Department of Homeland Security
Region IV
3003 Chamblee-Tucker Road
Atlanta, Georgia 30341

FEMA

MAR 03 2017

Leonard Wert, Regional Administrator - RII
Nuclear Regulatory Commission
One Marquis Tower
245 Peachtree Center Avenue, Suite 1200
Atlanta, Georgia 30303

Dear Mr. Wert:

Enclosed is a copy of the final report for the December 13, 2016, Oconee Nuclear Station partial participation plume phase exercise of the offsite radiological emergency response plans, site-specific to the Oconee Nuclear Station. This report addresses the evaluation of the plans and preparedness for the State of South Carolina, and affected local governments.

This exercise demonstrated the state and local governments' commitment to protecting public health and safety. State and local organizations demonstrated the ability to effectively implement their emergency response plans and procedures. No Level 1 or 2 Findings were identified during this exercise.

Based on the results of this exercise and the Federal Emergency Management Agency's review of the 2015 Annual Letter of Certification submitted by South Carolina, the offsite radiological emergency response plans and preparedness of the State of South Carolina and the affected local jurisdictions site-specific to the Oconee Nuclear Station 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 Oconee Nuclear Station granted to South Carolina on February 23, 1983, will remain in effect.

If you have any questions, please contact Kevin R. Keyes at 770/220-5378.

Sincerely,

for Gracia B. Szczech
Regional Administrator

Enclosure

cc: Ms. Vanessa E. Quinn, Branch Chief
Radiological Emergency Preparedness Branch

NRC Headquarters' Document Control Desk
Washington, D. C. 2055-0001

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Final After Action Report

Oconee Nuclear Station
Radiological Emergency Preparedness Exercise
Exercise Date: December 13, 2016

February 17, 2017

FEMA

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Oconee Nuclear Station
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Executive Summary

On December 13, 2016, the U.S. Department of Homeland Security, Federal Emergency Management Agency Region IV, Radiological Emergency Preparedness Program staff evaluated a partial participation plume exposure pathway exercise for the 10-mile emergency planning zone of the Oconee Nuclear Station. The exercise was originally scheduled for October 18th, but was rescheduled due to the impact of Hurricane Matthew on the State of South Carolina. Some of the out-of-sequence activities were postponed due to an active shooter incident in Anderson County. The evaluations of out-of-sequence activities conducted July 13, September 26-27, and October 27, 2016 are included in this report.

The Oconee Nuclear Station is located in eastern Oconee County, approximately eight miles northeast of Seneca, South Carolina and is operated by Duke Energy. The Oconee Nuclear Station 10-mile emergency planning zone is divided into 13 emergency response zones. It encompasses parts of Oconee and Pickens Counties, including Clemson University.

The purpose of the exercise was to assess the level of state and local preparedness in responding to an incident at the Oconee Nuclear Station. It was conducted in accordance with Federal Emergency Management Agency policies and guidance concerning the exercise of state and local radiological emergency response plans and procedures. The previous federally evaluated exercise at this site was conducted on August 19, 2014. The qualifying emergency preparedness exercise was conducted March 7th and 8th, 1982.

Officials and representatives from participating agencies and organizations demonstrated knowledge of their emergency response plans and procedures and successfully implemented them during the exercise. Clemson University and the Nuclear Regulatory Commission participated in the exercise but were not evaluated and are not included in this report. Out of sequence activities included reception and congregate care, emergency worker monitoring and decontamination, school relocation, and local primary radio station interview for the emergency alert system. All jurisdictions met their exercise objectives and successfully demonstrated the corresponding Core Capabilities identified in Section 2.2 of this report. The Federal Emergency Management Agency did not identify any level 1 or level 2 findings during this exercise.

Highlights of the exercise included the timely, accurate, and unified emergency information and instructions provided to the media, the coordination and consideration of protective action decisions, and the effective response to the numerous exercise injects. In nearly every aspect of the exercise, there were examples of organizations going above and beyond the requirements of the exercise. This demonstrated the commitment of the jurisdictions involved to always strive to improve their response.

The Federal Emergency Management Agency wishes to acknowledge the efforts of the many individuals who participated in the exercise and made it a success. The professionalism and teamwork of the participants was evident throughout all phases of the exercise.

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Section 1: Exercise Overview

1.1 Exercise Details

Exercise Name
2016 Oconee Nuclear Station Radiological Emergency Preparedness Exercise

Type of Exercise
Partial Participation Exercise

Exercise Date
December 13, 2016

Exercise Off-Scenario/Out-of-Sequence Dates
July 13, September 26-27, October 27, 2016

Program
U.S. Department of Homeland Security, Federal Emergency Management Agency, Radiological Emergency Preparedness Program

Mission
Response

Scenario Type
Plume-Phase Radiological Emergency Preparedness Exercise

1.2 Exercise Planning Team Leadership

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1.3 Participating Organizations

Agencies and organizations of the following jurisdictions participated in the 2016 Oconee Nuclear Station exercise.

State Jurisdictions:
- State of South Carolina
- Clemson University

Risk Jurisdictions:
- Oconee County
- Pickens County

Support Jurisdictions:
- Anderson County
- Greenville County

Private Organizations:
- Duke Energy
- American Red Cross

Federal Agencies:
- Nuclear Regulatory Commission

Section 2: Exercise Design Summary

2.1 Exercise Purpose and Design

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

The results of this exercise, together with review of the radiological emergency response plans, and verification of the periodic requirements set forth in NUREG-0654/FEMA-REP-1, along with supplements through the annual letter of certification and staff assistance visits, enabled the Federal Emergency Management Agency to provide a statement with the transmission of this final after action report to the U.S. Nuclear Regulatory Commission, that the affected state, tribal, 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 emergency; and (2) capable of being implemented.

Formal submission of the radiological emergency response procedures for the Oconee Nuclear Station to the Federal Emergency Management Agency Region IV by the State of South Carolina occurred on May 7, 1982. In accordance with Title 44 Code of Federal Regulations part 350, formal approval of those procedures was granted on February 23, 1983.

2.2 Exercise Core Capabilities and Objectives

Core Capabilities-based planning allows for exercise planning teams to develop exercise objectives and observe exercise outcomes through a framework of specific action items. Using the Homeland Security Exercise and Evaluation Program methodology, the exercise objectives meet the Radiological Emergency Preparedness Program requirements and encompass the emergency preparedness evaluation areas. The critical tasks to be demonstrated were negotiated with the State of South Carolina and the

participating counties. The Core Capabilities demonstrated during this exercise were:

- Operational Coordination
- Situational Assessment
- Public Information and Warning
- Environmental Response/Health and Safety
- Critical Transportation
- Mass Care

The definitions of each Core Capability is as follows:

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 through the use of clear, consistent, accessible, and culturally and linguistically appropriate methods to effectively relay information regarding any threat or hazard and, as appropriate, the actions being taken and the assistance being made available.

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

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

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

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

Objective 1: Demonstrate the ability to provide direction and control through the counties' and state emergency operations centers providing protective action decision-making for state and county emergency workers and the public through exercise play and discussions of plans and procedures.

Objective 2: Demonstrate the ability to provide protective action decisions affecting state and county emergency workers and public through exercise play and discussions of plans and procedures.

Objective 3: Demonstrate the ability to implement protective actions for state and county emergency workers and public through exercise demonstration.

Objective 4: Demonstrate the ability to activate the prompt alert and notification system utilizing the primary notification system and the emergency alert system through exercise play.

Objective 5: Demonstrate the effectiveness of plans, policies, and procedures in the joint information center for public and private sector emergency information communications.

Objective 6: Demonstrate the ability to provide dose projection and protective action decision making for the plume phase.

2.3 Exercise Scenario

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

The exercise begins at 0730. Meteorological conditions are wind speed from 6 miles per hour, wind direction from 10 degrees, and stability class of F. At 0806, the reactor building spray pump breaker trips and a fire alarm and smoke are reported in the area. At 0821, an Alert is declared for a fire affecting plant safety systems. At 0845, a loss of coolant accident occurs with increasing auxiliary and reactor building radiation monitor levels. At 0953, a Site Area Emergency is declared for the loss of the reactor coolant system and fuel clad barriers. At 1112, a containment breach occurs due to an equipment hatch seal failure. At 1127, a General Emergency is declared due to the loss of the containment barrier with protective action recommendations to evacuate zones A0, C1, and D1. At 1205, the wind direction begins to shift and by 1220 the protective action recommendations are updated to include evacuation of zone B1. At 1400, the exercise is terminated.

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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 December 13, 2016 plume-exposure-pathway exercise and out-of-sequence activities of July 13, September 26-27, and October 27, 2016. The exercise was originally scheduled for October 18, 2016, however due to the impact of Hurricane Matthew on the State of South Carolina the exercise was postponed until December 13, 2016. Some of the out-of-sequence activities were postponed from their original dates due to an active shooter incident in Anderson County.

Each jurisdiction and functional entity was evaluated based on the demonstration of Core Capabilities, capability targets, and critical tasks, and the underlying radiological emergency preparedness criteria as delineated in the Federal Emergency Management Agency Radiological Emergency Preparedness Program Manual dated January 2016. Exercise criteria are listed by number, and the demonstration status of those criteria are indicated by the use of the following terms:

- M: Met (no unresolved level 1 or level 2 findings assessed and no unresolved findings from prior exercises)
- 1: Level 1 finding assessed
- 2: Level 2 finding assessed or an unresolved level 2 finding(s) from a prior exercise
- P: Plan issue
- N: Not demonstrated

3.2 Summary Results of Exercise Evaluation

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

Operational Coordination: Key leadership personnel from the participating agencies established and maintained a unified and coordinated operational structure which provided effective and responsive direction and control. The overall decision making process integrated critical stakeholders, enabling protective action discussions and subsequent decisions to be made in a sensible and timely manner.

Situational Assessment: State dose assessment personnel assessed radiological and plant conditions to prepare decision-relevant information for the decision makers. While the emergency response coordinator (Department of Health and Environmental Control) clearly discussed the radiological release and the recommendations for protective actions with the state decision makers at the state emergency operations center, the room where these discussions took place did not have enough microphones attached to the conference phone to allow for the county decision makers to hear the discussion on the radiological release. The lack of information provided to the county decision makers may have led them to include more areas for evacuation and shelter-in-place protective actions than was warranted by the conditions at the plant and the release of radioactive materials to the atmosphere. The decision makers made appropriate decisions based on the information they were provided.

Public Information and Warning: Alert and notification of the public was made using simulated siren activation and emergency alert system messages, followed by supplemental media releases and formal media briefings in the joint information center. Through these processes, public information staff prepared and delivered coordinated, prompt, and reliable information and instructions to the public and media.

Environmental Response/Health and Safety: State emergency support function 10 provided appropriate staff and resources to support the response. They simulated the positioning and management of field monitoring teams and provided appropriate instructions for emergency worker exposure control. Workers in the risk and host counties demonstrated their ability to monitor and decontaminate evacuees and emergency workers. They demonstrated proficiency in using monitoring equipment, exposure control equipment, and operating procedures.

Critical Transportation: Administrators from Pickens County Schools demonstrated their ability to implement protective actions and safeguard students and faculty during an out-of-sequence discussion.

Mass Care: Emergency workers from Anderson and Greenville Counties demonstrated the ability to provide services and accommodations for evacuees during out-of-sequence activities. These activities included registration, feeding, housing, and care of evacuees at the Anderson Civic Center and Greenville County's Berea High School.

3.3 Jurisdictional Summary Results of Exercise Evaluation

3.3.1 State of South Carolina

3.3.1.1 State Emergency Operations Center

Operational Coordination Capability Summary:

The South Carolina Emergency Management Division emergency operations center staff successfully demonstrated the capability to establish and maintain a unified and coordinated operational structure and process while integrating all critical stakeholders in response to a simulated radiological emergency.

State warning point staff received the initial notification of an emergency at the Oconee Nuclear Station, promptly informed key leadership of the situation, and effectively mobilized the emergency operations center staff using a web-based notification system. The emergency operations center had sufficient communications capabilities, equipment, and supplies to support emergency operations.

The chief of operations, assisted by the technical officer, led the state's emergency response and held several briefings to maintain situational awareness. Several coordination calls were held with all pertinent decision makers via a dedicated decision line. The calls were effectively used to discuss, coordinate, and receive concurrence on protective actions.

The state emergency operations center staff followed their plans and procedures to support the risk and host counties' response efforts.

For this capability the following Radiological Emergency Preparedness criteria were MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.2, 3.d.1, and 3.d.2.

a. **Level 1 Finding:** None

b. **Level 2 Finding:** None

c. **Not Demonstrated:** None

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

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

Public Information and Warning Capability Summary:

Participants from the South Carolina Emergency Management Division External Affairs Department successfully demonstrated the ability to compose and disseminate accurate, timely, and useful information to the public following a simulated radiological incident.

The public information team, comprised of the external affairs director and two assistant emergency alert system administrators, developed three emergency alert system messages and six news releases. All public information products were developed from pre-scripted templates within their plan and included all essential elements of emergency public information required by Federal Emergency Management Agency guidance.

The team quickly established and maintained contact with the joint information center using commercial telephones. They posted emergency public information documents on the web-based emergency management software system.

All emergency public information products were approved by senior managers at the State emergency operations center prior to dissemination to the emergency alert system stations and the joint information center. The external affairs director explained the procedures for transmitting emergency alert system messages to the stations. He alerted his colleague in the joint information center before sending news releases.

South Carolina Emergency Management Division staff established a public inquiry telephone line and rumor control function, and operators appropriately responded to numerous calls from the simulation cell. Operators used emergency information available in news releases and posted on the emergency management software system to provide accurate and useful information to the public.

For this capability the following Radiological Emergency Preparedness criteria were MET: 5.a.1 and 5.b.1.

a. **Level 1 Finding:** None

b. **Level 2 Finding:** None

c. **Not Demonstrated:** None

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

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

3.3.1.2 Emergency Operations Facility

Situational Assessment Capability Summary:

The South Carolina Emergency Management Division and Department of Health and Environmental Control liaisons successfully demonstrated the capability to provide decision makers with decision-relevant information regarding the nature and extent of the radiological hazard, any cascading effects, and the status of the response.

The liaisons were dispatched to the Duke Energy emergency operations facility in Charlotte, North Carolina. The liaisons enhanced the flow of information between Duke Energy and the offsite response organizations, and facilitated discussions of plant conditions with the state emergency operations center staff. The emergency management liaison kept state decision makers up-to-date on plant conditions. At one time, the liaison had the utility emergency operations facility director get on the phone with the state and county decision makers to clarify the reasons for the utility's protective action recommendation. The health and environmental liaison provided the state dose assessment personnel with the latest dose assessment data from the utility and the Nuclear Regulatory Commission.

The liaisons performed their duties in an efficient and professional manner. Their actions helped keep the state decision makers knowledgeable of the current situational awareness, and assisted them in making protective action decisions.

For this capability the following Radiological Emergency Preparedness criterion was MET: 2.b.1.

a. Level 1 Finding: None

b. Level 2 Finding: None

c. Not Demonstrated: None

d. Prior Level 2 Findings – Resolved: None

e. Prior Level 2 Findings - Unresolved: None

3.3.1.3 Dose Assessment

Situational Assessment Capability Summary:

South Carolina Department of Health and Environmental Control personnel successfully demonstrated the ability to assess radiological, meteorological, and plant conditions in response to a simulated radiological incident.

The emergency response coordinator provided direction to emergency support function 10 team members, instructing them to gather the information necessary to understand changing plant conditions and to assess the radiological release. They responded to changing meteorological conditions and updated the protective action recommendations to include newly affected areas.

The planning section chief and dose assessment coordinator performed dose projection calculations and briefed the emergency response coordinator. The emergency response coordinator provided initial protective action recommendations to shelter-in-place, as the dose projections indicated that evacuation was not necessary. While the emergency response coordinator clearly discussed the radiological release and the recommendations for protective actions with the state decision makers at the state emergency operations center, the room where these discussions took place did not have enough microphones attached to the conference phone to allow for the county decision makers to hear the discussion on the radiological release. The lack of information provided to the county decision makers may have led them to include more areas for evacuation and shelter-in-place protective actions than was warranted by the conditions at the plant and the release of radioactive materials to the atmosphere.

Dose assessments were performed for each emergency notification form received that listed dose projection data. The dose projections were compared to licensee assessments and licensee field team data with good agreement.

For this capability the following Radiological Emergency Preparedness criteria were MET: 2.b.1 and 2.b.2.

a. **Level 1 Finding:** None

b. **Level 2 Finding:** None

c. **Not Demonstrated:** None

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

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

Environmental Response/Health and Safety Capability Summary:

South Carolina Department of Health and Environmental Control personnel successfully demonstrated the ability to provide staff and resources in response to a simulated radiological incident.

Personnel were pre-positioned near their assigned locations in accordance with the extent of play agreement and responded promptly when notified of the emergency, staffing emergency support functions 8 and 10 at the state emergency operations center. The

radiological field monitoring teams and mobile operations center were not staffed per the extent of play agreement. However, the emergency response coordinator simulated mobilizing three radiological field monitoring teams and positioning them in appropriate downwind locations. Emergency worker exposure control was demonstrated as appropriate for the exercise and calculated doses. The dose assessment area had sufficient equipment, communications, and supplies to support emergency operations.

For this capability the following Radiological Emergency Preparedness criteria were MET: 1.a.1, 1.d.1, 1.e.1, 2.a.1, and 4.a.2.

a. Level 1 Finding: None

b. Level 2 Finding: None

c. Not Demonstrated: None

d. Prior Level 2 Findings – Resolved: None

e. Prior Level 2 Findings - Unresolved: None

3.3.2 Oconee County

Operational Coordination Capability Summary:

Oconee County Emergency Services personnel and emergency operations center support staff successfully demonstrated the capability to establish and maintain a unified and coordinated operational structure and process while integrating all critical stakeholders.

Emergency operations center staff were efficiently notified and mobilized using a reverse calling system. The emergency operations center had sufficient equipment and communication capabilities for conducting operations and coordinating response actions with stakeholders. The deputy emergency management director kept staff aware of ongoing incident status and provided direction through frequent staff briefings and round table discussions. Appropriate protective action decisions were made for emergency workers and the public in a timely manner. Relocation of school children was a priority early in the incident.

The emergency management director used a dedicated telephone conference call line to successfully coordinate incident status and protective actions. Additionally, he conducted frequent coordination calls with the Pickens County emergency management director.

The emergency operations center staff followed their plans and procedures to implement protective actions. The shift change was effective and was used as an opportunity to train additional people.

For this capability the following Radiological Emergency Preparedness criteria were MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.2, 2.c.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, and 3.d.2.

a. Level 1 Finding: None

b. Level 2 Finding: None

c. Not Demonstrated: None

d. Prior Level 2 Findings – Resolved: None

e. Prior Level 2 Findings - Unresolved: None

Public Information and Warning Capability Summary:

The capability to perform emergency notification and make public information available was successfully demonstrated by Oconee County Emergency Services staff at the Oconee County emergency operations center. Siren activation was demonstrated in conjunction with Pickens County by silent test from the Oconee County Law Enforcement Communications Center with authorization from the emergency management director.

The Oconee County public information officer provided accurate emergency information and instructions to the public and the news media from the emergency operations center in a timely manner. The public information officer coordinated with the emergency management director to prepare press releases that were accurate and timely. She also coordinated with her counterpart located in the joint information center.

Backup route alert and notification was described by the radiological officer, who accurately identified route requirements and the process to dispatch the designated personnel from the emergency operations center. Public information staff established a public inquiry line and accurately answered calls from residents requesting general evacuation information and clarifications.

For this capability the following Radiological Emergency Preparedness criteria were MET: 5.a.1 5.a.3, and 5.b.1.

a. Level 1 Finding: None

b. Level 2 Finding: None

c. Not Demonstrated: None

d. Prior Level 2 Findings – Resolved: None

e. Prior Level 2 Findings - Unresolved: None

3.3.3 Pickens County

Operational Coordination Capability Summary:

Pickens County emergency operations center staff, including the supporting non-governmental organizations, demonstrated excellent coordination and control while responding to a simulated incident at the Oconee Nuclear Station. The ability to alert, mobilize, and activate emergency facilities in a timely manner was successfully demonstrated. All responders were instrumental in implementing the county response and were successful in communicating response information to internal and external partners. Through the use of redundant and reliable communications systems, along with the readily available equipment and supplies, emergency operations could be sustained for extended operations.

Emergency operations center leadership and staff identified resources to support operations as requested and anticipated future needs. Coordination with Oconee County was continuous throughout the exercise. Protective action recommendations were considered, discussed, and decisions were made in a unified and timely manner taking all known information and situational conditions into account.

The emergency operations center is located within the 10-mile emergency planning zone; as such, radiological exposure control equipment was readily available and managed by the radiation safety officer. All participants were issued a simulated permanent record dosimeter and potassium iodide, and a group direct read dosimeter was posted for the building.

Protective actions for persons with disabilities and those with access/functional needs were demonstrated and coordinated amongst the emergency operations center staff. School officials had effective protective actions in place, and were capable of coordinating and communicating in order to safeguard students and staff. Traffic control was managed by the Pickens County Sheriff's Office and the South Carolina Highway Patrol. Impediments were given by inject and notionally played and resolved throughout the exercise.

For this capability the following Radiological Emergency Preparedness criteria were MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.2, 2.c.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, and 3.d.2.

a. Level 1 Finding: None

b. Level 2 Finding: None

c. Not Demonstrated: None

d. Prior Level 2 Findings – Resolved: None

e. Prior Level 2 Findings - Unresolved: None

Public Information and Warning Capability Summary:

Pickens County public information staff successfully demonstrated the ability to accurately and efficiently communicate with the public and media during a simulated radiological incident. The public information staff demonstrated notification and release of information to the public and media through coordinated activation of the prompt notification system and development of public messaging in a timely fashion. Frequent coordination by the public information officer located in the emergency operations center with the public information officer located in the joint information center ensured accurate emergency information and instructions were disseminated to the public and the news media without delay.

Backup route alert and notification was described by the search and rescue coordinator, who accurately identified route requirements and the process to dispatch the designated rescue squad from the staging area. Law enforcement personnel initiated and conducted waterway warning activities. Public information staff established a public inquiry line and accurately answered calls from residents requesting general evacuation information and clarifications.

For this capability the following Radiological Emergency Preparedness criteria were MET: 5.a.1, 5.a.3, and 5.b.1.

a. Level 1 Finding: None

b. Level 2 Finding: None

c. Not Demonstrated: None

d. Prior Level 2 Findings – Resolved: None

e. Prior Level 2 Findings - Unresolved: None

Environmental Response/Health and Safety Capability Summary:

Pickens County firefighters and rescue services personnel successfully demonstrated emergency worker and vehicle monitoring and decontamination operations at the Pickens County Decontamination Facility. Personnel wore appropriate protective clothing, were familiar with dosimetry reading and recording requirements, and were knowledgeable of administrative dose limits. They used handheld survey instruments appropriately to detect radiological contamination on emergency workers, their vehicles, and their equipment. They also demonstrated appropriate decontamination procedures. Facility

personnel communicated well with emergency workers to ensure they understood the monitoring and decontamination process and to ensure they were free of contamination prior to leaving the facility.

For this capability the following Radiological Emergency Preparedness criteria were MET: 1.e.1, 3.a.1, and 6.b.1.

a. **Level 1 Finding:** None

b. **Level 2 Finding:** None

c. **Not Demonstrated:** None

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

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

Critical Transportation Capability Summary:

Pickens County schools' staff successfully demonstrated their ability to implement protective actions for the students and staff of Daniel High School and Edwards Middle School, which are located within the 10-mile emergency planning zone of Oconee Nuclear Station. An interview was conducted with the district's assistant superintendent of school administration, the transportation coordinator, and the principals of the two schools as an out-of-sequence activity on September 28, 2016. During the interview, school officials discussed actions they would take based on a variety of protective action decisions. They were well versed with their plans and procedures, and protective actions were well defined. There was sufficient transportation assets available to evacuate the schools, appropriate capabilities to notify parents simultaneously, and a comprehensive plan to maintain accountability of students.

For this capability the following Radiological Emergency Preparedness criterion was MET: 3.c.2.

a. **Level 1 Finding:** None

b. **Level 2 Finding:** None

c. **Not Demonstrated:** None

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

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

3.3.4 Anderson County

Environmental Response/Health and Safety Capability Summary:

Anderson County Hazmat, Anderson City Fire Department, and Anderson County Emergency Services personnel participated in an out of sequence drill at the Anderson Civic Center reception and congregate care center on October 27, 2016. They successfully demonstrated the monitoring and decontamination procedures of vehicles and evacuees in response to a simulated radiological incident at Oconee Nuclear Station. All exercise participants were knowledgeable of their duties and performed them well. Workers properly used portal monitors and handheld survey instruments to detect radiological contamination and demonstrated appropriate decontamination procedures on evacuees. Strong leadership and the position specific guidance documents provided to the workers aided in their ability to successfully carry out their responsibilities in accordance with plans and procedures.

For this capability the following Radiological Emergency Preparedness criteria were MET: 1.e.1, 3.a.1, and 6.a.1.

a. Level 1 Finding: None

b. Level 2 Finding: None

c. Not Demonstrated: None

d. Prior Level 2 Findings – Resolved: None

e. Prior Level 2 Findings - Unresolved: None

Mass Care Capability Summary:

Participants from the Palmetto South Carolina Region of the American Red Cross successfully demonstrated the ability to support mass care by establishing and maintaining a congregate care facility at the Anderson Civic Center.

The facility was well staffed and marked to guide evacuees to registration. The American Red Cross provided services and comforts such as the "safe and well" station, a health services station, and a canteen that included snacks and drinks. Cots and bedding were on display in the facility which could accommodate approximately 3000 evacuees. A separate station was available for potassium iodide distribution and included a potassium iodide request form and fact sheet. All stations included polite and knowledgeable staff who demonstrated proper empathy and concern for the evacuees.

For this capability the following Radiological Emergency Preparedness criteria were MET: 1.e.1, 3.b.1, and 6.c.1.

a. **Level 1 Finding:** None

b. **Level 2 Finding:** None

c. **Not Demonstrated:** None

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

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

3.3.5 Greenville County

Environmental Response/Health and Safety Capability Summary:

Berea Fire Department, Fire Rescue and Greenville County Sheriff's Office personnel participated in an out of sequence drill at the Berea High School reception and congregate care center on September 26, 2016. They successfully demonstrated the monitoring and decontamination procedures of vehicles and evacuees in response to a simulated radiological incident at Oconee Nuclear Station. Personnel wore appropriate protective clothing, were familiar with dosimetry reading and recording requirements, and were knowledgeable of administrative dose limits. Workers properly used portal monitors and handheld survey instruments to detect radiological contamination and demonstrated appropriate decontamination procedures on evacuees. Command staff demonstrated the flexibility of the facility by discussing how personnel and resources could be repositioned to meet a variety of needs and response scenarios.

For this capability the following Radiological Emergency Preparedness criteria were MET: 1.e.1, 3.a.1, and 6.a.1.

a. **Level 1 Finding:** None

b. **Level 2 Finding:** None

c. **Not Demonstrated:** None

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

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

Mass Care Capability Summary:

Representatives of Greenville County demonstrated the capability to provide immediate shelter, feeding centers, basic first aid, mental health services, bulk distribution of needed items and related services in response to a simulated incident at Oconee Nuclear Station.

The congregate care center, located at Berea High School, was managed by 10 members of the Palmetto Region Upstate Chapter of the American Red Cross. Three personnel from the Department of Health and Environmental Control staffed a table for potassium iodine information and issuance to evacuees. Provisions were also in place to care for service animals and pets on site with the assistance of the Greenville County Animal Care organization. Shelter management staff were knowledgeable and thoughtful in the performance of their duties.

For this capability the following Radiological Emergency Preparedness criteria were MET: 1.e.1, 3.b.1, and 6.c.1.

a. **Level 1 Finding:** None

b. **Level 2 Finding:** None

c. **Not Demonstrated:** None

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

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

3.3.6 Joint Information System/Center

Public Information and Warning Capability Summary:

The ability to provide public information was successfully demonstrated during the exercise. The joint information staff provided accurate and appropriate information and emergency instructions to the public and the news media in a timely manner.

Staff from the state warning point notified the public information personnel responding to the joint information center through established procedures. Joint information center staff mobilized to the facility and established communications with their counterparts at the state and risk county emergency operations centers. Redundant communications systems were in place and operated without fail.

Using the joint information system, 13 news releases were coordinated and issued by participating public information officers to the public and media. All information was accurate and timely.

Based on the evacuation of zone C-2, it was determined that the joint information center may require relocation. Staff discussed in detail the procedures to move the joint information center to an alternate location outside of the 10-mile emergency planning zone.

For this capability the following Radiological Emergency Preparedness criterion was

MET: 5.b.1.

a. Level 1 Finding: None

b. Level 2 Finding: None

c. Not Demonstrated: None

d. Prior Level 2 Findings – Resolved: None

e. Prior Level 2 Findings - Unresolved: None

3.3.7 Local Primary 1 Emergency Alert System Station

Public Information and Warning Capability Summary:

WFPC-FM in Greenville, SC was observed out of sequence during a quarterly siren test. Radio station staff successfully demonstrated their ability to relay emergency information regarding a simulated incident at the Oconee Nuclear Station. The station engineer discussed how the test message would be received during the test as well as how messages could be received and broadcast when the station is unmanned. The close relationships between the local primary radio station and the state and county public information officers helped to ensure emergency information would be received by the public. The station engineer indicated that he was available at all times to emergency officials and demonstrated a commitment to keeping the public informed during emergencies.

For this capability the following Radiological Emergency Preparedness criteria were MET: 1.d.1, 1.e.1, and 5.a.1.

a. Level 1 Finding: None

b. Level 2 Finding: None

c. Not Demonstrated: None

d. Prior Level 2 Findings – Resolved: None

e. Prior Level 2 Findings - Unresolved: None

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Section 4: Conclusion

Officials and representatives from the State of South Carolina, the risk counties of Oconee and Pickens, the host counties of Anderson and Greenville, Duke Energy, the Nuclear Regulatory Commission, and numerous other organizations participated in the exercise. The cooperation and teamwork of the participants was evident throughout all phases of the exercise. The Federal Emergency Management Agency wishes to acknowledge the efforts of the many individuals who participated and made this exercise a success. State and local emergency response organizations demonstrated knowledge of their emergency response plans and procedures and successfully implemented them.

Highlights of the exercise included the timely, accurate, and unified emergency information and instructions provided to the media, the coordination and consideration of protective action decisions, and the effective response to the numerous exercise injects. In nearly every aspect of the exercise, there were examples of organizations going above and beyond the requirements of the exercise. Some of these examples included activation of the mobile radiological laboratory, a timed relocation of school children, a shift change, and over 200 exercise injects designed to challenge exercise participants. This demonstrated the commitment of the jurisdictions involved to always strive to improve their response.

All jurisdictions met their exercise objectives and successfully demonstrated the corresponding Core Capabilities identified in Section 2.2 of this report. The Federal Emergency Management Agency did not identify any level 1 or level 2 findings during this exercise.

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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				
		SC-SEOC	SC DOSE ASSESSMENT	JIC	OCONEE COUNTY EOC	PICKENS COUNTY EOC
Unusual Event		N/A	N/A	N/A	N/A	N/A
Alert	0817	0828	0843	N/A	0828	0828
Site Area Emergency	0916	0938	0931	1015	0928	0937
General Emergency	1121	1126	1121	1128	1125	1129
Simulated Rad. Release Started		0919	0919	1020	0928	0937
Simulated Rad. Release Terminated		Ongoing	Ongoing	Ongoing	Ongoing	Ongoing
Facility Declared Operational		0851	0913	0920	0842	0926
Declaration of State of Emergency State		0955	0955	0955	1008	1008
Local		---	---	---	0855	---
Exercise Terminated		1353	1353	1346	1353	1353
Precautionary Actions: Early dismissal of schools (Pickens) Relocation of schools (Oconee)		---	---	---	0925	0925
1st Protective Action Decision: Evacuate A0, C1, D1 Shelter in Place D2; Hunting/fishing ban; River clearance; Issue KI to EW and institutionalized only; Animals on stored feed/water		1022	1022	1035	1022	1022
1st Siren Activation		1040	1040	1050	1040	1040
1st EAS Message		1043	1043	1050	1043	1043
1st National Weather Service Activation		1043	1043	None	---	---
2nd Protective Action Decision: Shelter-in-place add C2 Oconee will evacuate hospital (D2)		1152	1152	1226	1152	1152
2nd Siren Activation		1210	1210	1230	1210	1210
2nd EAS Message		1213	1213	1230	1213	1213
2nd National Weather Service Activation		1213	1213	---	---	---
3rd Protective Action Decision: Evacuate add B1, B2, C2, D2		1252	1252	1313	1252	1252
3rd Siren Activation		1305	1305	1313	1305	1305
3rd EAS Message		1308	1308	1313	1308	1308
3rd National Weather Service Activation		1308	1308	---	---	---
KI Decision: Issue to EW and institutionalized/do not ingest		1022	1022	---	1022	1022
No ingestion of KI		1254	1254	---	1254	1254

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Appendix B: Exercise Evaluators and Team Leaders

Regional Assistance Committee Chair: Conrad Burnside

Section Chief: Lawrence Robertson **Site Specialist**: Matthew Bradley

Location	Evaluation Team	Capability & Activity
Joint Operations		
EOF	Joe Harworth (FEMA)	Situational Assessment
JIC	Alex Sera (FEMA) Roy Smith (ICF)	Public Information & Warning
EAS (WFBC-FM Greenville) (OOS July 13)	Matt Bradley (FEMA)	Public Information & Warning
State of South Carolina EMD Director: Mr. Kim Stenson		
SEOC	Quintin Ivy (FEMA) Gerald McLemore (FEMA) John Simpson (FEMA)	Operational Coordination Public Information & Warning
Dose Assessment	Jill Leatherman (ICF) Lloyd Generette (EPA)	Situational Assessment Environment Response Health & Safety
Mobile Radiological Laboratory	Marcy Campbell (ICF) Artra Cooper (EPA)	Environment Response Health & Safety
Risk Counties		
Oconee County Director: Mr. Scott Krein		
EOC	Matt Bradley (FEMA) Robert Nash (FEMA) Debra Blunt (ICF) Glenda Bryson (OJT)	Operational Coordination Public Information & Warning
Pickens County Director: Ms. Denise Kwiatek		
EOC	JT Ackermann (FEMA) Libby Adkins (OJT) Mike Dolder (FEMA)	Operational Coordination Public Information & Warning
Protective Actions for Schools (OOS 1000 Sept 28 @ Pickens EOC)	Matthew Bradley (FEMA)	Critical Transportation
EWD (OOS 1730 Sept 27 @ Pickens County Stockade)	Matt Bradley (FEMA) John Simpson (FEMA) Ron Shaw (FEMA) Odis Spencer (FEMA)	Environmental Response/Health & Safety

Location	Evaluation Team	Capability & Activity
Host Counties		
Anderson County Director: Mr. Taylor Jones		
Reception Center & Congregate care (OOS 1800 Oct 27 @ Anderson Civic Center)	Matt Bradley (FEMA) John Simpson (FEMA) Walt Cushman (FEMA)	Environmental Response/Health & Safety Mass Care
Greenville County Director: Mr. Damon Hubber		
Reception Center & Congregate Care (OOS 1700 Sept 26 @ Berea High School)	Matt Bradley (FEMA) John Simpson (FEMA) Odis Spencer (FEMA)	Environmental Response Health & Safety Mass Care

Appendix C: Exercise Extent of Play Agreement

2016 OCONEE PARTIAL PARTICIPATION RADIOLOGICAL EMERGENCY PREPAREDNESS EXERCISE

All activities will be demonstrated fully in accordance with respective plans and procedures as they would be in an actual emergency (FEMA must receive these plans, guides and procedures NLT 60 days before the exercise). This Extent of Play Agreement is written by exception. If it is not listed as an exception it will be demonstrated as described in the plans, standard operating guides (SOGs) and/or procedures (SOPs). Any issue or discrepancy arising during exercise play may be re-demonstrated if allowed by the Regional Assistance Committee (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 Offsite Response Organization (ORO) controller and FEMA evaluator.

Core Capability: Operational Coordination – *State and County Emergency Operations Centers (EOCs)*

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.

Critical Task: Alert, Notify, Mobilize

OROs use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner (NUREG-0654/FEMA-REP-1, A.1.a, e; A.3, 4; C.1, 4, 6; D.4; E.1, 2; H.3, 4; Criterion 1.a.1).

All participating state and local government personnel will be pre-positioned in the area and will only respond after notification. Demonstration of shift changes at county EOCs will be for staff training only and will NOT be graded.

Critical Task: Direction and Control

Key personnel with leadership roles for the ORO provide direction and control to that part of the overall response effort for which they are responsible (NUREG-0654/FEMA-REP-1, A.1.d; A.2.a, b; A.2; C.4, 6; Criterion 1.c.1).

State direction and control will occur at the State Emergency Operations Center (SEOC). Local direction and control will occur at each county's specific Emergency Operations Center (EOC).

Critical Task: Communications Equipment

At least 2 communications systems are available, at least 1 operates properly, and communication links are established and maintained with appropriate locations. Communications capabilities are managed in support of emergency operations (NUREG-0654/FEMA-REP-1, F.1, 2; Criterion 1.d.1).

State and county decision makers will use Duke Emergency Management Network (DEMNet) to conduct protective action discussions/decision making among the offsite response organizations (OROs). DEMNet will be the primary means of communication and the conference bridge will be the secondary means of communication.

Critical Task: Equipment & Supplies to Support Operations

Equipment, maps, displays, monitoring instruments, dosimetry, KI, and other supplies are sufficient to support emergency operations (NUREG-0654/FEMA-REP-1, H.7, 10; I.7, 8, 9; J.10.a, b, e; J.11, 12; K.3.a; K.5.b; Criterion 1.e.1).

Quantities of KI were verified during Staff Assistance Visits (SAVs).

Quantities of equipment, their calibration/testing were verified during SAVs.

SAV locations, dates, and times were as follows:

Anderson County: County EOC on March 29, 2016, at 1300.
Oconee County: County EOC on March 28, 2016, at 1400.
Pickens County: County EOC on March 29, 2016, at 1730.

Critical Task: EW Exposure Control

OROs use a decision-making process, considering relevant factors and appropriate coordination, to ensure that an exposure control system, including use of KI is in place for emergency workers, including provisions to authorize radiation exposure in excess of administrative limits or PAGs (NUREG-0654/FEMA-REP-1, C.6; J.10e, f; K.3.a; K.4; Criterion 2.a.1).

Critical Task: Protective Action Decisions for the General Public

A decision-making process involving consideration of appropriate factors and necessary coordination is used to make PADs for the general public (including the recommendation for use of KI, if ORO policy) (NUREG-0654/FEMA-REP-1, A.3; C.4, 6; D.4; J.9; J.10.f, m; Criterion 2.b.2).

Critical Task: Protective Action Decisions for Access/Functional Needs

PADs are made, as appropriate, for groups of people with disabilities and those with access/functional needs (NUREG-0654/FEMA-REP-1, D.4; J.9; J.10.d, e; Criterion 2.c.1).

Critical Task: Implementation of Emergency Worker Exposure Control
The OROs issue appropriate dosimetry, KI, and procedures, and manage radiological exposure to emergency workers in accordance with the plans/procedures. Emergency workers periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. Appropriate record-keeping of the administration of KI for emergency workers is maintained (NUREG-0654/FEMA-REP-1, J.10.e; K.2.a, b; K.4; Criterion 3.a.1).

PRDs and KI will be simulated by separate props identified as such.

Equipment, dosimetry and KI will be issued and used in accordance with plans.

Critical Task: Implementation of KI Decision for Institutionalized and General Public
KI and appropriate instructions are made available in case a decision to recommend use of KI is made. Appropriate record-keeping of the administration of KI for institutionalized individuals and the general public is maintained (NUREG-0654/FEMA-REP-1, J.10.e, f; Criterion 3.b.1).

KI distribution and record-keeping for institutionalized individuals will be discussed at county EOCs during the exercise.

Critical Task: Implementation of PADs for Access/Functional Needs
PADs are implemented for people with disabilities and those with access/functional needs other than schools within areas subject to protective actions (NUREG-0654/FEMA-REP-1, J.10.c, d, e, g; Criterion 3.c.1).

The processes for contacting persons with disabilities and access/functional needs will be discussed during the exercise (if applicable).

Critical Task: Implementation of PADs for Schools
OROs/school officials implement protective actions for schools (NUREG-0654/FEMA-REP-1, J.10.c, d, e, g; Criterion 3.c.2).

This will be conducted by discussion in each county EOC during the exercise (if applicable).

Critical Task: Implementation of Traffic and Access Control
Appropriate traffic and access control is established. Accurate instructions are provided to traffic and access control personnel (NUREG-0654/FEMA-REP-1, A.3; C.1, 4; J.10.g, j); Criterion 3.d.1).

This will be conducted by discussion in Oconee County EOC and Pickens County EOC during the exercise.

Critical Task: Impediments to Evacuation and Traffic and Access Control
Impediments to evacuation are identified and resolved (NUREG-0654/FEMA-REP-1, J.10.k; Criterion 3.d.2).

This will be conducted by discussion in Oconee County EOC and Pickens County EOC during the exercise.

Core Capability: Situational Assessment – *ESF-10/Dose Assessment and Emergency Operations Facility (EOF)*
Definition: 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.

Critical Task: Protective Action Recommendations
Appropriate PARs are based on available information on plant condition, field monitoring data, and licensee and ORO dose projections, as well as knowledge of onsite and offsite environmental conditions (NUREG-0654/FEMA-REP-1, I. 10; Supp. 3; Criterion 2.b.1).

Critical Task: Protective Action Decisions for the General Public
A decision-making process involving consideration of appropriate factors and necessary coordination is used to make PADs for the general public (including the recommendation for the use of KI, if ORO policy) (NUREG-0654/FEMA-REP-1, A.3; C.4, 6; D.4; J.9; J.10.f, m Criterion 2.b.2).

Core Capability: Public Information and Warning – *State/County EOCs, Local Primary (LP-1) Radio Station, and Joint Information Center (JIC)*
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 and, as appropriate, the actions being taken and the assistance being made available.

Critical Task: Alert, Notify, Mobilize
OROs use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner (NUREG-0654/FEMA-REP-1, A.1.a, e; A.3, 4; C.1, 4, 6; D.4; E.1, 2; H.3, 4; Criterion 1.a.1).

Public Information staff will be pre-positioned in the area at the Duke Energy Joint Information Center (664 Issaqueena Trail; Central) and will only respond after notification.

Critical Task: Communications Equipment
At least 2 communications systems are available, at least 1 operates properly, and communication links are established and maintained with appropriate locations. Communications capabilities are managed in support of emergency operations (NUREG-0654/FEMA-REP-1, F.1, 2; Criterion 1.d.1).

Communications with real-world media will be simulated.

Critical Task: Equipment & Supplies to Support Operations
Equipment, maps, displays, monitoring instruments, dosimetry, KI, and other supplies are sufficient to support emergency operations (NUREG-0654/FEMA-REP-1, H.7, 10; I.7, 8, 9; J.10.a, b, e; J.11, 12; K.3.a; K.5.b; Criterion 1.e.1).

PRDs and KI will be simulated by separate props identified as such.

Critical Task: Initial Activation of Prompt Alert and Notification System
Activities associated with primary alerting and notification of the public are completed in a timely manner following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. The initial instructional message to the public must include as a minimum the elements required by current FEMA REP Guidance (Timely: The responsible ORO personnel/representatives demonstrate actions to disseminate the appropriate information/instructions with a sense of urgency and without undue delay) (NUREG-0654/FEMA-REP-1, E.5, 6, 7; Criterion 5.a.1).

The State will coordinate PADs with Oconee and Pickens counties as scenario dictates. A "silent test" of sirens may be conducted and the Emergency Alert System (EAS) may be activated, if necessary. The first siren activation will be demonstrated by "silent test." All subsequent siren activations will be simulated.

No EAS messages will be transmitted to the EAS station during the exercise. There will be no radio station collaboration during the exercise. All EAS messages will be simulated via the JIS Email distribution list developed by SCEMD PIOs. Copies of the simulated EAS messages and news releases will be provided to the FEMA evaluators at the SEOC and county EOCs.

Receipt of EAS messaging by the LP-1 radio station was evaluated during OOS demonstration as conducted at WFBC at 1100 on July 13, 2016.

Critical Task: Backup Alert and Notification
Backup alert and notification of the public is completed within a reasonable time following the detection by the ORO of a failure of the primary alert and notification system (NUREG-0654/FEMA-REP-1, E.6; Appendix 3.B.2.c; Criterion 5.a.3).

Backup route alerting procedures will be discussed at each county EOC during the exercise. If a siren failure is indicated during the "silent test," implementation of backup route alerting will be demonstrated through interview.

Critical Task: Emergency Info and Instructions for Public and the Media
OROs provide accurate emergency information and instructions to the public and news media in a timely manner (NUREG-0654/FEMA-REP-1, E.5, 7; G.3.a; G.4.a, c; Criterion 5.b.1).

Communications with and distribution of messages to real-world media will be simulated.

Core Capability: Environmental Response/Health and Safety – *ESF-10/Dose Assessment, Emergency Worker Decontamination (EWD), Reception Center/Congregate Care (RC/CC)*
Definition: Ensure the availability of guidance and resources to address all hazards including hazardous materials, acts of terrorism, and natural disasters in support of the responder operations and the affected communities.

Critical Task: Alert, Notify, Mobilize
OROs use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner (NUREG-0654/FEMA-REP-1, A.1.a, e; A.3, 4; C.1, 4, 6; D.4; E.1, 2; H.3, 4; Criterion 1.a.1).

DHEC personnel will be pre-positioned in the area and will only respond after notification.

Critical Task: Communications Equipment
At least 2 communications systems are available, at least 1 operates properly, and communication links are established and maintained with appropriate locations. Communications capabilities are managed in support of emergency operations (NUREG-0654/FEMA-REP-1, F.1, 2; Criterion 1.d.1).

Critical Task: Equipment & Supplies to Support Operations
Equipment, maps, displays, monitoring instruments, dosimetry, KI, and other supplies are sufficient to support emergency operations (NUREG-0654/FEMA-REP-1, H.7, 10; I.7, 8, 9; J.10.a, b, e; J.11, 12; K.3.a; K.5.b; Criterion 1.e.1).

The MRL will be observed for training only and will NOT be graded.

PRDs and KI will be simulated by separate props identified as such.

Critical Task: EW Exposure Control
OROs use a decision-making process, considering relevant factors and appropriate coordination, to ensure that an exposure control system, including use of KI is in place for emergency workers, including provisions to authorize radiation exposure in excess of administrative limits or PAGs (NUREG-0654/FEMA-REP-1, C.6; J.10e, f; K.3.a; K.4; Criterion 2.a.1).

Critical Task: Implementation of Emergency Worker Exposure Control
OROs issue appropriate dosimetry, KI, and procedures, and manage radiological exposure to EWs in accordance with the plans/procedures. EWs periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. OROs maintain appropriate record-keeping of the administration of KI to EWs (NUREG-0654/FEMA-REP-1, J.10.e, K.3.a, b, K.4; Criterion 3.a.1).

EW exposure control will be evaluated at EWDs and RC/CC sites. It will also be observed at the MRL For Training Only and will NOT be graded.

Critical Task: Field Teams (Two or More) Management
Field Teams (two or more ***simulated***) are managed to obtain sufficient information to help characterize the release and to control radiation exposure (NUREG-0654/FEMA-REP-1, C.1, H.12, I.7, 8, 11, J.10.a; Criterion 4.a.2).

Field monitoring teams will be simulated.

Critical Task: Laboratory Operations
The laboratory is capable of performing required radiological analyses to support PADs (NUREG-0654/FEMA-REP-1, C.1, 3; J.11; Criterion 4.c.1)

Field teams will NOT participate except to courier samples to the rad lab (8500 Farrow Road; Columbia). The mobile rad lab and staff will participate in a COURTESY evaluation. This will be for training only and will NOT be graded.

Critical Task: Monitor Decontamination/Registration of Evacuees
The reception center facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees (NUREG-0654/FEMA-REP-1, A.3; C.4; J.10.h; J.12; Criterion 6.a.1).

This will be demonstrated in accordance with plans and procedures during out-of-sequence activities at the RC/CC sites. A minimum of six evacuees will be processed through the facility with at least one contaminated male and one contaminated female. Decontamination of personnel will be verbalized. RC/CC site OOS demonstrations are as follows:

Anderson County: Anderson Civic Center (3027 Martin Luther King Jr Boulevard; Anderson) on ~~September 28, 2016,~~ October 27, 2016 at 1800
- Date changed due to local school shooting

Greenville County: Berea High School (201 Burdine Drive; Greenville) on September 26, 2016, at 1700

Critical Task: Monitor Decontamination of Emergency Workers, Equipment and Vehicles

The facility/ORO has adequate procedures and resources to accomplish monitoring and decontamination of emergency workers and their equipment and vehicles (NUREG-0654/FEMA-REP-1, K.5.a, b; Criterion 6.b.1).

Emergency Worker Decontamination (EWD) will be evaluated during OOS demonstration. A minimum of two emergency workers and their vehicles and equipment must be processed through the facility. Decontamination of vehicles will be demonstrated. Decontamination of personnel will be verbalized. OOS demonstrations are as follows:

Oconee County: Oakway Fire Department (171 School House Road; Westminster) on ~~September 29, 2016,~~ November 1, 2016 at 1800

- Date changed due to local school shooting and was changed to a courtesy evaluation

Pickens County: Pickens County Stockade (186 Prison Camp Road; Pickens) on September 27, 2016, at 1730

Core Capability: Mass Care – *Reception Center/Congregate Care (RC/CC)*

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

RC/CC sites will be evaluated during out-of-sequence demonstration as previously noted in this document.

Critical Task: Equipment & Supplies to Support Operations

Equipment, maps, displays, monitoring instruments, dosimetry, KI, and other supplies are sufficient to support emergency operations (NUREG-0654/FEMA-REP-1, H.7, 10; I.7, 8, 9; J.10.a, b, e; J.11, 12; K.3.a; K.5.b; Criterion 1.e.1).

Critical Task: Implementation of KI Decision for Institutionalized and General Public

KI and appropriate instructions are made available in case a decision to recommend use of KI is made. Appropriate record-keeping of the administration of KI for institutionalized individuals and the general public is maintained (NUREG-0654/FEMA-REP-1, J.10.e, f; Criterion 3.b.1).

PRDs and KI will be simulated by separate props identified as such.

Critical Task: Temporary Care of Evacuees

Managers of congregate care facilities demonstrate that the centers have resources to provide services and accommodations consistent with planning guidelines. Managers demonstrate the procedures to assure that evacuees have been monitored for contamination and have been decontaminated as appropriate before entering congregate care facilities (NUREG-0654/FEMA-REP-1; J.10.h; J.12; Criterion 6.c.1).

Core Capability: Critical Transportation – *Protective Action for Schools*
Definition: 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.

Critical Task: Implementation of PADs for Schools
OROs/school officials implement protective actions for schools (NUREG-0654/FEMA-REP-1, J.10.c, d, e, g; Criterion 3.c.2).

This will be conducted during out-of-sequence (OOS) activities at school demonstration/interview. OOS activities are as follows:

Oconee County by demonstration at Keowee Elementary School (7051 Keowee School Road; Seneca) on September 27, 2016, at 0900. This is a COURTESY evaluation and will NOT be graded.

Pickens County by interview with Daniel High School and Edwards Middle School; Pickens Co EOC (1509 Walhalla Highway; Pickens) on September 28, 2016, at 1000.