld instrument and the results were recorded by the scribe. Spot decontamination was conducted using a cleaning wipe and the area was resurveyed. If spot decontamination was not successful, the evacuee was directed to the shower area. Personal valuables (wallet, keys, jewelry, etc.) were collected in a bag and the evacuee was given a receipt. The evacuee was instructed to disrobe and shower; clothing was collected in a trash can for disposal. After showering, the evacuee was resurveyed using a hand-held meter. If contamination was not removed initially, the areas would be rewashed and re-surveyed until clean, or it was determined the area could not be decontaminated. Each evacuee was resent though a portal monitor to verify successful decontamination. Evacuees were provided a decontamination kit prior to entering the shower area with soap, modesty garments, a gray plastic bag for valuables, and a red plastic bag for contaminated clothing. Evacuees deemed clean were given a green wristband to indicate that they were not contaminated were directed to proceed to the shelter registration station.

Smaller personal belonging would be monitored, decontaminated, if possible, and returned to the evacuee. If belongings could not be decontaminated, they would be placed in a bag and numbered to match evacuees' number for later collection. Contaminated waste was disposed of in locker room trash cans away from portal monitors and survey equipment to prevent increased background radiation levels. There was an adequate number of personnel available to perform monitoring and decontamination of evacuees.

Chatham County reception and congregate care center personnel demonstrated that facilities, equipment, and procedures were in place and utilized to provide temporary shelter, congregate care, and registration of evacuees in response to a radiological emergency at Harris Nuclear Plant. The Chatham County Department of Social Services and American Red Cross, volunteers were the lead agencies responsible for the registration and care of evacuees. Additional shelters were available and would be opened when deemed necessary by the shelter manager. Evacuees with a green wristband were registered using the Red Cross Shelter Dormitory Registration Form, escorted to the dormitory area, and given information on services available at the shelter including feeding, medical response, and mental health services. Potassium iodide tablets and appropriate instructions were made available to evacuees. Staff members maintained appropriate record keeping of the distribution of potassium iodide for the general public. The facilities had sufficient supplies of forms, cots, bedding, and comfort kits for evacuees.

For this core capability the following radiological emergency preparedness capability targets were met: 5.1.

Public Health, Healthcare, and Emergency Medical Services Core Capability Summary:

FirstHealth Emergency Medical Services technicians successfully demonstrated the ability to treat a potentially contaminated, injured individual at the Chatham County Reception Center located at Chatham Grove Elementary School.

A FirstHealth Emergency Medical Services ambulance crew consisting of two emergency medical technicians was pre-positioned in the parking area of Chatham Grove Elementary School in accordance with the extent of play agreement and therefore were not notified and mobilized per the standard operating guide. The medical scenario component of the drill commenced with the Chatham County lead exercise controller providing an exercise inject stating an evacuee (simulated) fainted while approaching the initial monitoring area and required medical attention. The technicians observed the collapsed injured individual across the parking area and immediately prepared to render aid.

The technicians wrapped their pre-staged backboard in an outer and inner sheet to reduce the spread of contamination and then approached the injured individual to assess their medical needs. The technicians placed the backboard on the right side of the injured individual and took care to not transfer contamination from the ground onto the clean medical equipment. The lead controller provided additional injects stating the evacuee was alert and lived in a protective action zone that was instructed to evacuate to the reception center. The technicians did not have a radiological survey meter to confirm if the injured individual was contaminated or not. The technicians explained that radiological monitoring would be performed by staff at the hospital upon arrival.

The technicians used scissors to carefully cut the outer layer of clothing off the injured individual and removed the evacuees clothing in a head-to-toe direction to avoid stirring up loose contamination. The injured individual was then transferred to the backboard, wrapped in the inner sheet, secured to the backboard using straps, and carried to the clean zone near the parked ambulance. The individual was placed on a covered gurney and cocooned a second time in an outer sheet. The technicians then transferred the injured individual to the ambulance and doffed their outer layer of gloves and shoe coverings before entering the ambulance. The technicians simulated taking the injured individual's vital signs and took care to only expose the necessary extremities.

Transport was not demonstrated per the extent of play agreement; however, the technicians explained by interview the process for contacting the hospital by radio during transport to relay relevant information including that the injured individual may potentially be contaminated and the estimated time of arrival at the hospital. The technicians indicated decontamination of the ambulance and crew would occur at the hospital. Additional decontamination would occur at the Chatham County emergency worker decontamination facility if needed.

The technicians were issued a direct reading dosimeter, a simulated permanent record dosimeter, simulated potassium iodide tablets, and received a radiological safety briefing from the radiation safety officer prior to the reception center being opened. Personal protective equipment worn by the technicians included multiple sets of gloves and shoe coverings. The technicians wore a lower level of personal protective equipment since they were staged outside of the Harris Nuclear Plant 10-mile emergency planning zone; however, the technicians explained by interview that additional personal protective equipment would be worn if necessary, including disposable suits, face shields, and head coverings.

For this core capability the following radiological emergency preparedness capability targets were met: 5.3.

### 3.5.13 Harnett County Emergency Operations Center

Operational Coordination Capability Summary:

Harnett County Emergency Operations Center staff successfully demonstrated operational coordination during a simulated response to an incident at the Harris Nuclear Plant. They demonstrated the ability to establish communications and maintain a unified and coordinated operational structure and process that appropriately integrated all critical stakeholders. Participating agencies and personnel demonstrated knowledge of radiological emergency plans and procedures and made informed decisions to protect the health and safety of the public. They worked seamlessly within the unified command with the three (3) other risk counties and the state to coordinate protective actions and public messaging across the entire 10-mile emergency planning zone.

Upon receiving the initial notification from the Harris Plant that an Alert was declared, the Harnett County Emergency Management Director activated their call down system which notified personnel that the emergency operations center was being activated and they should report there. Those who were not prepositioned quickly arrived and the emergency operations center was activated. Available resources were reviewed. Harnett requested additional portal monitors and personnel to operate them through the established state resource request process.

Following the initial notification from the utility, Wake County established the unified command using the utility's notification system and then shifted to a commercial conference video/audio line. Harnett County's Emergency Services Manager and Emergency Management Coordinator represented the county in the unified command. They made the decision to shelter in place their part of the 10-mile emergency planning zone and to relocate an elementary school on the edge of the zone. The county fire marshal's office and emergency medical services were directed to stand up the reception center and emergency worker decontamination operations in support of the response.

Emergency worker exposure control is managed by the individual county agencies during an emergency. The emergency services director coordinated, time permitting, with the state's Radiation Protection Section on issues concerning exceeding dose limits. Dosimetry and potassium iodide was stored at the county emergency operations center and would be delivered where needed (reception center, emergency worker decontamination) during an emergency.

Harnett County demonstrated the capability to provide and maintain reliable communications with emergency personnel. Systems utilized included the utility's notification system, commercial voice over internet, satellite, and cellular telephones, commercial video/audio conference lines, the state's 800 MHz radio system, the state's emergency management coordination software and basic email and internet. Personnel from the county's 9-1-1 center and information technology department were at the emergency operations center to support operations and troubleshoot any communication problems.

For this core capability the following radiological emergency preparedness capability targets were met: 1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, and 3.1.

Public Information and Warning Capability Summary:

Harnett County Emergency Operations Center personnel demonstrated the ability to deliver coordinated, prompt, reliable, and actionable information to the whole community. This was accomplished using clear, consistent, accessible, culturally, and linguistically appropriate methods to relay emergency information, as well as the actions being taken, and the assistance being made available. Personnel provided and maintained reliable communications with emergency personnel. They also provided information and instructions to the public and media. The emergency management director worked closely with public information staff to insure accurate and timely dissemination of critical data. Public information formulated and distributed two county specific press releases: emergency operations center activation and closing parks/relocation of elementary school students; and supported the unified command's joint information system.

For this core capability the following radiological emergency preparedness capability targets were met: 3.2 and 3.3.

### 3.5.14 Harnett County Emergency Worker Decontamination

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

Harnett County emergency worker decontamination personnel successfully demonstrated the capability to provide monitoring and decontamination of emergency workers, equipment, and vehicles in response to a radiological emergency at Harris Nuclear Plant. The demonstration was conducted at Angier-Black River Fire Station in Angier, North Carolina. Participants were prepositioned for the demonstration in accordance with the extent of play agreement.

The facility was a modern and spacious drive-through fire station with ample outdoor space to accommodate vehicle monitoring and decontamination, as well as adequate indoor areas to conduct emergency worker registration, portal monitoring, hand-held contamination monitoring, decontamination, and shower decontamination for males and females in the truck bay areas. The facility setup and traffic flow paths were clearly designated by floor markings and the use of signs and attendants. Informational signs, personal protective clothing, walkway floor coverings, traffic cones, and barrier ribbon were sufficient to minimize the spread of contamination within the facility. A "clean" area was provided for emergency workers who had been decontaminated or monitored with no contamination.

There were adequate quantities of contamination survey meters, direct reading dosimeters, and permanent record dosimeters for monitoring and decontamination activities. Survey instruments were within current annual calibration and instruments appropriately responded within a specified range of readings when exposed to a check source. Survey meter probes were wrapped in a thin cellophane material. Background radiation levels were established prior to operations. One portal monitor was set up for demonstration with three other ones available as needed. The portal monitor was operationally checked with a designated source for each detector and at three centerline levels.

Each emergency worker was given a zeroed direct reading dosimeter with range appropriate for reading the administrative and turnback limits. All dosimeters were within the annual leak test dates. Responders were provided a simulated permanent record dosimeter. Responders understood the administrative and turnback limits and the contamination action level.

Monitoring and decontamination of emergency workers vehicles at the fire station included ambulances, fire apparatus, law enforcement vehicles, and other vehicles that may have been exposed in the plume. There was adequate space for vehicles to enter, park, and complete initial vehicle monitoring by fire station staff. Vehicles entered the emergency worker monitoring and decontamination center through a well-marked two-lane entrance to the station, where they were initially greeted by vehicle monitoring workers. Fire station staff were assigned as vehicle monitors and properly demonstrated donning of proper protective clothing including wearing of personal dosimetry and received just-in-time training on dosimetry, monitoring equipment, and vehicle monitoring techniques.

Following a checklist and other job aids, vehicle monitoring workers demonstrated appropriate initial emergency worker screening as well as vehicle monitoring of arriving vehicles. Using handheld survey meters, workers successfully demonstrated a radiological survey of one vehicle by surveying the exterior and interior, paying close attention to areas most likely to be contaminated. If contamination was detected on the vehicle, the driver was directed to the vehicle decontamination area at the station. Occupants of the vehicle were directed to the emergency worker monitoring and decontamination area.

Vehicle decontamination was successfully demonstrated through simulation using fire hoses, buckets, and brushes. The staff paid special attention to areas that had been monitored and were designated as contaminated. Vehicles that could not be decontaminated below the action level would be impounded in an authorized area. Following vehicle decontamination, the fire station personnel demonstrated donning and doffing for both full turnout gear and protective clothing. One (1) fire station personnel read the preprinted procedures aloud while another person followed the steps required to don and doff including the proper placement of both permanent reading dosimeters and direct reading dosimeters. Precautions were taken to avoid cross contamination. The workers were aided by laminated instruction cards and large displays.

Following registration of emergency workers, entry into the portal monitoring area was controlled by the monitoring staff. Emergency workers who alarmed the portal monitor were hand monitored using survey meters with appropriate speed and distance. Emergency workers who exceeded the action level were first escorted to a hand decontamination area which could be used as needed. If other areas of the body required decontamination, emergency workers were escorted to a portable decontamination tent with separate showering and dressing areas for males and females.

For this demonstration, two (2) emergency workers were monitored with one (1) emergency worker contaminated greater than the action level (simulated). After alarming the portal monitor, the contaminated emergency worker was surveyed with a handheld monitor and readings were documented with the location of the contamination and the contamination level. The emergency worker was directed down a designated path to the decontamination shower area. Staff provided instructions on disrobing, collection of personal effects, showering, and follow-up monitoring. While full showers were available, spot decontamination could also be used if contamination was not widespread. A large shower tent provided privacy for male/female disrobing, showering, redressing in modesty clothing and follow-up surveys when completed. If the emergency worker was still contaminated, the emergency worker would shower, redress, and be monitored again. If still contaminated after a third shower, the worker would be wrapped to minimize contamination and transported to the designated hospital. Contaminated clothing and other personal belongings would be

sealed in plastic bags with a copy of an inventory form and placed in a storage receptacle. Contaminated waste was stored in an area separate from the decontamination area to prevent the waste from increasing background radiation levels in occupied areas.

For this core capability the following radiological emergency preparedness capability targets were met: 5.2.

### 3.5.15 Harnett County Reception Center and Congregate Care

Mass Care Capability Summary:

Harnett County reception and congregate care center staff successfully demonstrated monitoring, decontamination, sheltering, and registration of evacuees during out-of-sequence activities on April 4, 2023. Participating agencies mobilized staff and resources to set-up and operate the Harnett Central Middle School reception center and shelter in response to a simulated radiological incident at the Harris Nuclear Plant.

The Harnett Central Middle School was set up and staffed for monitoring, decontamination, sheltering, and registration of evacuees. Ample supplies were available and utilized to set up the facility to prevent or control the spread of contamination. Staff used barrier tape, cones, stanchions, signage, directional arrows, and verbal instructions to direct evacuees through the facility and minimize cross-contamination.

Emergency workers received a detailed safety briefing and were issued exposure management equipment as outlined in emergency plans. Prior to issuance, direct reading dosimeters were tested and zeroed by the logistics unit. Select staff demonstrated the proper donning and doffing of personal protective equipment, including full-body suits, gloves, booties, face shields, and dosimetry. Regular dosimetry checks and contamination control were practiced and observed throughout the process.

Personnel used electronic hand-held survey meters and portable portal monitors to screen evacuees, their belongings, and vehicles. Select staff performed operational checks on each instrument using an appropriate check source in accordance with the manufacturer's specifications and industry recommendations. Screening instruments were wrapped in a protective plastic film to prevent contamination. All hand-held survey meters were observed to be current in calibration and operationally checked against a range of readings, as indicated on affixed stickers, prior to issuance. Survey meter operators established background readings at assigned workstations.

Buies Creek Fire Department personnel set up cones and signage to direct evacuee vehicles through the monitoring process. In accordance with the extent of play, monitoring personnel displayed limited personal protective equipment and supplies that included a direct reading dosimeter, a permanent record dosimeter, and a simulated dose of potassium iodide. Personnel explained that in a real world-emergency, they would be outfitted in full-body protective suits with seams taped and two (2) sets of latex gloves and booties, in addition to the dosimetry. Near the vehicle entrance, fire personnel stopped evacuee vehicles, recorded the number of occupants, and directed them to a designated parking area. Each vehicle was provided a sequential number which was written on the back glass and recorded on the appropriate form.

In the parking area, a team of fire personnel met and instructed evacuees to park in every other space, exit the vehicle, and proceed to personnel monitoring. The defined parking area was limited; however, personnel discussed the ability to use grassy areas, as well as an adjacent school for overflow parking, if needed. Fire personnel spot checked each vehicle by collecting a smear from the grill, wheel wells, or side of vehicle using a thick, dust-free cloth, and then surveying the cloth with a digital, hand-held meter. If survey results were above 300 counts per minute, the vehicle was considered contaminated. Additionally, if contamination was found on occupants of the vehicle during individual monitoring, vehicle monitoring personnel were notified via pre-programmed, hand-held radio. In both circumstances, fire personnel wrapped the mid-section of the contaminated vehicles in cellophane to limit cross-contamination from accidentally touching or brushing against the vehicles. In accordance with plans and procedures, the contaminated vehicles were not decontaminated and would remain in designated parking areas until resources became available for further inspection and possible decontamination, as recommended by officials.

Throughout the vehicle monitoring process, survey meter operators demonstrated proper technique and safe practices to avoid unnecessary exposure or cross-contamination. Limited touching or kneeling, glove changes, frequent surveying, dosimeter checks, and teamwork were regularly observed or discussed. Diagrams, procedures, and appropriate supplies were readily available to staff, as needed. Personnel were well-trained and adequate in number to perform roles and responsibilities in accordance with plans and procedures.

Staff successfully demonstrated population monitoring procedures at the Harnett County Reception Center. Following vehicle processing, evacuees exited their vehicles to be screened for contamination. Population monitoring took place in an accordion pop-up triage tent which provided shelter from the elements. Spacing for personnel monitoring and registration was adequate and scalable, with room for additional portal monitors and ancillary operations such as intake. Two portal monitors were set up and operational. Staffing was adequate and consisted of three personnel for each portal monitor, and one flow manager, who directed evacuees to portal stations or held them in que until portal monitors were available.

The personnel monitoring team processed six (6) evacuees. The evacuees arrived carrying a vehicle slip with an assigned identification number. A handler directed evacuees to an available portal monitor. As the evacuees were surveyed by the portal monitor, a scribe noted their readings and the general location of the contamination. If the evacuee was clean, they would pass through the monitor and receive a green band. If the evacuee alerted the monitor, the scribes directed the evacuee to step backwards off the step pad and proceed to the decontamination station with the appropriate contamination form. Staff alerted the vehicle monitoring team and provide them with the corresponding vehicle identification number. The portal monitor operator cleaned and surveyed the step off pad and baseplate before allowing the next evacuee to proceed. Staff described how to clean and survey the portal monitor if it became contaminated. The six evacuees were processed thru the portal monitors in 213 seconds or 1 every 36 seconds; therefore, this meets the metrics requirement of 156 seconds per evacuee.

Harnett County Reception Center staff validated, through interview, pet management protocols in response to a radiological emergency. Per discussion with the Harnett County Department of Agriculture and Veterinary Care, responders would transport the companion animal management equipment trailer to the reception center. The trailer contained 50 kennels and all supplies to manage pet operations, other than food and water. The animal

services director would act as the incident commander. During the initial response phase of the incident, staff would provide pet screening and decontamination assistance to pet owners. The agency had a mobile air conditioning system for outside use. An addition 50-60 kennels were available at the county animal control facility. All animals would be surveyed regardless of whether the pet owner(s) were found to be contaminated. Officials identified an area designated for special needs which could be used for pet decontamination.

At the decontamination station, evacuees were monitored with hand-held instruments to isolate the contamination prior to decontamination. Contamination control procedures included the use of marked walkways with floor coverings, and the use of personal protective equipment by emergency workers. Provisions were in place to ensure privacy, and consisted of two single – person decontamination stations (male and female), as well as a non-ambulatory decontamination station that could also accommodate decontamination of service animals. Monitoring instruments were current in calibration and operationally checked prior to use. Background readings were taken and recorded. Although not included as part of the procedures, personnel took it upon themselves to post background levels at each of the monitoring and decontamination stations.

Decontamination station staff provided appropriate direction to contaminated evacuees and detailed instructions in both English and Spanish, including images for disrobing, collection of personal effects, showering, and re-monitoring. Full showers were demonstrated. Evacuee post-decontamination kits included modesty clothing and slippers.

For demonstration, two (2) evacuees were processed through the station. One (1) evacuee was processed through the shower station, then re-monitored to ensure that contamination was below the limit. Contamination on the second evacuee was limited to the extremities, so spot decontamination techniques were used to decontaminate the area.

Contaminated clothing and other personal belongings were sealed in plastic bags with unique inventory-control barcodes and placed in a storage receptacle. Contaminated waste was stored in an area separate from the decontamination station to prevent elevated background radiation levels in occupied areas. A green wristband, sticker, tag, or equivalent indicated that an individual had been decontaminated and could access the reception area. If an evacuee could not be successfully decontaminated after three attempts, they would be transported to Betsy Johnson Hospital.

The Harnett County reception and congregate care center personnel demonstrated that facilities, equipment, and procedures were in place and utilized to provide temporary shelter, congregate care, and registration of evacuees in response to a radiological emergency at Harris Nuclear Plant. The Harnett County Department of Social Services managed the shelter that was co-located with the county evacuee reception center.

The shelter manager explained that the coordination of activities in an emergency was made by the Harnett County Emergency Services Director. The shelter manager explained that personnel from the Harnett County Department of Social Services would staff the registration tables. County staff would provide additional services including counseling, nursing/medical assistance, feeding, and mental health support.

The shelter manager explained that the registration personnel only accepted evacuees (and service animals) who had been monitored and displayed a green sticker indicating the evacuee's clean status. Various stations were set up in accordance with the established

shelter plan. The county emergency services had a supply of cots, bedding, mats, and comfort kits for evacuees. Meals would initially be served from the stocked school kitchen by school employees. Space at the shelter was also designated for evacuees with service and emotional support animals. The shelter manager had access to several methods of communication with the Harnett County Emergency Operations Center, including county radio, amateur radio, and telephone. Communication in the shelter was by hand-held radios or the school's public address system.

The Harnett County Health Department established a station to issue potassium iodide to evacuees following the potassium iodide distribution plan. The Harnett County Emergency Services provided personnel to set up area dosimetry in the shelter to monitor exposure.

This facility could easily handle expected evacuees in the middle school gymnasium and could be expanded to the second gymnasium. When the middle school reached capacity, overflow would be directed to the high school building adjacent to the middle school. The facility had sufficient forms, cots, bedding, and comfort kits for evacuees.

For this core capability the following radiological emergency preparedness capability targets were met: 5.1.

Public Health, Healthcare, and Emergency Medical Services Capability Summary:

Harnett County Emergency Medical Services personnel, on standby at the reception center, demonstrated the capability to provide medical transport and treatment services to a contaminated, injured individual. The incident commander summoned emergency medical services personnel to the male decontamination showers for an individual who requested to be transported to a hospital for evaluation and treatment of his injured arm and possible contamination. An ambulance was staged at the reception center.

Emergency medical services personnel obtained the evacuee monitoring from decontamination station personnel to accompany the patient. Medical care was provided to the patient's right arm. In accordance with their procedures, emergency medical services personnel did not conduct area or patient monitoring. Communications (simulated) occurred between the crew and Betsy Johnson Hospital by radio prior to departure from the reception center.

Contamination control measures utilized by the emergency medical services crew included double cocooning the patient in sheets and personnel explained that they would use personal protective equipment. The crew explained that they would be monitored and decontaminated, if needed at Betsy Johnson Hospital. They also explained that their ambulance would be monitored and decontaminated, if required, at the Angier Fire Department Emergency Worker Decontamination Station.

For this core capability the following radiological emergency preparedness capability targets were met: 5.3

### 3.5.16 Lee County Emergency Operations Center

Operational Coordination Capability Summary:

During the 2023 Harris Nuclear Station hostile-action based radiological exercise, Lee County Emergency Management staff successfully demonstrated the capability to protect the public in the event of a radiological emergency.

The Lee County emergency operations center was equipped to manage the needs of Lee County's radiological response. The facility had adequate projector displays to provide situational awareness to emergency operations center staff and posters of emergency protective zone maps and forms to assist staff. Each staff position had corresponding binders that included plans as well as position-specific checklists to guide staff. Each position desk had wired telephones, and the space had wi-fi connectivity. Staff members also utilized cell phones to communicate with organization counterparts. The director provided frequent emergency operations center briefings to provide situational awareness and coordinate with staff members to accomplish tasks.

Three (3) dedicated phone lines were installed in the facility to provide initial and subsequent notification from the Harris plant. Two dedicated phones were in the emergency operations center, and one was in the 9-1-1 center in the same building. Initial and subsequent notifications were received in the emergency operations center on one of the dedicated phones. However, the emergency management director explained that the 9-1-1 center would have received the initial notification if the emergency operations center was not prepositioned. The deputy director demonstrated use of the mass notification system that would be used to recall emergency operations center staff. The mass notification system sends out text messages and voice messages to members on the distribution list that is managed by Lee County Emergency Management.

The Lee County Emergency Management Director conducted protective action decision-making during this demonstration in conjunction with North Carolina emergency management, Wake County, Chatham County, and Harnett County on a conference line call. The conference line call was used to discuss and make decisions regarding the response. Wake County acted as lead during the conference call, and Lee County provided questions/clarifications/concurrence to implement decisions.

Lee County made four (4) protective action decisions. The first protective action decision was to have the two (2) schools in Lee County that serve as reception centers release students early to ensure spaces were available for reception center implementation. After the General Emergency classification level change, the director also instructed the fire marshal to open the emergency worker decontamination site. Additionally, at that time the director instructed law enforcement to remain on standby for potential backup route alerting. The state and counties made the decision to evacuate zones A and K and shelter all other zones after the General Emergency declaration. Following that decision, the director instructed the emergency operations center to activate the reception centers and release the remaining schools. The director and school liaison coordinated, deciding to divert student who lived in A and K zones to the reception centers.

Lee County did not implement the decision for emergency workers to ingest potassium iodide. The reason for this is that Lee County never sent any emergency workers out into the affected zones. However, they did issue emergency worker kits following the General

Emergency declaration when law enforcement and fire department staff were advised to be on standby.

Control of the emergency worker exposure, radiological briefings and dosimetry issue is performed by the three fire departments in the local area and not by the emergency operations center. Equipment and emergency worker exposure control was previously validated during the staff assistance visit in 2023.

For this core capability the following radiological emergency preparedness capability targets were met: 1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, and 3.1.

Public Information and Warning Capability Summary:

The Lee County Public Information Officer successfully demonstrated the capability to alert and notify the public and provide timely information during a radiological emergency at the Harris Nuclear Plant. Public information messages were coordinated and approved by the Lee County Emergency Operations Center Director. Once activated, the Joint Information Center information and communications with the Lee County Public Information Officer were timely and accurate.

In the press releases, media inquiries regarding Lee County were directed to the Lee County Communications Department using the published phone number or e-mail address included on the press release. Any inquiries regarding the Harris Nuclear Plant were directed to the Duke Energy 24-hour media relations line with the published number. Clear and concise emergency information and instructions for the public and news media were drafted by the Lee County Public Information Officer. Approval of the contents was by the Lee County Emergency Operations Center Director. As the incident progressed, updated information (including previously identified protective areas) and any new protective actions were included. Information that was no longer valid was clarified or deleted. All public information produced by the Lee County Public Information Officer was produced in English.

Sirens, an emergency alert system, and a tone alert system are in place for notification of the public in Lee County. Activation of these systems was located in Wake County. When systems activation was agreed upon, Wake County personnel advised Lee County of the planned and staggered times for siren activation, emergency alert system activation, and tone alert activation. This task was conducted and evaluated in Wake County. One (1) siren failure was communicated to Lee County, but the alternate route alerting did not fall within Lee County's jurisdiction.

For this core capability the following radiological emergency preparedness capability targets were met: 3.2 and 3.3.

### 3.5.17 Lee County Backup Route Alerting

Public Information and Warning Capability Summary:

Deep River Fire Department staff successfully demonstrated backup route alerting and notification of the public following the detection of a siren failure in Lee County. Per the standard operating guideline, Lee County Emergency Management would request dispatch of the backup route alerting teams after receiving notification that a siren had failed.

The Deep River Fire Department Fire Chief acted as the radiation safety officer and provided a comprehensive safety briefing prior to deploying the backup route alerting teams that included issuance of direct reading and permanent record dosimeters (simulated), minimizing emergency worker exposures as low as reasonably achievable (ALARA), potassium iodide (simulated), radiation exposure control forms, and instructions for taking potassium iodide when directed to do so. The safety briefing also included instructions for checking direct reading dosimeters every 15 minutes and reporting increases of 1 Rem on the direct reading dosimeter and the 2.5 Rem turnback limit for aborting the mission.

The Deep River Fire Department Fire Chief utilized maps and a display board within the Deep River Fire Department to maintain situational awareness throughout the entirety of the demonstration. The facility had adequate space, communications equipment, and a backup generator to support the mission.

The primary communication system used during the back-up route alerting demonstration was the Wake County Emergency Services VHF radio system; handheld and vehicle mounted radios were used for communication between the route alerting teams and the command staff at the fire station. Mobile cell phones with voice, text and email capabilities provided secondary communications capability.

Two (2) teams of firefighters from Deep River Fire Department were dispatched to perform backup route alerting; two (2) fire department vehicles were used to drive the selected routes, and repeatedly broadcast the selected message to the public along the routes. The teams were given route maps, a pre-scripted message to broadcast along the route, and personal protective equipment.

Route alerting activities, including reading of the pre-scripted message along the route were simulated every 15 seconds or as needed. Initially, there was an issue with the vehicle mounted public address system used for broadcasting the route alert message to the public, however the teams quickly identified available alternatives including alternate vehicles or a handheld bullhorn to broadcast the message. All direct reading dosimeters were checked every 15 minutes with no increases being observed, and the readings were reported back to the radiation safety officer. Backup route alerting activities were concluded without delay in less than 20 minutes.

For this core capability the following radiological emergency preparedness capability targets were met: 1.1, 1.2, 2.2, 3.1, and 3.3.

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# Section 4: Conclusion

FEMA assesses offsite response organization preparedness on an ongoing basis which meets the intent of the 44 CFR 350 planning standards and, through the assessment of selected core capabilities, the National Preparedness Goal. This report is used to document biennial demonstration-based assessment activities and will be used to inform the Biennial Preparedness Report in December 2024.

The demonstration-based assessment activities evaluated by core capabilities, objectives, and capability targets were successfully demonstrated. All offsite response organizations demonstrated knowledge of their emergency response plans and procedures, and successfully demonstrated the ability to protect the health and safety of the public in the event of an incident involving the Harris Nuclear Plant.

Coordination between the state and risk counties was seamless and it was apparent that detailed training on policies and procedures, and the utilization of checklists in every emergency operations center contributed to the effective sharing of information and increased the overall preparedness of all Harris Nuclear Plant offsite response organizations.

Based on the results of this exercise and FEMA's review of the 2023 Annual Letter of Certification submitted by North Carolina, the offsite radiological emergency response plans and preparedness of the state of North Carolina and the affected local jurisdictions site-specific to the Harris Nuclear Plant can be implemented. They are adequate to provide reasonable assurance that appropriate measures can be taken offsite to protect the health and safety of the public in the event of an emergency at the site. The Title 44 CFR, Part 350 approval of the offsite radiological emergency response plans and preparedness site-specific to the Harris Nuclear Plant granted on June 20, 1980, will remain in effect. FEMA wishes to acknowledge the efforts of the many individuals who participated and made this exercise a success.

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# Appendix A: Exercise Timeline

| Emergency Classification Level or Event | | Time Utility Declared | Time That Notification Was Received or Action Was Taken | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | State EOC | Dose Assessment | CBO | Wake County | Wake ICP | Apex CP | Chatham County | Harnett County | Lee County | JIC |
| Unusual Event | | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Alert | | 8:22 a.m. | 8:32 a.m. | 8:36 a.m. | 8:39 a.m. | 8:33 a.m. | 8:34 a.m. | N/A | 8:33 a.m. | 8:32 a.m. | 8:33 a.m. | 9:39 a.m. |
| Site Area Emergency | | 8:57 a.m. | 9:08 a.m. | 9:09 a.m. | 9:08 a.m. | 9:06 a.m. | 9:10 a.m. | 10:16 a.m. | 9:06 a.m. | 9:06 a.m. | 9:05 a.m. | 9:11 a.m. |
| General Emergency | | 10:44 a.m. | 10:53 a.m. | 10:53 a.m. | 10:57 a.m. | 10:51 a.m. | 10:51 a.m. | 10:58 a.m. | 10:52 a.m. | 10:51 a.m. | 10:51 a.m. | 10:51 a.m. |
| Radiological Release Started (simulated) | | 8:57 a.m. | 9:08 a.m. | 9:09 a.m. | 9:08 a.m. | 9:04 a.m. | 9.10 a.m. | 10:16 a.m. | 9:06 a.m. | 9:06 a.m. | 8:57 a.m. | 9:08 a.m. |
| Radiological Release Terminated | | Ongoing | Ongoing | Ongoing | Ongoing | Ongoing | Ongoing | Ongoing | Ongoing | Ongoing | Ongoing | Ongoing |
| Facility Declared Operational | | | 8:57 a.m. | 8:30 a.m. | 8:39 a.m. | 8:29 a.m. | 8:42 a.m. | 9:20 a.m. | 8:47a.m. | 8:54 a.m. | 8:39 a.m. | 9:30 a.m. |
| Declaration of State of Emergency | | State | 10:54 a.m. | N/A | 11:00 a.m. | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | Local | N/A | N/A | N/A | 9:48 a.m. | N/A | N/A | 10:30 a.m. | 10:19 a.m. | 10:00 a.m. | N/A |
| Exercise Terminated | | | 12:20 p.m. | 12:50 p.m. | 12:20 p.m. | 12:21 p.m. | 12:20 p.m. | 12:25 p.m. | 12:24 p.m. | 12:20 p.m. | 12:20 p.m. | 12:21 p.m. |
| Precautionary and Protective Action Decision Time (List actions ordered) | Action(s) 1:<br>Close Parks z<br>Close Reception Center Schools (Lee & Wake)<br>Harnett Closed Lafyette Elementary<br>Waterway Warning<br>Shelter- In-Place (SIP) all Zones | | 9:26 a.m. | 9:26 a.m. | 9:26 a.m. | 9:26 a.m. | 9:26 a.m. | 10:00 a.m. | 9:26 a.m. | 9:26 a.m. | 9:26 a.m. | *10:46 a.m. |
| | Livestock/Food Advisory | | | | | | | | | | | *10:48 a.m. |
| | Action(s):<br>Early Dismissal of Wake County Schools (Zone A) | | N/A | N/A | N/A | 10:56 a.m. | 10:56 a.m. | 10:56 a.m. | N/A | N/A | N/A | *11:20 a.m. |
| | Action(s):<br>Evacuate Zones A & K<br>SIP all other Zones | | 11:05 a.m. | 11:05 a.m. | 11:05 a.m. | 11:05 a.m. | 11:05 a.m. | 11:05 a.m. | 11:05 a.m. | 11:05 a.m. | 11:05 a.m. | *11:45 a.m. |
| KI Ingestion Decision | Emergency Workers/Institutionalized Population<br>Wake – Near site/All Emergency Workers in EPZ<br>Chatham – Emergency Workers | | 11:25 a.m. | 10:38 a.m. | 10:36 a.m. | 10:36 a.m. | 10:40 a.m. | 10:45 a.m. | 12:17 p.m. | N/A | N/A | N/A |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | State EOC – All Emergency Workers ingest | | | | | | | | | | |
| | General Public – Not Recommended/Do not ingest | 12:17 p.m. | 12:17 p.m. | 12:17 p.m. | 12:17 p.m. | 12:17 p.m. | 12:17 p.m. | 12:17 p.m. | 12:17 p.m. | 12:17 p.m. | N/A |
| Siren Activation Time | 1st Activation: Wake – Failed @ 9:40a.m./ Chatham successful @ 9:49 a.m. | 9:49 a.m. | N/A | 9:49 a.m. | 9:49 a.m. | 9:49 a.m. | 9:49 a.m. | 9:49 a.m. | 9:49 a.m. | 9:49 a.m. | N/A |
| | 2nd Activation: | 11:20 a.m. | 11:20 a.m. | 11:20 a.m. | 11:20 a.m. | 11:20 a.m. | 11:20 a.m. | 11:20 a.m. | 11:20 A.M. | 11:20 a.m. | N/A |
| EAS Message Broadcast Time | 1st EAS/Tone Alert: | 9:53 a.m./ 9:58 a.m. | 9:53 a.m./ 9:58 a.m. | 9:53 a.m./ 9:58 a.m. | 9:53 a.m./ 9:58 a.m. | 9:53 a.m./ 9:58 a.m. | 9:53 a.m./ 9:58 a.m. | 9:53 a.m./ 9:58 a.m. | 9:53 a.m./ 9:58 a.m. | 9:53 a.m./ 9:58 a.m. | N/A |
| | 2nd EAS/Tone Alert: | 11:25 a.m./ 11:35 a.m. | 11:25 a.m./ 11:35 a.m. | 11:25 a.m./ 11:35 a.m. | 11:25 a.m./ 11:35 a.m. | 11:25 a.m./ 11:35 a.m. | 11:25 a.m./ 11:35 a.m. | 11:25 a.m./ 11:35 a.m. | 11:25 a.m./ 11:35 a.m. | 11:25 a.m./ 11:35 a.m. | N/A |

# Appendix B: Evaluator Assignments

| Location/Venue | Evaluation Team | Core Capability |
|---|---|---|
| State Emergency Operations Center | Gerald Mclemore<br>Roy Smith<br>Rosemary Samsel<br>Carol Shepard | Operational Coordination<br>Public Information and Warning |
| Joint Information System/Center | PJ Nied<br>Peter Judge | Public Information and Warning |
| Central Branch Office | Robert Nash | Operational Coordination |
| Dose Assessment | Jill Leatherman | Situational Assessment |
| Field Monitoring Team Management | Debbie Cummings | Environmental Response/Health and Safety |
| Field Monitoring Team Operations | Bart Ray<br>Cheryl Weaver | Environmental Response/Health and Safety |
| Mobile Laboratory | Brad McRee | Environmental Response/Health and Safety |
| Emergency Operations Facility | Robert Spence | Operational Coordination |
| Wake County Emergency Operations Center | Nathan Nienhius<br>Steve Watts<br>Tom Hegele | Operational Coordination<br>Public Information and Warning |
| Wake County – Apex Command Post | Norman Kalson<br>Terry Blackmon | Operational Coordination |
| Wake County – Incident Command Post | Matt Bradley<br>Farrah Stewart | Operational Coordination |
| Chatham County Emergency Operations Center | DeShun Lowery<br>Herb Massie<br>Bob Princic | Operational Coordination<br>Public Information and Warning |
| Harnett County Emergency Operations Center | James Young<br>Jim Greer | Operational Coordination<br>Public Information and Warning |
| Lee County Emergency Operations Center | Randi Hendrix<br>Marynette Herndon | Operational Coordination<br>Public Information and Warning |

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# Appendix C: Exercise Participants

| Participating Organizations |
|---|
| State of North Carolina |
| North Carolina Department of Agriculture & Consumer Services |
| North Carolina Department of Health & Human Services |
| North Carolina Department of Public Health |
| North Carolina Department of Public Safety |
| North Carolina Department of Transportation |
| North Carolina Emergency Management |
| North Carolina State Highway Patrol |
| North Carolina State University |
| Radiation Protection Service |
| Wake County |
| Apex Fire Department |
| Apex Police Department |
| Cary Fire Department |
| Garner Fire Department |
| Raleigh Fire Department |
| Holly Springs Fire Department |
| Town of Apex |
| Wake County Animal Control Services |
| Wake County Communications Office |
| Wake County Emergency Management |
| Wake County Emergency Medical Services |
| Wake County Environmental Services |
| Wake County Fire Services |

| Participating Organizations |
| --- |
| Wake County GIS |
| Wake County Health and Human Services |
| Wake County Public School System |
| Wake County Sheriff's Office |
| WakeMed Hospital |
| Chatham County |
| Chatham County 9 1 1 |
| Chatham County CERT |
| Chatham County Commissioners' Office |
| Chatham County Department of Social Services |
| Chatham County Emergency Management |
| Chatham County Fire Department (North Station No. 2) |
| Chatham County Managers' Office |
| Chatham County Public Health Department |
| Chatham County Public Schools |
| Chatham County Sheriff's Office |
| FirstHealth of the Carolinas Emergency Medical Services |
| Harnett County |
| Buies Creek Fire Department |
| Harnett County Administration |
| Harnett County Animal Services |
| Harnett County Department of Agriculture and Veterinary Care |
| Harnett County Department of Social Services |
| Harnett County Development Services |
| Harnett County E911 Communications |

| Participating Organizations |
| --- |
| Harnett County Emergency Medical Services |
| Harnett County Emergency Services |
| Harnett County Fire Marshal |
| Harnett County GIS |
| Harnett County Health Department |
| Harnett County Information Technology |
| Harnett County Public Information Office |
| Harnett County Public Library |
| Harnett County Sheriff's Office |
| Harnett County Schools |
| Harnett County Transportation Department |
| Harnett County Veterans Services |
| Lee County |
| Central Carolina Hospital |
| City of Sanford Administration |
| City of Sanford Water Department |
| County of Lee Transportation Services |
| Deep River Fire Department |
| FirstHealth of the Carolinas Emergency Medical Services |
| Lee County 9 1 1 |
| Lee County Administration |
| Lee County Board of Commissioners |
| Lee County Communications Department |
| Lee County Department of Health |
| Lee County Department of Social Services |

| Participating Organizations |
| --- |
| Lee County Emergency Management |
| Lee County Finance Department |
| Lee County Fire Marshal |
| Lee County General Services |
| Lee County GIS |
| Lee County Information Technology |
| Lee County Parks and Recreation |
| Lee County Schools |
| Lee County Senior Services |
| Lee County Sheriff's Office |
| North Carolina Agriculture – Lee County |
| Raleigh Executive Jetport |
| Sanford Fire Department |
| Sanford-Lee County Planning Department |
| Sanford Police Department |
| Private Sector |
| American Red Cross |
| Duke Energy |
| Federal |
| Federal Bureau of Investigation |
| Federal Emergency Management Agency, Region 4 |
| United States Department of Homeland Security |

# Appendix D: Extent of Play Agreement

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# Harris Nuclear Plant
# Out of Sequence Activities & Exercise

## Radiological Emergency Preparedness
## Program Extent-of-Play Agreement

April 3-6, 2023 & April 25, 2023

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# SECTION 1: EXERCISE OVERVIEW

## Purpose

The purpose of this extent-of-play agreement identifies the conditions that will be used to conduct, control, and evaluate the Harris Nuclear Plant Out of Sequence Activities and Exercise, as agreed to by the offsite response organizations and Federal Emergency Management Agency (FEMA) Region 4, Radiological Assistance Committee (RAC) Chair.

The extent-of-play agreement is negotiated during the exercise planning process and documents deviations from activities as described in plans and procedures for exercise demonstration purposes. The extent-of-play agreement identifies the capability targets that will be evaluated during the out of sequence activities and exercise, including any exceptions, as well as the entities responsible for demonstrating the capability targets.

## Scope

All activities will be demonstrated fully in accordance with respective plans and procedures as they would be in an actual emergency. This extent-of-play agreement is written by exception. If an exception is not included below then the activity will be demonstrated as described in plans and/or procedures. Any issue or discrepancy arising during the Harris Nuclear Plant Out of Sequence Activities and Exercise may be redemonstrated, if allowed by the RAC Chair, or as listed herein. This allowance may be granted if it is not disruptive to exercise play and is mutually agreed to by the lead offsite response organization controller and lead FEMA evaluator.

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## Activity, Core Capabilities, and Exercise Objectives

| Activity | Core Capability | Exercise Objective |
|---|---|---|
| State and County Emergency Operations Centers/State Emergency Response Team | Operational Coordination<br>Public Information and Warning<br>Environmental Response/Health and Safety | Objective 1: Emergency Operations Management<br>Objective 2: Exposure Control<br>Objective 3: Alert and Notification<br>Objective 5: Operate |
| Regional Coordination Center – Central | Operational Coordination | Objective 1: Emergency Operations Management<br>Objective 2: Exposure Control<br>Objective 3: Alert and Notification |
| Dose Assessment | Situational Assessment | Objective 1: Emergency Operations Management<br>Objective 4: Detect, Measure, Sample, Analyze, and Assess |
| Field Monitoring Team Management and Operations | Environmental Response/Health and Safety | Objective 1: Emergency Operations Management<br>Objective 2: Exposure Control<br>Objective 3: Alert and Notification<br>Objective 4: Detect, Measure, Sample, Analyze, and Assess |
| Laboratory Operations | Environmental Response/Health and Safety | Objective 1: Emergency Operations Management<br>Objective 3: Alert and Notification<br>Objective 4: Detect, Measure, Sample, Analyze, and Assess |
| Emergency Operations Facility | Operational Coordination<br>Situational Assessment | Objective 1: Emergency Operations Management |
| Joint Information System/Center | Public Information and Warning | Objective 1: Emergency Operations Management<br>Objective 3: Alert and Notification |

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| Activity | Core Capability | Exercise Objective |
|---|---|---|
| Incident Command Post | Operational Coordination | Objective 1: Emergency Operations Management<br>Objective 2: Exposure Control<br>Objective 3: Alert and Notification |
| Apex Area Command Post | Operational Coordination | Objective 1: Emergency Operations Management<br>Objective 2: Exposure Control<br>Objective 3: Alert and Notification |
| Reception and Congregate Care Center | Mass Care Services | Objective 5: Operate |
| Emergency Worker Decontamination | Environmental Response/ Health and Safety | Objective 5: Operate |
| Backup Route Alerting | Public Information and Warning | Objective 1: Emergency Operations Management |
| Traffic/Access Control Points | On-Scene Security, Protection, and Law Enforcement | Objective 5: Operate |
| Waterway Warning | On-Scene Security, Protection, and Law Enforcement | Objective 2: Exposure Control<br>Objective 3: Alert and Notification<br>Objective 5: Operate |
| Medical Services Drill | Public Health, Healthcare, and Emergency Medical Services | Objective 5: Operate |

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## References, Plans, and Procedures

The following references, plans, and procedures will be used to evaluate the offsite response organizations:

- North Carolina Radiological Emergency Preparedness Plan, February 2021
- North Carolina Emergency Operations Plan, December 2020
- NUREG 0654/FEMA REP 1 Rev. 2
- DHS/FEMA REP Program Manual, December 2019
- Local County Emergency Operations Plans

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## SECTION 2: EXTENT-OF-PLAY AGREEMENT

### Signatures

The following agree to support this Harris Nuclear Plant Out of Sequence Activities and Exercise as described herein:

| NCEM Exercise Manager | Radiological Assistance Committee Chair |
|---|---|
| X Chris Call<br>Chris Call<br>North Carolina Department of Public Safety<br>Emergency Management | X JOHN T ACKERMANN Digitally signed by JOHN T ACKERMANN Date: 2023.02.22 09:26:10 -05'00'<br>J.T. Ackermann<br>Federal Emergency Management Agency<br>Region 4 |
| **Wake County EM Director** | **Harnett County EM Director** |
| X Joshua Creighton<br>Joshua Creighton<br>Wake County Emergency Management | X Zach Shean<br>Zach Shean<br>Harnett County Emergency Services |
| **Lee County EM Director** | **Chatham County EM Director** |
| X Matthew G. Britt<br>Matthew Britt<br>Lee County Emergency Services | X SLKNL<br>Steven Newton<br>Chatham County Emergency Management |

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# State and County Emergency Operations Centers/State Emergency Response Team

## Core Capability: Operational Coordination

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

### Objective 1: Emergency Operations Management

#### Capability Target 1.1: Mobilization

Intent: The capability to alert, notify, and mobilize offsite response organizations to staff facilities in support of emergency operations.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (A.1, A.1.a, A.1.b, A.3, A.4, A.5, C.1, C.2, C.2.a, C.2.b, C.3, E.1, E.1.a, E.3, F.1.c, H.6, and O.1)

| Assessment | Extent of Play |
|---|---|
| Alert, notify, and mobilize key personnel, to include a 24-hour staffing roster, and activate facilities in a timely manner. | Prepositioning of exercise players is allowed at day-to-day workstations. Some players may be remote dependent on current operational status. Interviews with remote personnel will be coordinated through the controller.<br>Silent test will be demonstrated via interview. |
| Receive and verify notifications. | No Exception |
| Identify and request additional resources, as needed. | No Exception |
| Determine a facility is operational. | No Exception |

#### Capability Target 1.2: Direction and Control

Intent: The capability to provide overall direction and control of response efforts, commensurate with the responsibilities of leadership, as detailed in plans/procedures.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (A.1, A.1.a, A.1.b, A.1.c, A.2, A.3, A.5, C.2, C.2.a, C.2.b, C.3, D.4, E.1, H.6, and O.1)

| Assessment | Extent of Play |
|---|---|
| Support protective action decision-making. | No Exception |
| Conduct briefings in a timely manner. | No Exception |

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| | |
|---|---|
| Maintain situational awareness. | No Exception |
| Coordinate response activities with other organizations. | No Exception |
| Obtain resources to support emergency operations. | No Exception |
| Provide and maintain adequate facilities and equipment to support the emergency response. | No Exception |

Capability Target 1.3: Protective Action Recommendations

Intent: The capability to use dose assessment and field data, compare this data to the PAGs, and choose among a range of protective actions those most appropriate in a given emergency.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (D.4, J.7, J.8, J.8.b, J.9, and O.1)

| Assessment | Extent of Play |
|---|---|
| Select and implement pre-planned precautionary protective items. | No Exception |

Capability Target 1.4: Protective Action Decisions for the Plume Phase

Intent: The capability to utilize appropriate factors and necessary coordination in the decision-making process used to make protective action decisions for the public.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (D.1.b, D.4, J.6, J.7, J.8, J.8.b, J.10, J.10.a, J.10.b, J.11.c-g, and O.1)

| Assessment | Extent of Play |
|---|---|
| Coordinate and make protective action decisions for members of the general public. | No Exception |
| Coordinate and make protective action decisions for those with access and functional needs. | No Exception |
| Coordinate and make protective action decisions for students at schools. | Chatham and Wake: The School representative will perform school interview for schools on-scenario. |
| Coordinate and make subsequent or alternate protective action decisions. | No Exception |
| Coordinate and make decisions on the administration of potassium iodide (where applicable) for the public and institutionalized members of the population. | No Exception |

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### Capability Target 1.5: Protective Action Decision Implementation for the Plume Phase

Intent: The capability to implement precautionary protective action and/or protective action decisions, including evacuation and/or sheltering, for all populations within the plume and ingestion exposure pathway emergency planning zones. The populations include those with access and functional needs, students, and institutionalized individuals.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (A.4, C.2.a, G.1, J.11, J.11.a, J.11.b, J.11.c, J.11.e, J.11.g, and O.1)

| Assessment | Extent of Play |
|---|---|
| Implement protective action decisions, ensuring communication and coordination with all appropriate jurisdictions. | This will be completed through interview |
| Assist those with access and functional needs during the implementation of protective action decisions. | This will be completed through interview |
| Communicate, coordinate, and implement protective actions for schools. | This will be completed through interview |
| Communicate with transportation officials. | This will be completed through interview |
| Identify evacuation routes for the general public. | This will be completed through interview |
| Make potassium iodide available to both institutionalized persons and the general public, in accordance with plans and procedures. | This will be completed through interview |

## Objective 2: Exposure Control

### Capability Target 2.1: Emergency Worker Exposure Control Decision-Making Process

Intent: The capability to assess and control the radiation exposure and dose received by emergency workers and utilize a decision-making chain to authorize emergency worker exposure limits to be exceeded for specific missions.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (C.2.c, H.11, K.2, K.2.b, K.3, K.3.a, M.1.b, M.8, and O.1)

| Assessment | Extent of Play |
|---|---|
| Control emergency workers' exposure and dose, including offsite workers performing duties onsite. | Permanent record dosimeters will be simulated. |

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| | |
|---|---|
| Maintain record of dose as a result of exposure. | Maintenance record of dose will be simulated. |
| Authorize exposures and dose in excess of identified limits. | No Exception |
| Process for considering occupational exposures and to authorize individuals to receive doses in excess of occupational dose limits. | No Exception |
| Determine a correction factor for direct reading dosimeter-based isotopic release mixture. | No Exception |
| Control exposure and dose for temporary reentry of emergency workers, or members of the public, to restricted areas. | No Exception |
| Determine the need to authorize radioprotective drugs using projected thyroid doses and field measurements. Projections are compared to previously established protective action guides. | No Exception |
| Adequately protect members of the public from radiological exposure and control dose for those who are authorized to temporarily reenter a restricted area. | No Exception |

Capability Target 2.2: Emergency Worker Exposure Control Management

Intent: The capability of emergency workers to manage dose and exposure, use equipment (e.g., dosimetry, radio protective drugs), and identify procedures to monitor their exposure and dose, including following procedures to obtain authorization to receive emergency exposures in excess of the protective action guides.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (C.2.c, H.11, H.11.b, K.2.b, K.3, K.3.a, M.1.b, and O.1)

| Assessment | Extent of Play |
|---|---|
| Maintain an appropriate inventory of direct-reading dosimeters that are leak-tested or current in calibration. | No Exception |
| Maintain an appropriate inventory of permanent record dosimeters. | No Exception |
| Retain an adequate supply of radioprotective drugs. | No Exception |

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| Assessment | Extent of Play |
|---|---|
| Adequately distribute appropriate direct-reading dosimeters and permanent record dosimeters. | Permanent record dosimeters will be simulated. |
| Adequately distribute radioprotective drugs to emergency workers. | All potassium iodide distribution will be simulated. |
| Record and report exposures in the field. | No Exception |
| Implement decisions to administer radioprotective drugs. | No Exception |
| Report to individual responsible for managing exposure and dose when limits are reached. | No Exception |
| Implement exposure control decisions to members of the public from radiological exposure and control dose for those who are authorized to temporarily reenter a restricted area. | No Exception |

Objective 3: Alert and Notification

Capability Target 3.1: Communications

Intent: The capability to provide and maintain reliable communications with emergency personnel.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (E.1.a, E.3, F.1, F.1.a, F.1.b, F.1.c, F.3, and O.1)

| Assessment | Extent of Play |
|---|---|
| Utilize communication systems that are fully functional, continuously available, and redundant. | No Exception |
| Maintain periodic test results and corrective actions on a real time basis. | No Exception |
| Access at least one communication system that is independent of the commercial telephone system. | No Exception |
| Manage the communication systems and ensure that all message traffic is handled without delays that might disrupt emergency operations. | No Exception |

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| Assessment | Extent of Play |
|---|---|
| Identify and address any failures of the systems. | No Exception |
| Transmit, receive, and understand messages (i.e., "content check"). | No Exception |

## Core Capability: Public Information and Warning

Definition: 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, as well as the actions being taken and the assistance being made available, as appropriate.

### Objective 3: Alert and Notification

Capability Target 3.2: Alert and Notification of the Public

Intent: The capability to provide instructions to the public.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (E.2, E.4, E.5, F.3, and O.1)

| Assessment | Extent of Play |
|---|---|
| Sequentially provide an alert signal followed by an initial instructional message to populated areas. | Alert signals will be demonstrated via a silent test of the siren system at County (Decision will be made during Protective Action discussion). Emergency information will be written and posted in WebEOC but not released to the public or media. |
| Alert and notify the general public. | Alert signals will be demonstrated via a silent test of the siren system at County (Decision will be made during Protective Action discussion). Emergency information will be written and posted in WebEOC but not released to the public or media. |
| Identify and address any failures of the system(s) or portion of a system(s). | Alert signals will be demonstrated via a silent test of the siren system at County (Decision will be made during Protective Action discussion). Emergency information will be written and posted in WebEOC but not released to the public or media. |
| Identify the process to activate the Emergency Alert System. | Activation of the Emergency Alert System will be simulated at the State Warning Point. |
| Ensure that updated emergency information is disseminated in a timely manner. | Emergency information will be written and posted in WebEOC but not released to the public or media. |

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| Assessment | Extent of Play |
|---|---|
| Ensure that current emergency information is repeated at pre-established intervals. | Emergency information will be written and posted in WebEOC but not released to the public or media. |
| Identify the process to activate the Emergency Alert System, to include the process to receive and then broadcast updated information/messages and verification of the message, if applicable. | Activation of the Emergency Alert System will be simulated at the State. |
| Complete route alerting, whether because of failure for system/portion of a system or for exception areas, as needed to demonstrate all routes are capable of being run in allotted time. Emphasis on the most challenging routes and demonstration of these routes will be varied from assessment activity to assessment activity. Challenging routes are defined as those that may be difficult to accomplish, such as those that are lengthy or with conditions (physical or otherwise) that may affect the speed and accuracy with which the route can be completed (e.g., traffic patterns and/or capacity, road conditions, etc.). | This will be conducted via interview in an event of siren system(s) failures at the Counties.<br><br>Chatham: Will perform route alerting demonstration during on scenario exercise. |

Capability Target 3.3: Emergency Information and Instructions for the Public and News Media

Intent: The capability to disseminate emergency information and instructions to the public during all phases of an incident.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (E.2, E.4, E.5, G.1, G.2, G.3, G.3.a, G.4, G.5, and O.1)

| Assessment | Extent of Play |
|---|---|
| Deliver coordinated, prompt, reliable, and actionable information in a timely manner. | Emergency information will be written and posted in WebEOC but not released to the public or media. |
| Provide clear, concise, accessible messaging using plain language. | No Exception |
| Messaging addresses appropriate cultural and linguistic considerations. | No Exception |
| Ensure subsequent messaging is consistent with protective actions. | No Exception |
| Update information as the incident progresses, to include validating previously identified | No Exception |

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| Assessment | Extent of Play |
|---|---|
| protective areas and clearly identifying any new protective action areas, any information that is no longer valid, and any changes to previously provided information (e.g., rerouting of evacuation routes due to impediments, etc.). | |
| Respond to media and public inquiries. | No Exception |

## Regional Coordination Center – Central

### Core Capability: Operational Coordination

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

#### Objective 1: Emergency Operations Management

#### Capability Target 1.1: Mobilization

Intent: The capability to alert, notify, and mobilize offsite response organizations to staff facilities in support of emergency operations.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (A.1, A.1.a, A.1.b, A.3, A.4, A.5, C.1, C.2, C.2.a, C.2.b, C.3, E.1, E.1.a, E.3, F.1.c, H.6, and O.1)

| Assessment | Extent of Play |
|---|---|
| Alert, notify, and mobilize key personnel, to include a 24-hour staffing roster, and activate facilities in a timely manner. | Prepositioning of exercise players is allowed at day-to-day workstations. Some players may be remote dependent on current operational status. Interviews with remote personnel will be coordinated through the controller. |
| Receive and verify notifications. | No Exception |
| Identify and request additional resources, as needed. | No Exception |
| Determine a facility is operational. | No Exception |

#### Capability Target 1.2: Direction and Control

Intent: The capability to provide overall direction and control of response efforts, commensurate with the responsibilities of leadership, as detailed in plans/procedures.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (A.1, A.1.a, A.1.b, A.1.c, A.2, A.3, A.5, C.2, C.2.a, C.2.b, C.3, D.4, E.1, H.6, and O.1)

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| Assessment | Extent of Play |
|---|---|
| Support protective action decision-making. | No Exception |
| Conduct briefings in a timely manner. | No Exception |
| Maintain situational awareness. | No Exception |
| Coordinate response activities with other organizations. | No Exception |
| Obtain resources to support emergency operations. | No Exception |
| Provide and maintain adequate facilities and equipment to support the emergency response. | No Exception |

### Capability Target 1.3: Protective Action Recommendations

Intent: The capability to use dose assessment and field data, compare this data to the PAGs, and choose among a range of protective actions those most appropriate in a given emergency.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (D.4, J.7, J.8, J.8.b, J.9, and O.1)

| Assessment | Extent of Play |
|---|---|
| Select and implement pre-planned precautionary protective items. | No Exception |
| Utilize the methodology in plans/procedures to select among a range of protective actions most appropriate in a given emergency. | No Exception |
| Develop protective action recommendations. | No Exception |
| Transmit protective action recommendations in a timely manner. | No Exception |

### Capability Target 1.5: Protective Action Decision Implementation for the Plume Phase

Intent: The capability to implement precautionary protective action and/or protective action decisions, including evacuation and/or sheltering, for all populations within the plume and ingestion exposure pathway emergency planning zones. The populations include those with access and functional needs, students, and institutionalized individuals.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (A.4, C.2.a, G.1, J.11, J.11.a, J.11.b, J.11.c, J.11.e, J.11.g, and O.1)

| Assessment | Extent of Play |
|---|---|

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| | |
|---|---|
| Implement protective action decisions, ensuring communication and coordination with all appropriate jurisdictions. | No Exception |
| Assist those with access and functional needs during the implementation of protective action decisions. | No Exception |
| Communicate, coordinate, and implement protective actions for schools. | No Exception |
| Communicate with transportation officials. | No Exception |
| Identify evacuation routes for the general public. | No Exception |
| Make potassium iodide available to both institutionalized persons and the general public, in accordance with plans and procedures. | No Exception |

### Objective 2: Exposure Control

#### Capability Target 2.1: Emergency Worker Exposure Control Decision-Making Process

Intent: The capability to assess and control the radiation exposure and dose received by emergency workers and utilize a decision-making chain to authorize emergency worker exposure limits to be exceeded for specific missions.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (C.2.c, H.11, K.2, K.2.b, K.3, K.3.a, M.1.b, M.8, and O.1)

| Assessment | Extent of Play |
|---|---|
| Control emergency workers' exposure and dose, including offsite workers performing duties onsite. | Permanent record dosimeters will be simulated. |
| Maintain record of dose as a result of exposure. | No Exception |
| Authorize exposures and dose in excess of identified limits. | No Exception |
| Process for considering occupational exposures and to authorize individuals to receive doses in excess of occupational dose limits. | No Exception |
| Determine a correction factor for direct reading dosimeter-based isotopic release mixture. | No Exception |

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| | |
|---|---|
| Control exposure and dose for temporary reentry of emergency workers, or members of the public, to restricted areas. | No Exception |
| Determine the need to authorize radioprotective drugs using projected thyroid doses and field measurements. Projections are compared to previously established protective action guides. | No Exception |
| Adequately protect members of the public from radiological exposure and control dose for those who are authorized to temporarily reenter a restricted area. | No Exception |

### Objective 3: Alert and Notification

#### Capability Target 3.1: Communications

Intent: The capability to provide and maintain reliable communications with emergency personnel.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (E.1.a, E.3, F.1, F.1.a, F.1.b, F.1.c, F.3, and O.1)

| Assessment | Extent of Play |
|---|---|
| Utilize communication systems that are fully functional, continuously available, and redundant. | No Exception |
| Maintain periodic test results and corrective actions on a real time basis. | No Exception |
| Access at least one communication system that is independent of the commercial telephone system. | No Exception |
| Manage the communication systems and ensure that all message traffic is handled without delays that might disrupt emergency operations. | No Exception |
| Identify and address any failures of the systems. | No Exception |
| Transmit, receive, and understand messages (i.e., "content check"). | No Exception |

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## Dose Assessment

### Core Capability: Situational Assessment

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

Objective 1: Emergency Operations Management

Capability Target 1.3: Protective Action Recommendations

Intent: The capability to use dose assessment and field data, compare this data to the PAGs, and choose among a range of protective actions those most appropriate in a given emergency.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (D.4, J.7, J.8, J.8.b, J.9, and O.1)

| Assessment | Extent of Play |
|---|---|
| Utilize the methodology in plans/procedures to select among a range of protective actions most appropriate in a given emergency. | No Exception |
| Develop protective action recommendations. | No Exception |
| Transmit protective action recommendations in a timely manner. | No Exception |

Capability Target 1.4: Protective Action Decisions for the Plume Phase

Intent: The capability to utilize appropriate factors and necessary coordination in the decision-making process used to make protective action decisions for the public.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (D.1.b, D.4, J.6, J.7, J.8, J.8.b, J.10, J.10.a, J.10.b, J.11.c-g, and O.1)

| Assessment | Extent of Play |
|---|---|
| Support protective action decision-making. | No Exception |
| Support protective action decision making for those with access and functional needs. | No Exception |
| Support protective action decision making for students at schools. | No Exception |
| Support protective action decision making for subsequent or alternate protective action decisions. | No Exception |
| Support protective action decision making on the administration of potassium iodide (where | No Exception |

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| | |
|---|---|
| applicable) for the public and institutionalized members of the population. | |

Objective 4: Detect, Measure, Sample, Analyze, and Assess

Capability Target 4.5: Plume Phase Analysis and Dose Assessment

Intent: The capability to collect data, project doses to members of the public and emergency workers, and analyze and communicate the results.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (A.3, H.13, I.6, I.8, I.10, K.3, and O.1)

| Assessment | Extent of Play |
|---|---|
| Obtain adequate data to make dose projections. | No Exception |
| Use software and/or other methods (e.g., manual calculations) to make dose projections for members of the public (both TED and thyroid dose) based on plant data. | No Exception |
| Compare dose projections to members of the public to Environmental Protection Agency Protective Action Guides. | No Exception |
| Compare dose projections to the public with those of the licensee and discuss differences greater than a factor of ten with the licensee and explain reasons for the difference. | No Exception |
| Make initial protection action recommendations based on recommendations of the licensee, release data, meteorological data, and other pertinent information. | No Exception |
| Promptly communicate protection action recommendations to decision-makers. | No Exception |
| Receive ambient exposure rates from field monitoring teams and compare to model projections. | No Exception |
| Calculate iodine and particulate concentrations from field monitoring team air samples. | No Exception |
| Calculate plume ratios of noble gas, iodines, and particulates, and compare to model projections. | No Exception |
| Adjust protection action recommendations, as necessary, based on analysis of field data. | No Exception |

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| Assessment | Extent of Play |
|---|---|
| Calculate an incident-specific correction factor for emergency workers inside the plume exposure pathway emergency planning zone. | No Exception |

## Field Monitoring Team Management and Operations

### Core Capability: Environmental Response/Health and Safety

Definition: 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.

#### Objective 1: Emergency Operations Management

##### Capability Target 1.1: Mobilization

Intent: The capability to alert, notify, and mobilize offsite response organizations to staff facilities in support of emergency operations.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (A.1, A.1.a, A.1.b, A.3, A.4, A.5, C.1, C.2, C.2.a, C.2.b, C.3, E.1, E.1.a, E.3, F.1.c, H.6, and O.1)

| Assessment | Extent of Play |
|---|---|
| Alert, notify, and mobilize key personnel, to include a 24-hour staffing roster, and activate facilities in a timely manner. | Prepositioning of exercise players is allowed at day-to-day workstations. Some players may be remote dependent on current operational status. Interviews with remote personnel will be coordinated through the controller. |
| Receive and verify notifications. | No Exception |
| Identify and request additional resources, as needed. | No Exception |
| Determine a facility is operational. | No Exception |

#### Objective 2: Exposure Control

##### Capability Target 2.1: Emergency Worker Exposure Control Decision-Making Process

Intent: The capability to assess and control the radiation exposure and dose received by emergency workers and utilize a decision-making chain to authorize emergency worker exposure limits to be exceeded for specific missions.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (C.2.c, H.11, K.2, K.2.b, K.3, K.3.a, M.1.b, M.8, and O.1)

| Assessment | Extent of Play |
|---|---|

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| | |
|---|---|
| Control emergency workers' exposure and dose, including offsite workers performing duties onsite. | No Exception<br>RPS only controls the staff under its area of operations, not all off-site workers. |
| Maintain record of dose as a result of exposure. | No Exception |
| Authorize exposures and dose in excess of identified limits. | No Exception |
| Process for considering occupational exposures and to authorize individuals to receive doses in excess of occupational dose limits. | No Exception |
| Determine a correction factor for direct reading dosimeter-based isotopic release mixture. | No Exception |
| Control exposure and dose for temporary reentry of emergency workers, or members of the public, to restricted areas. | No Exception. RPS will not man the control points. We will advise and train as required the staff that does man them and determine stay times. |
| Determine the need to authorize radioprotective drugs using projected thyroid doses and field measurements. Projections are compared to previously established protective action guides. | No Exception |
| Adequately protect members of the public from radiological exposure and control dose for those who are authorized to temporarily reenter a restricted area. | No Exception. RPS will not man the control points. We will advise and train as required the staff that does man them and determine stay times. |

Capability Target 2.2: Emergency Worker Exposure Control Management

Intent: The capability of emergency workers to manage dose and exposure, use equipment (e.g., dosimetry, radio protective drugs), and identify procedures to monitor their exposure and dose, including following procedures to obtain authorization to receive emergency exposures in excess of the protective action guides.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (C.2.c, H.11, H.11.b, K.2.b, K.3, K.3.a, M.1.b, and O.1)

| Assessment | Extent of Play |
|---|---|
| Maintain an appropriate inventory of direct-reading dosimeters that are leak-tested or current in calibration. | No Exception |
| Maintain an appropriate inventory of permanent record dosimeters. | No Exception |

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| | |
|---|---|
| Retain an adequate supply of radioprotective drugs. | For RPS Staff only. |
| Adequately distribute appropriate direct-reading dosimeters and permanent record dosimeters. | Permanent record dosimeters will be simulated.<br>For RPS Staff only. |
| Adequately distribute radioprotective drugs to emergency workers. | All potassium iodide distribution will be simulated. For RPS Staff only. |
| Record and report exposures in the field. | Will be recorded by the agencies responsible for field staffing. |
| Implement decisions to administer radioprotective drugs. | No Exception |
| Report to individual responsible for managing exposure and dose when limits are reached. | No Exception |
| Implement exposure control decisions to members of the public from radiological exposure and control dose for those who are authorized to temporarily reenter a restricted area. | Will not demonstrate |

Objective 3: Alert and Notification

Capability Target 3.1: Communications

Intent: The capability to provide and maintain reliable communications with emergency personnel.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (E.1.a, E.3, F.1, F.1.a, F.1.b, F.1.c, F.3, and O.1)

| Assessment | Extent of Play |
|---|---|
| Utilize communication systems that are fully functional, continuously available, and redundant. | No Exception |
| Maintain periodic test results and corrective actions on a real time basis. | No Exception |
| Access at least one communication system that is independent of the commercial telephone system. | No Exception |
| Manage the communication systems and ensure that all message traffic is handled without delays that might disrupt emergency operations. | No Exception |

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| Assessment | Extent of Play |
|---|---|
| Identify and address any failures of the systems. | No Exception |
| Transmit, receive, and understand messages (i.e., "content check"). | No Exception |

Objective 4: Detect, Measure, Sample, Analyze, and Assess

Capability Target 4.1: Field Monitoring Teams Management

Intent: The capability to provide overall management of field monitoring teams to direct movements and measurements to characterize the plume and its impacts.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (H.11, H.13, I.5, I.6, I.9, I.10, M.7, M.8, and O.1)

| Assessment | Extent of Play |
|---|---|
| Brief field monitoring teams on predicted plume location and direction, plume travel speed, equipment operational checks, background measurement, and exposure control procedures before deployment. | No Exception |
| Direct the field monitoring teams to monitoring locations, predesignated points or otherwise, at times and locations sufficient to characterize the plume. | No Exception |
| Obtain peak plume measurements from field monitoring teams. | No Exception |
| Direct field monitoring teams to collect air samples at locations and times sufficient to characterize the plume. | No Exception |
| Keep incident command informed of field monitoring teams activities and location(s) during a hostile action based incident or other instances when an incident command post or other may be in use. | No Exception |
| Coordinate and share information amongst all field monitoring teams (licensee, federal, state, and local). | No Exception |
| Coordinate sample analysis from field to those responsible for assessing radiological data. | No Exception |

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| Assessment | Extent of Play |
|---|---|
| Coordinate transfer of sample media to locations and organizations responsible for assessing radiological data. | No Exception |
| Assist with development and modification of sampling plans, as appropriate. | Will not demonstrate |

Capability Target 4.2: Plume Phase Measurements and Sampling

Intent: The capability to make and report measurements of ambient radiation.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (H.9, H.11, H.11.a, H.11.b, H.12, H.13, I.2, I.5, I.6, I.7, I.8, I.9, I.10, and O.1)

| Assessment | Extent of Play |
|---|---|
| Maintain emergency equipment including calibration and operational checks according to manufacturer's specifications or per national standards. | No Exception |
| Maintain inventory for emergency kits. | No Exception |
| Operate and monitor radiation survey instruments to detect changes in radiation exposure rate while moving and in stationary positions. | No Exception |
| Use appropriate contamination control and personal protective equipment. | RPS will verbalize procedure for wearing PPE |
| Be in location(s) at the appropriate time(s) to detect and characterize the active release (plume). | No Exception |
| Obtain peak plume measurements either directly or from licensee field teams. | No Exception |
| Correctly interpret survey instrument readings to determine submersion in the active plume. | No Exception |
| Collect representative air samples in the active plume on particulate media (e.g., glass or paper filter) and iodine selective media (e.g., silver zeolite cartridge). | No Exception |

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| Assessment | Extent of Play |
|---|---|
| Handle sample media and equipment to avoid sample cross-contamination, contamination of equipment and personnel contamination. | No Exception |
| Determine an appropriate low background location to count sample media. | No Exception |
| Count iodine and particulate media using appropriate and effective instrumentation and counting geometries or have samples analyzed by a supporting laboratory within four hours. | No Exception |
| Report to field monitoring team manager all survey and counting results in format and units suitable for use by the organization's dose assessor. | No Exception |
| Procedures, qualified collection and counting efficiencies, and calculations are capable of detecting airborne radioactive iodine concentrations as low as $10^{-7}$ µCi/cc. | No Exception |
| Preparation of packaging, sample identification, and chain-of-custody forms ensures integrity of samples throughout transportation and transfer. | No Exception |

## Laboratory Operations

### Core Capability: Environmental Response/Health and Safety

Definition: 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.

#### Objective 1: Emergency Operations Management

#### Capability Target 1.1: Mobilization

Intent: The capability to alert, notify, and mobilize offsite response organizations to staff facilities in support of emergency operations.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (A.1, A.1.a, A.1.b, A.3, A.4, A.5, C.1, C.2, C.2.a, C.2.b, C.3, E.1, E.1.a, E.3, F.1.c, H.6, and O.1)

| Assessment | Extent of Play |
|---|---|
| Alert, notify, and mobilize key personnel, to include a 24-hour staffing roster, and activate facilities in a timely manner. | Prepositioning of exercise players is allowed at day-to-day workstations. Some players may be remote dependent on current operational |

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| Assessment | Extent of Play |
|---|---|
| | status. Interviews with remote personnel will be coordinated through the controller. |
| Receive and verify notifications. | No Exception |
| Identify and request additional resources, as needed. | No Exception |
| Determine a facility is operational. | No Exception |

Objective 3: Alert and Notification

Capability Target 3.1: Communications

Intent: The capability to provide and maintain reliable communications with emergency personnel.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (E.1.a, E.3, F.1, F.1.a, F.1.b, F.1.c, F.3, and O.1)

| Assessment | Extent of Play |
|---|---|
| Utilize communication systems that are fully functional, continuously available, and redundant. | No Exception |
| Maintain periodic test results and corrective actions on a real time basis. | No Exception |
| Access at least one communication system that is independent of the commercial telephone system. | No Exception |
| Manage the communication systems and ensure that all message traffic is handled without delays that might disrupt emergency operations. | No Exception |
| Identify and address any failures of the systems. | No Exception |
| Transmit, receive, and understand messages (i.e., "content check"). | No Exception |

Objective 4: Detect, Measure, Sample, Analyze, and Assess

Capability Target 4.4: Laboratory Operations

Intent: The capability to perform laboratory analyses of radioactivity in environmental, food, and drinking water samples to support decision-making.

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Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (C.4, H.11, H.11.b, H.13, I.2, I.6, M.7, and O.1)

| Assessment | Extent of Play |
|---|---|
| Prepare analytical equipment for use, including performing calibrations, quality control checks, and background counts, as appropriate. | Will not demonstrate. Calibrations are performed annually. |
| Receive and track samples, including completing chain-of-custody records. | No Exception |
| Prepare and process each type of sample necessary to assess the ingestion plume exposure pathway and to support reentry, relocation, and return decisions. The types of samples necessary are based on the exercise scenario and may include drinking water, soil, vegetation, milk, crops, or other agriculture samples. | No Exception |
| Analyze samples to determine the concentration of each radionuclide in each sample. Minimum detection limits (MDLs) for various radionuclides must be low enough to support ORO decisions. | No Exception |
| Provide analysis results to the appropriate organization. | No Exception |
| If the laboratory is used to count air samples during the early phase of an incident and prepare, process, and analyze air filters and cartridges, provide analysis results in a timely manner to support ORO decisions. | No Exception |

## Emergency Operations Facility

### Core Capability: Situational Assessment

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

Objective 1: Emergency Operations Management

Capability Target 1.1: Mobilization

Intent: The capability to alert, notify, and mobilize offsite response organizations to staff facilities in support of emergency operations.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (A.1, A.1.a, A.1.b, A.3, A.4, A.5, C.1, C.2, C.2.a, C.2.b, C.3, E.1, E.1.a, E.3, F.1.c, H.6, and O.1)

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| Assessment | Extent of Play |
|---|---|
| Alert, notify, and mobilize key personnel, to include a 24-hour staffing roster, and activate facilities in a timely manner. | Prepositioning of exercise players is allowed. |
| Receive and verify notifications. | No Exception |
| Identify and request additional resources, as needed. | No Exception |
| Determine a facility is operational. | No Exception |

### Core Capability: Situational Assessment

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

Objective 1: Emergency Operations Management

Capability Target 1.3: Protective Action Recommendations

Intent: The capability to use dose assessment and field data, compare this data to the PAGs, and choose among a range of protective actions those most appropriate in a given emergency.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (D.4, J.7, J.8, J.8.b, J.9, and O.1)

| Assessment | Extent of Play |
|---|---|
| Utilize the methodology in plans/procedures to select among a range of protective actions most appropriate in a given emergency. | No Exception |
| Develop protective action recommendations. | No Exception |
| Transmit protective action recommendations in a timely manner. | No Exception |

## Joint Information System/Center

### Core Capability: Public Information and Warning

Definition: 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, as well as the actions being taken and the assistance being made available, as appropriate.

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### Objective 1: Emergency Operations Management

#### Capability Target 1.1: Mobilization

Intent: The capability to alert, notify, and mobilize offsite response organizations to staff facilities in support of emergency operations.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (A.1, A.1.a, A.1.b, A.3, A.4, A.5, C.1, C.2, C.2.a, C.2.b, C.3, E.1, E.1.a, E.3, F.1.c, H.6, and O.1)

| Assessment | Extent of Play |
|---|---|
| Alert, notify, and mobilize key personnel, to include a 24-hour staffing roster, and activate facilities in a timely manner. | Prepositioning of exercise players is allowed at day-to-day workstations. Some players may be remote dependent on current operational status. Interviews with remote personnel will be coordinated through the controller. |
| Receive and verify notifications. | No Exception |
| Identify and request additional resources, as needed. | No Exception |
| Determine a facility is operational. | No Exception |

### Objective 3: Alert and Notification

#### Capability Target 3.1: Communications

Intent: The capability to provide and maintain reliable communications with emergency personnel.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (E.1.a, E.3, F.1, F.1.a, F.1.b, F.1.c, F.3, and O.1)

| Assessment | Extent of Play |
|---|---|
| Utilize communication systems that are fully functional, continuously available, and redundant. | No Exception |
| Maintain periodic test results and corrective actions on a real time basis. | No Exception |
| Access at least one communication system that is independent of the commercial telephone system. | No Exception |
| Manage the communication systems and ensure that all message traffic is handled without delays that might disrupt emergency operations. | No Exception |

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| Assessment | Extent of Play |
|---|---|
| Identify and address any failures of the systems. | No Exception |
| Transmit, receive, and understand messages (i.e., "content check"). | No Exception |

Capability Target 3.3: Emergency Information and Instructions for the Public and News Media

Intent: The capability to disseminate emergency information and instructions to the public during all phases of an incident.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (E.2, E.4, E.5, G.1, G.2, G.3, G.3.a, G.4, G.5, and O.1)

| Assessment | Extent of Play |
|---|---|
| Deliver coordinated, prompt, reliable, and actionable information in a timely manner. | Emergency information will be written and posted in WebEOC but not released to the public or media. |
| Provide clear, concise, accessible messaging using plain language. | No Exception |
| Messaging addresses appropriate cultural and linguistic considerations. | No Exception |
| Ensure subsequent messaging is consistent with protective actions. | No Exception |
| Update information as the incident progresses, to include validating previously identified protective areas and clearly identifying any new protective action areas, any information that is no longer valid, and any changes to previously provided information (e.g., rerouting of evacuation routes due to impediments, etc.). | No Exception |
| Respond to media and public inquiries. | No Exception |
| Rapidly disseminate of ingestion exposure pathway information to predetermined individuals and businesses. | No Exception |
| Provide information to the public that addresses temporary reentry to a restricted area, permanent relocation from areas not evacuated, and return to formerly restricted areas will be communicated. | No Exception |

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## Incident Command Post (Wake County)

### Core Capability: Operational Coordination

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

#### Objective 1: Emergency Operations Management

##### Capability Target 1.1: Mobilization

Intent: The capability to alert, notify, and mobilize offsite response organizations to staff facilities in support of emergency operations.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (A.1, A.1.a, A.1.b, A.3, A.4, A.5, C.1, C.2, C.2.a, C.2.b, C.3, E.1, E.1.a, E.3, F.1.c, H.6, and O.1)

| Assessment | Extent of Play |
|---|---|
| Alert, notify, and mobilize key personnel, to include a 24-hour staffing roster, and activate facilities in a timely manner. | Prepositioning of exercise players is allowed. Some players will be remote; interviews with remote personnel will be coordinated through the controller. |
| Receive and verify notifications. | No Exception |
| Identify and request additional resources, as needed. | No Exception |
| Determine a facility is operational. | No Exception |

##### Capability Target 1.2: Direction and Control

Intent: The capability to provide overall direction and control of response efforts, commensurate with the responsibilities of leadership, as detailed in plans/procedures.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (A.1, A.1.a, A.1.b, A.1.c, A.2, A.3, A.5, C.2, C.2.a, C.2.b, C.3, D.4, E.1, H.6, and O.1)

| Assessment | Extent of Play |
|---|---|
| Support protective action decision-making. | No Exception |
| Conduct briefings in a timely manner. | No Exception |
| Maintain situational awareness. | No Exception |
| Coordinate response activities with other organizations. | No Exception |

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|---|---|
| Obtain resources to support emergency operations. | No Exception |
| Provide and maintain adequate facilities and equipment to support the emergency response. | No Exception |

### Capability Target 1.3: Protective Action Recommendations

Intent: The capability to use dose assessment and field data, compare this data to the PAGs, and choose among a range of protective actions those most appropriate in a given emergency.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (D.4, J.7, J.8, J.8.b, J.9, and O.1)

| Assessment | Extent of Play |
|---|---|
| Select and implement pre-planned precautionary protective items. | No Exception |

### Capability Target 1.4: Protective Action Decisions for the Plume Phase

Intent: The capability to utilize appropriate factors and necessary coordination in the decision-making process used to make protective action decisions for the public.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (D.1.b, D.4, J.6, J.7, J.8, J.8.b, J.10, J.10.a, J.10.b, J.11.c-g, and O.1)

| Assessment | Extent of Play |
|---|---|
| Coordinate and make protective action decisions for members of the general public. | No Exception |
| Coordinate and make protective action decisions for those with access and functional needs. | No Exception |
| Coordinate and make protective action decisions for students at schools. | No Exception |
| Coordinate and make subsequent or alternate protective action decisions. | No Exception |
| Coordinate and make decisions on the administration of potassium iodide (where applicable) for the public and institutionalized members of the population. | No Exception |

## Objective 2: Exposure Control

### Capability Target 2.2: Emergency Worker Exposure Control Management

Intent: The capability of emergency workers to manage dose and exposure, use equipment (e.g., dosimetry, radio protective drugs), and identify procedures to monitor their exposure and dose, including following procedures to obtain authorization to receive emergency exposures in excess of the protective action guides.

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Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (C.2.c, H.11, H.11.b, K.2.b, K.3, K.3.a, M.1.b, and O.1)

| Assessment | Extent of Play |
|---|---|
| Maintain an appropriate inventory of direct-reading dosimeters that are leak-tested or current in calibration. | No Exception |
| Maintain an appropriate inventory of permanent record dosimeters. | No Exception |
| Retain an adequate supply of radioprotective drugs. | No Exception |
| Adequately distribute appropriate direct-reading dosimeters and permanent record dosimeters. | Permanent record dosimeters will be simulated. |
| Adequately distribute radioprotective drugs to emergency workers. | All potassium iodide distribution will be simulated. |
| Record and report exposures in the field. | No Exception |
| Implement decisions to administer radioprotective drugs. | No Exception |
| Report to individual responsible for managing exposure and dose when limits are reached. | No Exception |
| Implement exposure control decisions to members of the public from radiological exposure and control dose for those who are authorized to temporarily reenter a restricted area. | No Exception |

### Objective 3: Alert and Notification

#### Capability Target 3.1: Communications

Intent: The capability to provide and maintain reliable communications with emergency personnel.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (E.1.a, E.3, F.1, F.1.a, F.1.b, F.1.c, F.3, and O.1)

| Assessment | Extent of Play |
|---|---|
| Utilize communication systems that are fully functional, continuously available, and redundant. | No Exception |

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| Assessment | Extent of Play |
|---|---|
| Maintain periodic test results and corrective actions on a real time basis. | No Exception |
| Access at least one communication system that is independent of the commercial telephone system. | No Exception |
| Manage the communication systems and ensure that all message traffic is handled without delays that might disrupt emergency operations. | No Exception |
| Identify and address any failures of the systems. | No Exception |
| Transmit, receive, and understand messages (i.e., "content check"). | No Exception |

## Apex Area Command Post (Wake County)

### Core Capability: Operational Coordination

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

Objective 1: Emergency Operations Management

Capability Target 1.1: Mobilization

Intent: The capability to alert, notify, and mobilize offsite response organizations to staff facilities in support of emergency operations.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (A.1, A.1.a, A.1.b, A.3, A.4, A.5, C.1, C.2, C.2.a, C.2.b, C.3, E.1, E.1.a, E.3, F.1.c, H.6, and O.1)

| Assessment | Extent of Play |
|---|---|
| Alert, notify, and mobilize key personnel, to include a 24-hour staffing roster, and activate facilities in a timely manner. | Prepositioning of exercise players is allowed at day-to-day work stations. Some players may be remote dependent on current operational status. Interviews with remote personnel will be coordinated through the controller.<br>Silent test will be demonstrated via interview. |
| Receive and verify notifications. | No Exception |
| Identify and request additional resources, as needed. | No Exception |

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| | |
|---|---|
| Determine a facility is operational. | No Exception |

Capability Target 1.2: Direction and Control

Intent: The capability to provide overall direction and control of response efforts, commensurate with the responsibilities of leadership, as detailed in plans/procedures.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (A.1, A.1.a, A.1.b, A.1.c, A.2, A.3, A.5, C.2, C.2.a, C.2.b, C.3, D.4, E.1, H.6, and O.1)

| Assessment | Extent of Play |
|---|---|
| Support protective action decision-making. | No Exception |
| Conduct briefings in a timely manner. | No Exception |
| Maintain situational awareness. | No Exception |
| Coordinate response activities with other organizations. | No Exception |
| Obtain resources to support emergency operations. | No Exception |
| Provide and maintain adequate facilities and equipment to support the emergency response. | No Exception |

Capability Target 1.5: Protective Action Decision Implementation for the Plume Phase

Intent: The capability to implement precautionary protective action and/or protective action decisions, including evacuation and/or sheltering, for all populations within the plume and ingestion exposure pathway emergency planning zones. The populations include those with access and functional needs, students, and institutionalized individuals.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (A.4, C.2.a, G.1, J.11, J.11.a, J.11.b, J.11.c, J.11.e, J.11.g, and O.1)

| Assessment | Extent of Play |
|---|---|
| Implement protective action decisions, ensuring communication and coordination with all appropriate jurisdictions. | This will be completed through interview |

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### Objective 2: Exposure Control

#### Capability Target 2.1: Emergency Worker Exposure Control Decision-Making Process

Intent: The capability to assess and control the radiation exposure and dose received by emergency workers and utilize a decision-making chain to authorize emergency worker exposure limits to be exceeded for specific missions.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (C.2.c, H.11, K.2, K.2.b, K.3, K.3.a, M.1.b, M.8, and O.1)

| Assessment | Extent of Play |
|---|---|
| Control emergency workers' exposure and dose, including offsite workers performing duties onsite. | Permanent record dosimeters will be simulated. |
| Maintain record of dose as a result of exposure. | Maintenance record of dose will be simulated. |

#### Capability Target 2.2: Emergency Worker Exposure Control Management

Intent: The capability of emergency workers to manage dose and exposure, use equipment (e.g., dosimetry, radio protective drugs), and identify procedures to monitor their exposure and dose, including following procedures to obtain authorization to receive emergency exposures in excess of the protective action guides.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (C.2.c, H.11, H.11.b, K.2.b, K.3, K.3.a, M.1.b, and O.1)

| Assessment | Extent of Play |
|---|---|
| Maintain an appropriate inventory of direct-reading dosimeters that are leak-tested or current in calibration. | No Exception |
| Maintain an appropriate inventory of permanent record dosimeters. | No Exception |
| Retain an adequate supply of radioprotective drugs. | No Exception |
| Adequately distribute appropriate direct-reading dosimeters and permanent record dosimeters. | Permanent record dosimeters will be simulated. |
| Adequately distribute radioprotective drugs to emergency workers. | All potassium iodide distribution will be simulated. |
| Record and report exposures in the field. | No Exception |

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| Assessment | Extent of Play |
|---|---|
| Implement decisions to administer radioprotective drugs. | No Exception |
| Report to individual responsible for managing exposure and dose when limits are reached. | No Exception |
| Implement exposure control decisions to members of the public from radiological exposure and control dose for those who are authorized to temporarily reenter a restricted area. | No Exception |

### Objective 3: Alert and Notification

#### Capability Target 3.1: Communications

Intent: The capability to provide and maintain reliable communications with emergency personnel.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (E.1.a, E.3, F.1, F.1.a, F.1.b, F.1.c, F.3, and O.1)

| Assessment | Extent of Play |
|---|---|
| Utilize communication systems that are fully functional, continuously available, and redundant. | No Exception |
| Access at least one communication system that is independent of the commercial telephone system. | No Exception |
| Manage the communication systems and ensure that all message traffic is handled without delays that might disrupt emergency operations. | No Exception |
| Identify and address any failures of the systems. | No Exception |
| Transmit, receive, and understand messages (i.e., "content check"). | No Exception |

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## Reception and Congregate Care Center (Wake, Harnett, Chatham Counties)

### Core Capability: Mass Care Services

Definition: 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.

Objective 5: Operate

Capability Target 5.1: Monitoring, Decontamination, Sheltering, and Registration of Evacuees

Intent: The capability to implement radiological monitoring and decontamination of evacuees, and to identify, register, temporarily shelter, and provide congregate care for evacuees at reception centers.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (J.11.d, J.13, K.4, and O.1)

| Assessment | Extent of Play |
|---|---|
| Set-up operations. | Chatham, Harnett, and Wake: Only one person dresses out and undresses for evaluation.<br>Chatham: Will be demonstration a medical response for the First Health of the Carolinas at the school. The patient will not be transported to the hospital. First Health will not use a survey meter for contamination monitoring. |
| Operationally check instruments and equipment. | No Exception |
| Attain and sustain the overall monitoring productivity rate per hour needed to monitor 20 percent of the plume exposure pathway emergency planning zone population, including transients, within a 12-hour period at each facility. The monitoring productivity rate per hour is the number of evacuees that can be monitored, per hour, per location, by the total complement of monitors using an appropriate procedure. | No Exception |
| Monitor evacuees, service animals, pets, vehicles, and possessions. | The monitoring of service animals and pets will be discussed via interview. |
| Utilize trigger/action levels for determining the need for decontamination. | No Exception |
| Decontaminate evacuees, and personal belongings, while limiting the spread of contamination. | Showering will be simulated |

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| Assessment | Extent of Play |
|---|---|
| Follow-up with any evacuee(s) who cannot be appropriately decontaminated for assessment; ensure the capability to provide evacuee-referrals. | No Exception |
| Monitor and decontaminate vehicles. | The use of water us will be simulated for vehicle decontamination. |
| Provide adequate, separate space for both contaminated and non-contaminated vehicles. | No Exception |
| Monitor emergency worker personnel and their equipment and vehicles for contamination. | No Exception |
| Decontaminate evacuee vehicles based on trigger/action levels. | No Exception |
| Coordinate for incoming evacuees who have been monitored and, if necessary, decontaminated. | No Exception |
| Establish shelter operations. | No Exception |
| Congregate care centers and operations in host/support jurisdictions are sufficient to support the expected number of evacuees. | No Exception |
| Register evacuees. | No Exception |
| Ensure the registration area is clean and controlled. | No Exception |

## Emergency Worker Decontamination (Wake, Harnett)

### Core Capability: Environmental Response/Health and Safety

Definition: 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.

Objective 5: Operate

Capability Target 5.2: Monitoring and Decontamination of Emergency Workers, Equipment, and Vehicles

Intent: The capability to implement radiological monitoring and decontamination of emergency workers, equipment, and vehicles.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (K.4 and O.1)

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| Assessment | Extent of Play |
|---|---|
| Set-up operations. | Wake and Harnett: Only one person dresses out and undresses for evaluation. |
| Operationally check instruments and equipment. | No Exception |
| Monitor emergency worker personnel and their equipment and vehicles for contamination. | No Exception |
| Decontaminate emergency worker personnel and their equipment and vehicles based on trigger/action levels. | The use of water us will be simulated for vehicle decontamination. For personnel decontamination water will be used with the exception of showers.<br>Wake and Harnett: All water usage for decontamination will be simulated. |
| Control the spread of contamination. | No Exception |
| Create and maintain a record of monitoring and decontaminating workers upon completion of monitoring and decontamination activities. | No Exception |
| Process for prioritizing emergency workers and equipment before the public in facilities where the public and emergency workers are both processed for contamination. | No Exception |

## Backup Route Alerting (Lee and Chatham Counties)

### Core Capability: Public Information and Warning

Definition: 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, as well as the actions being taken and the assistance being made available, as appropriate.

#### Objective 1: Emergency Operations Management

#### Capability Target 1.1: Mobilization

Intent: The capability to alert, notify, and mobilize offsite response organizations to staff facilities in support of emergency operations.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (A.1, A.1.a, A.1.b, A.3, A.4, A.5, C.1, C.2, C.2.a, C.2.b, C.3, E.1, E.1.a, E.3, F.1.c, H.6, and O.1)

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| Assessment | Extent of Play |
|---|---|
| Alert, notify, and mobilize key personnel, to include a 24-hour staffing roster, and activate facilities in a timely manner. | Prepositioning of exercise players is allowed. Some players will be remote; interviews with remote personnel will be coordinated through the controller.<br>Chatham: Will perform route alerting demonstration during on scenario exercise. One siren failure will be communicated to the station when applicable for scenario play. Will attempt to use SARTopo for tracking purposes FOR COURTESY EVALUATION ONLY. In the event of traffic build up, vehicle may pull over and allow traffic to pass. |
| Receive and verify notifications. | No Exception |
| Identify and request additional resources, as needed. | No Exception |
| Determine a facility is operational. | No Exception |

Capability Target 1.2: Direction and Control

Intent: The capability to provide overall direction and control of response efforts, commensurate with the responsibilities of leadership, as detailed in plans/procedures.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (A.1, A.1.a, A.1.b, A.1.c, A.2, A.3, A.5, C.2, C.2.a, C.2.b, C.3, D.4, E.1, H.6, and O.1)

| Assessment | Extent of Play |
|---|---|
| Support protective action decision-making. | No Exception |
| Conduct briefings in a timely manner. | No Exception |
| Maintain situational awareness. | No Exception |
| Coordinate response activities with other organizations. | No Exception |
| Obtain resources to support emergency operations. | No Exception |
| Provide and maintain adequate facilities and equipment to support the emergency response. | No Exception |

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### Objective 2: Exposure Control

#### Capability Target 2.2: Emergency Worker Exposure Control Management

Intent: The capability of emergency workers to manage dose and exposure, use equipment (e.g., dosimetry, radio protective drugs), and identify procedures to monitor their exposure and dose, including following procedures to obtain authorization to receive emergency exposures in excess of the protective action guides.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (C.2.c, H.11, H.11.b, K.2.b, K.3, K.3.a, M.1.b, and O.1)

| Assessment | Extent of Play |
|---|---|
| Maintain an appropriate inventory of direct-reading dosimeters that are leak-tested or current in calibration. | No Exception |
| Maintain an appropriate inventory of permanent record dosimeters. | No Exception |
| Retain an adequate supply of radioprotective drugs. | No Exception |
| Adequately distribute appropriate direct-reading dosimeters and permanent record dosimeters. | Permanent record dosimeters will be simulated. |
| Adequately distribute radioprotective drugs to emergency workers. | All potassium iodide distribution will be simulated. |
| Record and report exposures in the field. | No Exception |
| Implement decisions to administer radioprotective drugs. | No Exception |
| Report to individual responsible for managing exposure and dose when limits are reached. | No Exception |
| Implement exposure control decisions to members of the public from radiological exposure and control dose for those who are authorized to temporarily reenter a restricted area. | No Exception |

### Objective 3: Alert and Notification

#### Capability Target 3.1: Communications

Intent: The capability to provide and maintain reliable communications with emergency personnel.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (E.1.a, E.3, F.1, F.1.a, F.1.b, F.1.c, F.3, and O.1)

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| Assessment | Extent of Play |
|---|---|
| Utilize communication systems that are fully functional, continuously available, and redundant. | No Exception |
| Maintain periodic test results and corrective actions on a real time basis. | No Exception |
| Access at least one communication system that is independent of the commercial telephone system. | No Exception |
| Manage the communication systems and ensure that all message traffic is handled without delays that might disrupt emergency operations. | No Exception |
| Identify and address any failures of the systems. | No Exception |
| Transmit, receive, and understand messages (i.e., "content check"). | No Exception |

Capability Target 3.2: Alert and Notification of the Public

Intent: The capability to provide instructions to the public.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (E.2, E.4, E.5, F.3, and O.1)

| Assessment | Extent of Play |
|---|---|
| Sequentially provide an alert signal followed by an initial instructional message to populated areas. | The public address system will be tested and the pre-scripted message read aloud once while demonstrating backup route alerting to ensure system operability. |
| Alert and notify the general public. | The public address system will be tested and the pre-scripted message read aloud once while demonstrating backup route alerting to ensure system operability. |
| Identify and address any failures of the system(s) or portion of a system(s). | No Exception |
| Actual testing of the mobile public address system will be conducted at an agreed-upon location. | The public address system will be tested and the pre-scripted message read aloud once while demonstrating backup route alerting to ensure system operability. |
| Ensure that updated emergency information is disseminated in a timely manner. | This will be discussed via interview. |

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| Assessment | Extent of Play |
|---|---|
| Ensure that current emergency information is repeated at pre-established intervals. | This will be discussed via interview. |
| Complete route alerting, whether because of failure for system/portion of a system or for exception areas, as needed to demonstrate all routes are capable of being run in allotted time. Emphasis on the most challenging routes and demonstration of these routes will be varied from assessment activity to assessment activity. Challenging routes are defined as those that may be difficult to accomplish, such as those that are lengthy or with conditions (physical or otherwise) that may affect the speed and accuracy with which the route can be completed (e.g., traffic patterns and/or capacity, road conditions, etc.). | No Exception |

## Traffic/ Access Control Points (Chatham County)

### Core Capability: On-Scene Security, Protection, and Law Enforcement

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

Objective 5: Operate

Capability Target 5.4: Traffic and Access Control

Intent: The capability to select, establish, and staff traffic and access control points and removing impediments to the flow of evacuation traffic.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (H.12, J.8, J.8.b, J.10, J.10.a, J.11.c, J.11.e, J.11.f, J.14.d, J.14.e, M.1.b, and O.1)

| Assessment | Extent of Play |
|---|---|
| Select, establish, and staff appropriate traffic and access control points, consistent with current conditions and protective action decisions (e.g., evacuating, sheltering, and relocation), in a timely manner. | This will be discussed via interview. |
| Provide instructions to traffic and access control staff on actions to take, including when modifications in protective action strategies necessitate changes in evacuation patterns or in the area(s) where access is controlled. | This will be discussed via interview. |

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| | |
|---|---|
| Contact the state or federal agencies that have the authority for the different transportation modes (e.g., rail, water, and air traffic). | The contacting of state or federal agencies that have authority for the different transportation modes will be simulated. |
| Identify and take appropriate actions concerning impediments that affect the evacuation and evacuation routes. | This will be discussed via interview. |
| Make the decision to re-route traffic and coordinate with key decision-makers and the JIC to ensure the alternate route information is appropriately communicated to evacuees. | This will be discussed via interview. |

## Waterway Warning (Wake and Chatham Counties)

### Core Capability: On-Scene Security, Protection, and Law Enforcement

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

#### Objective 1: Emergency Operations Management

#### Capability Target 1.1: Mobilization

Intent: The capability to alert, notify, and mobilize offsite response organizations to staff facilities in support of emergency operations.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (A.1, A.1.a, A.1.b, A.3, A.4, A.5, C.1, C.2, C.2.a, C.2.b, C.3, E.1, E.1.a, E.3, F.1.c, H.6, and O.1)

| Assessment | Extent of Play |
|---|---|
| Alert, notify, and mobilize key personnel, to include a 24-hour staffing roster, and activate facilities in a timely manner. | Prepositioning of exercise players is allowed. Some players will be remote; interviews with remote personnel will be coordinated through the controller. |
| Receive and verify notifications. | No Exception |
| Identify and request additional resources, as needed. | No Exception |
| Determine a facility is operational. | No Exception |

#### Capability Target 1.2: Direction and Control

Intent: The capability to provide overall direction and control of response efforts, commensurate with the responsibilities of leadership, as detailed in plans/procedures.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (A.1, A.1.a, A.1.b, A.1.c, A.2, A.3, A.5, C.2, C.2.a, C.2.b, C.3, D.4, E.1, H.6, and O.1)

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| Assessment | Extent of Play |
|---|---|
| Support protective action decision-making. | No Exception |
| Conduct briefings in a timely manner. | No Exception |
| Maintain situational awareness. | No Exception |
| Coordinate response activities with other organizations. | No Exception |
| Obtain resources to support emergency operations. | No Exception |
| Provide and maintain adequate facilities and equipment to support the emergency response. | No Exception |

Objective 2: Exposure Control

Capability Target 2.2: Emergency Worker Exposure Control Management

Intent: The capability of emergency workers to manage dose and exposure, use equipment (e.g., dosimetry, radio protective drugs), and identify procedures to monitor their exposure and dose, including following procedures to obtain authorization to receive emergency exposures in excess of the protective action guides.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (C.2.c, H.11, H.11.b, K.2.b, K.3, K.3.a, M.1.b, and O.1)

| Assessment | Extent of Play |
|---|---|
| Maintain an appropriate inventory of direct-reading dosimeters that are leak-tested or current in calibration. | No Exception |
| Maintain an appropriate inventory of permanent record dosimeters. | No Exception |
| Retain an adequate supply of radioprotective drugs. | No Exception |
| Adequately distribute appropriate direct-reading dosimeters and permanent record dosimeters. | Permanent record dosimeters will be simulated. |
| Adequately distribute radioprotective drugs to emergency workers. | All potassium iodide distribution will be simulated. |

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| Assessment | Extent of Play |
|---|---|
| Record and report exposures in the field. | No Exception |
| Implement decisions to administer radioprotective drugs. | No Exception |
| Report to individual responsible for managing exposure and dose when limits are reached. | No Exception |
| Implement exposure control decisions to members of the public from radiological exposure and control dose for those who are authorized to temporarily reenter a restricted area. | No Exception |

Objective 3: Alert and Notification

Capability Target 3.1: Communications

Intent: The capability to provide and maintain reliable communications with emergency personnel.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (E.1.a, E.3, F.1, F.1.a, F.1.b, F.1.c, F.3, and O.1)

| Assessment | Extent of Play |
|---|---|
| Utilize communication systems that are fully functional, continuously available, and redundant. | No Exception |
| Maintain periodic test results and corrective actions on a real time basis. | No Exception |
| Access at least one communication system that is independent of the commercial telephone system. | No Exception |
| Manage the communication systems and ensure that all message traffic is handled without delays that might disrupt emergency operations. | No Exception |
| Identify and address any failures of the systems. | No Exception |
| Transmit, receive, and understand messages (i.e., "content check"). | No Exception |

Capability Target 3.2: Alert and Notification of the Public

Intent: The capability to provide instructions to the public.

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Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (E.2, E.4, E.5, F.3, and O.1)

| Assessment | Extent of Play |
|---|---|
| Identify and address any failures of the system(s) or portion of a system(s). | No Exception |
| Actual testing of the mobile public address system will be conducted at an agreed-upon location. | The public address system on each boat will be tested and the pre-scripted message read aloud once while demonstrating waterway warning to ensure system operability. |
| Ensure that updated emergency information is disseminated in a timely manner. | This will be discussed via interview. |
| Ensure that current emergency information is repeated at pre-established intervals. | This will be discussed via interview. |

Objective 5: Operate

Capability Target 5.4: Traffic and Access Control

Intent: The capability to select, establish, and staff traffic and access control points and removing impediments to the flow of evacuation traffic.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (H.12, J.8, J.8.b, J.10, J.10.a, J.11.c, J.11.e, J.11.f, J.14.d, J.14.e, M.1.b, and O.1)

| Assessment | Extent of Play |
|---|---|
| Select, establish, and staff appropriate traffic and access control points, consistent with current conditions and protective action decisions (e.g., evacuating, sheltering, and relocation), in a timely manner. | This will be discussed via interview. |
| Provide instructions to traffic and access control staff on actions to take, including when modifications in protective action strategies necessitate changes in evacuation patterns or in the area(s) where access is controlled. | This will be discussed via interview. |
| Contact the state or federal agencies that have the authority for the different transportation modes (e.g., rail, water, and air traffic). | The contacting of state or federal agencies that have authority for the different transportation modes will be simulated. |
| Identify and take appropriate actions concerning impediments that affect the evacuation and evacuation routes. | This will be discussed via interview. |
| Make the decision to re-route traffic and coordinate with key decision-makers and the joint information center to ensure the alternate | This will be discussed via interview. |

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| route information is appropriately communicated to evacuees. | |

## Medical Services Drill (Wake County)

Core Capability: Public Health, Healthcare, and Emergency Medical Services

Definition: Provide lifesaving medical treatment via Emergency Medical Services and related operations and avoid additional disease and injury by providing targeted public health, medical, and behavioral health support, and products to all affected populations.

Objective 5: Operate

*Capability Target 5.3: Transportation and Treatment of Contaminated, Injured Individuals*

Intent: The capability to provide medical transport and treatment services to contaminated, injured individuals.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (C.2.d, F.2, H.11, H.12, J.2, K.3, K.4, L.1, L.3, L.4, and O.1)

| Assessment | Extent of Play |
|---|---|
| Transport contaminated, injured individuals to medical facilities. | Once proper PPE donning and doffing has been demonstrated to satisfaction of evaluators, players have the option to dress down or open suits. Will not be taping seams or suits. |
| Maintain communications between the medical transportation provider and the receiving medical facility. | No Exception |
| Operationally check instruments and equipment. | Instrument operability checks will be demonstrated at both sites. At SHNPP prior to entry into the contaminated area.<br>Hospital staff will demonstrate instrument operability checks prior to use. |
| Set-up, activate, and operate a radiation emergency area. | FD personnel will demonstrate setting up a "hot" and "warm" zone at SHNPP.<br>Wake Med - Raleigh will set up their decontamination room according to their policy.<br>Exception: Glove changes will be simulated/verbalized. Can be demonstrated out of sequence. |
| Monitor and decontaminate the individual, equipment, and other items. | Monitoring and decontamination of responders and staff will be demonstrated to the satisfaction of evaluators and subsequently simulated. |

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| | Exception: If decontamination with water is required, no actual water flow will occur. Emergency Worker Decon will not be demonstrated during exercise. |

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## Out of Sequence Activities Sequence of Events

| Date/Time | Event | Location | Address |
|---|---|---|---|
| 3 April 10:00 | Lee County SAV | Lee County EOC | 204 West Courtland Dr., Sanford, NC 27331 |
| 3 April 12:00 | Wake County SAV | Harris Lake Park | 2112 County Park Dr., New Hill, NC 27562 |
| 3 April 13:00 | Wake County Waterway Warning | Harris Lake Park | 2112 County Park Dr., New Hill, NC 27562 |
| 3 April 15:00 | Harnett County SAV | Harnett County EOC | 1005 Edwards Brothers Dr., Lillington, NC 27546 |
| 3 April 18:00 | Harnett County Emergency Worker Decon | Angier Fire Department | 309 N Broad St. E, Angier, NC 27501 |
| 3 April 19:00 | Chatham Reception Center with Medical Scenario | Chatham Grove Elementary | 1301 Andrews Store Rd., Pittsboro, NC 27312 |
| 4 April 08:00 | Chatham County SAV | Chatham County EOC | 297 West St., Pittsboro, NC 27312 |
| 4 April 09:00 | Wake County Emergency Worker Decon | NC State Fairgrounds | 4285 Trinity Rd, Raleigh NC 27607 |
| 4 April 1800 | Harnett County Reception Center with Medical Scenario | Harnett Central Middle School | 2529 Harnett Central Rd., Angier NC 27501 |
| 5 April 08:00 | Wake County MSD | HNP Wake Med | Harris E&E 3932 New Hill Holleman Rd., New Hill, NC 27562 |
| 5 April 10:00 | Chatham County Waterway Warning, Traffic/Access Control Points | Chatham County Agriculture & Conference Center | 1192 US-64 W, Pittsboro, NC 27312 |
| 5 April 18:00 | Lee County Backup Route Alerting | Deep River Fire Dept | 5107 Deep River Rd., Sanford, NC 27330 |
| 6 April 08:00 | Wake County Reception Center | Garner Magnet HS | 2101 Spring Dr., Garner, NC 27529 |