



V.C. Summer Nuclear Station

# After Action Report/ Improvement Plan

Exercise Date - November 20, 2013

Radiological Emergency Preparedness (REP) Program



**FEMA**

*Published April 04, 2014*

**Unclassified**

Radiological Emergency Preparedness Program (REP)

After Action Report/Improvement Plan

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## **EXECUTIVE SUMMARY**

On November 20, 2013, the Department of Homeland Security, Federal Emergency Management Agency (FEMA) Region IV Radiological Emergency Preparedness (REP) Program staff evaluated a Hostile Action Based (HAB) exercise in the emergency planning zone (EPZ) for the V.C. Summer Nuclear Station (VCSNS) located 26 miles north of Columbia, SC. The emergency planning zone (EPZ) includes Fairfield, Lexington, Newberry and Richland counties. The evaluation of out of sequence activities for EPZ counties occurred during the weeks of July 15 and August 12, 2013. These out of sequence activities included: a medical service drill, protective actions for schools, reception and congregate care centers, emergency worker and evacuee decontamination and monitoring, vehicle decontamination and monitoring, water way warning, and traffic control.

FEMA's overall objective of the exercise was to assess the level of State and local preparedness in responding to an HAB incident at VCSNS. This exercise was conducted in accordance with FEMA's 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 September 28, 2011. The qualifying emergency preparedness exercise was conducted November 1981.

The purpose of this report is to analyze exercise results, identify strengths to be maintained and built upon, identify potential areas for further improvement and support development of corrective actions.

The objectives for the 2013 VCSNS HAB REP Exercise were as follows:

- Objective 1: Demonstrate the ability to provide direction and control through the counties and State emergency operations centers (EOCs/SEOC), incident command post (ICP), mobile command center (MCC), and multi-agency coordination centers (MACCs), providing protective action decision-making for State and county emergency workers and the public through exercise play and discussion of plans and procedures.
  
- Objective 2: Demonstrate the ability to provide protective action decision making for the State and county emergency workers and the public through exercise play and discussions of plans and procedures.

- Objective 3: Demonstrate the ability to physically implement protective actions for State and county emergency workers and the public through exercise demonstration.
- Objective 4: Demonstrate the ability to activate the prompt alert and notification system (PNS) and Emergency Alert System (EAS) through exercise play and the effectiveness of plans, policies and procedures in the joint information center (JIC) for public and private sector emergency information communications.
- Objective 5: Demonstrate the ability to coordinate off-site resources with on-site personnel in case of a hostile action taken against the fixed nuclear facility.

These objectives encompass the REP Program evaluation area criteria and were successfully demonstrated during this exercise. FEMA did not identify any Areas Requiring Corrective Action (ARCA) or Deficiencies during this exercise. The State of South Carolina demonstrated the correction of an ARCA identified during the 2011 VCSNS exercise, which concerned inaccurate information in an EAS message and news release as a result of receiving inaccurate information regarding the protective action decision.

FEMA wishes to acknowledge the outstanding efforts of the many individuals who planned, prepared for and participated in this exercise. The State and local organizations demonstrated knowledge of their emergency response plans and procedures and successfully implemented them. Their enthusiasm, cooperation and teamwork highlighted the obvious training and preparation invested in this successful exercise.

## **SECTION 1: EXERCISE OVERVIEW**

### **1.1 Exercise Details**

**Exercise Name**

V.C. Summer Nuclear Station

**Type of Exercise**

Plume

**Exercise Date**

November 20, 2013

**Program**

Department of Homeland Security/FEMA Radiological Emergency Preparedness  
Program

**Scenario Type**

Radiological Emergency

### **1.2 Exercise Planning Team Leadership**

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## 1.3 Participating Organizations

Agencies and organizations of the following jurisdictions participated in the V.C. Summer Nuclear Station exercise:

### State Jurisdictions

- South Carolina Emergency Management Division (SCEMD)
- South Carolina Department of Health and Environmental Control (DHEC)
- South Carolina Department of Public Safety (DPS)
- South Carolina State Law Enforcement Division (SLED)
- South Carolina Department of Natural Resources (DNR)
- South Carolina Department of Social Services (DSS)

### Risk Jurisdictions

- Fairfield County Emergency Management Agency
- Fairfield County Fire Services
- Fairfield County Sheriff's Office
- Fairfield County School District
- Fairfield County Department of Social Services
- City Of Newberry Police Department
- Newberry Sheriff's Office
- Newberry County Emergency Management Agency
- Newberry County School District
- City of Newberry Fire Department
- Lexington County Emergency Medical Services
- Lexington County Emergency Management Agency
- Lexington County Department of Social Services
- Lexington County Medical Center
- Lexington County - Irmo Fire Department
- Richland County Emergency Management Agency
- Richland-Lexington County School District
- Columbia Fire Department
- Richland County Emergency Medical Services
- Richland County Sheriff's Department
- Richland County Department of Social Services

### Private Organizations

American Red Cross (ARC), Central South Carolina Chapter  
WCOS (AM &FM) Emergency Alert System

Federal Jurisdictions

Federal Bureau of Investigation

## **SECTION 2: EXERCISE DESIGN SUMMARY**

### **2.1 Exercise Purpose and Design**

The Department of Homeland Security (DHS) Federal Emergency Management Agency (FEMA) administers the Radiological Emergency Preparedness (REP) Program pursuant to the regulations found in Title 44 Code of Federal Regulation (CFR) parts 350, 351 and 352. 44 CFR 350 codifies 16 planning standards that form the basis for radiological emergency response planning for licensee, State, tribal and local governments impacted by the EPZs established for each nuclear power plant site in the United States. 44 CFR 350 sets forth the mechanisms for the formal review and approval of State, tribal and local government Radiological Emergency Response Plans (RERPs) and procedures by DHS/FEMA. One of the REP 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 an emergency at the nuclear plant.

The results of this exercise together with review of the RERP and procedures and verification of the periodic requirements set forth in NUREG-0654/FEMA-REP-1 through the Annual Letter of Certification and staff assistance visits enables FEMA to provide a statement with the transmission of this final After Action Report (AAR) to the Nuclear Regulatory Commission (NRC) 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 RERPs for VCSNS to FEMA by the State of South Carolina occurred on March 31, 1981. Formal approval of the State of South Carolina's RERP was granted on November 13, 1981, under 44 CFR 350.

## 2.2 Exercise Objectives, Capabilities and Activities

Capabilities-based planning allows for exercise planning teams to develop exercise objectives and observe exercise outcomes through a framework of specific action items that were derived from Homeland Security Exercise Evaluation Program (HSEEP) core capabilities. The core capabilities listed below form the foundation of FEMA Region IV REP Program objectives and observations for this exercise.

- **Operational Coordination:** Is the core capability to establish and maintain a unified and coordinated operational structure and process that appropriately integrates all critical stakeholders and supports the execution of core capabilities.
  
- **Public Information and Warning:** Is the capability to 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 Safety:** Is the capability to 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.
  
- **On-Scene Security and Protection:** Is the capability to 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 all traditional and atypical response personnel engaged in lifesaving and life-sustaining operations.
  
- **Critical Transportation:** Is the capability to 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:** Is the capability to 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.

- **Public Health and Medical Services:** Is the capability to provide lifesaving medical treatment via emergency medical services and related operations and avoid additional disease and injury by providing targeted public health and medical support and products to all people in need within the affected area.

Additionally, each capability is linked to several corresponding capability targets and critical tasks to provide additional detail. Specific targets and tasks are listed in the Exercise Evaluation Guides (EEGs).

The objectives for the 2013 VCSNS HAB REP exercise were as follows:

- **Objective 1:** Demonstrate the ability to provide direction and control through the counties and State emergency operations centers (EOCs/SEOC), incident command post (ICP) and mobile command center (MCC) multi-agency coordination centers (MACCs), providing protective action decision making for State and county emergency workers and the public through exercise play and discussion of plans and procedures.
- **Objective 2:** Demonstrate the ability to provide protective action decision making for the State and county emergency workers and the public through exercise play and discussions of plans and procedures.
- **Objective 3:** Demonstrate the ability to physically implement protective actions for State and county emergency workers and the public through exercise demonstration.
- **Objective 4:** Demonstrate the ability to activate the prompt alert and notification system (PNS) and emergency alert system (EAS) through exercise play and the effectiveness of plans, policies and procedures in the joint information center (JIC) for public and private sector emergency information communications.
- **Objective 5:** Demonstrate the ability to coordinate off-site resources with on-site personnel in case of a hostile action taken against the fixed nuclear facility.

The objectives align with the listed capabilities as indicated below:

- Objective 1: Capability – Operational Coordination
  
- Objective 2: Capability – Operational Coordination
  
- Objective 3: Capabilities – Environmental Response/Safety and Health, On-Scene Security and Protection, Critical Transportation, Mass Care and Public Health and Medical Services.
  
- Objective 4: Capabilities – Operational Coordination and Public Information and Warning.
  
- Objective 5: Capabilities – Operational Coordination, Public Information and Warning and On-Scene Security and Protection.

## 2.3 Scenario Summary

The following is an extract of the scenario from the utility:

"The plant is operating at 100% power, Middle of Life, equilibrium Xenon and Samarium. It is an A1 Maintenance week. The NRC Operations Center has contacted all nuclear power plants in the southeast, communicating credible threat information of possible planned terrorist activity in Region II (i.e., not site-specific). Per applicable procedures, Security implemented urgent threat level procedures.

It is a Saturday morning. For Drill/Exercise purposes, it is Saturday, 10/09/13. [RATIONALE: VCSNS has elected to establish off-shift hours for this Evaluated Exercise for the purpose of demonstrating its remote Emergency Response Facilities at the Emergency Operations Facility (EOF): Remote TSC (RTSC), and Remote OSC (ROSC).

METEOROLOGICAL DATA: Lake temperature today is 75° F, which is the average lake temperature over the last 5 years. It is a sunny day, with no rain or severe weather in the forecast. Initial wind direction is from 187° at 9 mph, with an "E" Stability Class. Wind direction, speed, and stability class will continue to change through the majority of the Exercise window, then finally remaining constant at a new wind direction from 140°, at 4 mph, and with a "D" stability class toward the end of the Exercise.

Spent Fuel Pool time to reach 200° F 44.0 hours. (IER 11-2)

**PLACARDING:** Turbine-Driven Emergency Feedwater Pump (TDEFW), B-Diesel Generator, 1DA and 1DB Switchgear Rooms, and Alternate Seal Injection. Also, both Spent Fuel Pool Cooling pumps and their breakers are placarded due to time being less than 72 hours to reach 200° F in the Spent Fuel Pool.

**EQUIPMENT OUT OF SERVICE:** The A-Emergency Diesel Generator (A-EDG) had control issues during surveillance testing this past Thursday, and it was determined that the “Digital Reference Unit” was bad. The spare unit was checked out from the warehouse but would not bench calibrate. A new Digital Reference Unit is expected to be received from the vendor on Monday afternoon, two days from now. The A-EDG is expected to be restored to operability after testing early on Tuesday morning.

**PARR HYDRO:** Given communications on potential terrorist activity from the NRC and the fact that A-EDG is currently inoperable, VCSNS management has coordinated with Parr Hydro, and personnel are in place in the event 13.8 kV power is needed from Parr Hydro. Confirmed per requirements of GTP-702. Station is currently w/in the 14-day Allotted Outage Time.

**EXPECTED ACTION:** The Operational Plan is to maintain 100% Power.

- 0738 Notification of hostile action to Fairfield County Sheriff’s Office / Establishment of ICP
- 0745 Notification of hostile action to State and Counties
- 0748 Site Area Emergency declared due to hostile action
- 0800 State requested to consider use of Emergency Warning System
- 0805 EMS and EOD requested on site
- 0830 Local law enforcement and Security complete sweeps
- 0855 JIC activated
- 1050 Repair teams arrive on site
- 1230 Termination"

## **SECTION 3: ANALYSIS OF CAPABILITIES**

### **3.1 Exercise Evaluation and Results**

This section contains the results and findings of the evaluation of jurisdictions and functional entities that participated in the Nov 20, 2013 HAB full participation plume phase exercise and off-scenario activities. Exercise criteria are listed by number and the demonstration status of those criteria are indicated by the use of the following terms:

- Met (No Deficiency or ARCA(s) assessed and no unresolved ARCA(s) from prior exercise)
- ARCA(s) assessed or unresolved ARCA(s) from previous exercises
- Deficiency assessed
- Plan Issues
- Not Demonstrate

### **3.2 Summary Results of Exercise Evaluation**

See section 3.3 Criteria Evaluation Summaries for the associated Capability Summaries for each jurisdiction.



**Table 3.1 - Summary of Exercise Evaluation**

DATE: 2013-11-20 SITE: V.C. Summer Nuclear Station, SC M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated		SC	SC JIS	Fairfield County	Lexington County	Newberry County	Richland County
<b>Emergency Operations Management</b>							
Alert and Mobilization	1a1	M	M	M	M	M	M
Facilities	1b1	M	M	M	M	M	M
Direction and Control	1c1	M	M	M	M	M	M
Communications Equipment	1d1	M	M	M	M	M	M
Equipment and Supplies to Support Operations	1e1	M	M	M	M	M	M
<b>Protective Action Decision Making</b>							
Emergency Worker Exposure Control	2a1	M		M	M	M	M
Dose Assessment & PARs & PADs for the Emergency Event	2b1	M					
Dose Assessment & PARs & PADs for the Emergency Event	2b2	M				M	M
PADs for the Protection of persons with disabilities and access/functional needs	2c1	M		M	M	M	M
Radiological Assessment and Decision-making for the Ingestion Exposure Pathway	2d1	M					
Radiological Assessment & Decision-making Concerning Post-Plume Phase Relocation, Reentry, and Return	2e1	M					
<b>Protective Action Implementation</b>							
Implementation of Emergency Worker Exposure Control	3a1	M		M	M	M	M
Implementation of KI Decision for Institutionalized Individuals and the Public	3b1	M					
Implementation of Protective Actions for persons with disabilities and access/functional needs	3c1			M	M	M	M
Implementation of Protective Actions for persons with disabilities and access/functional needs	3c2			M	M	M	
Implementation of Traffic and Access Control	3d1	M		M	M	M	M
Implementation of Traffic and Access Control	3d2	M		M	M	M	M
Implementation of Ingestion Pathway Decisions	3e1						
Implementation of Ingestion Pathway Decisions	3e2						
Implementation of Post-Plume Phase Relocation, Reentry, and Return Decisions	3f1						
<b>Field Measurement and Analysis</b>							
RESERVED	4a1						
Plume Phase Field Measurement and Analyses	4a2	M					
Plume Phase Field Measurement and Analyses	4a3	M					
Post Plume Phase Field Measurements and Sampling	4b1	M					
Laboratory Operations	4c1	M					
<b>Emergency Notification and Public Info</b>							
Activation of the Prompt Alert and Notification System	5a1	M		M	M	M	M
RESERVED	5a2						
Activation of the Prompt Alert and Notification System	5a3	M		M	M	M	M
Activation of the Prompt Alert and Notification System	5a4						
Emergency Information and Instructions for the Public and the Media	5b1	M	M	M	M	M	M
<b>Support Operations/Facilities</b>							
Monitoring, Decontamination, and Registration of Evacuees	6a1			M	M	M	M
Monitoring and Decontamination of Emergency Workers and their Equipment and Vehicles	6b1			M	M	M	M
Temporary Care of Evacuees	6c1			M	M	M	M
Transportation and Treatment of Contaminated Injured Individuals	6d1				M		



## 3.3 Criteria Evaluation Summaries

### 3.3.1 South Carolina Jurisdictions

#### 3.3.1.1 State of South Carolina

Core Capability: Operational Coordination

State Emergency Operations Center (SEOC)

South Carolina Emergency Management Division (SCEMD) personnel and support agencies successfully demonstrated the capability to establish and maintain a unified and coordinated operational structure and process that appropriately integrated all critical stakeholders and supported the execution of core capabilities.

The SCEMD Director, Chief of Operations and the Technical Officer used effective procedures to alert, notify, and mobilize key staff and activate the SEOC in a timely manner in response to a HAB event at VCSNS.

The SEOC facility had sufficient space, furnishings, lighting, restrooms, ventilation, backup power, equipment and supplies to conduct emergency response actions. During the exercise, the Chief of Operations utilized the selective signaling system (SSS) to communicate directly with VCSNS and a conference bridge line was the primary means of communication to coordinate protective action decision (PAD) making with the risk counties. The primary conference bridge line initially failed during the first conference call. After a slight delay, the alternate bridge line was set up and functioned flawlessly.

The Director, the Chief of Operations, and the Technical Officer provided effective direction and control throughout the exercise. They used a decision-making process that involved the consideration of appropriate factors and necessary coordination to make PADs for the general public and emergency workers, including the possible use of the State Dosimetry Redistribution Plan and potassium iodide (KI), if necessary. The Chief of Operations actively coordinated State law enforcement support for the incident with local law enforcement and counties. Key staff members were encouraged to be proactive in their response planning and all PADs were coordinated with the risk Chief of counties.

All personnel were professional, knowledgeable, and well-trained. All activities were accomplished in accordance with plans, procedures, and the exercise extent of play agreement.

#### Emergency Operations Facility (EOF)

In accordance with established procedures, following the declaration of the Site Area Emergency (SAE) emergency classification level (ECL) in response to a simulated hostile action within the protected area, the utility activated the VCSNS Emergency Response Organization and actions were initiated to staff the Emergency Operations Facility (EOF). There were adequate supplies and equipment available to support all response operations.

State government officials representing the SCEMD and DHEC were dispatched to the EOF to serve in a critical liaison capacity between the utility and the State and county EOCs, as well as to the ICP. The government liaisons, in conjunction with the utility Emergency Control Officer and other EOF staff, effectively communicated, coordinated, and functioned as a cohesive response and recovery unit.

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

DHEC personnel successfully demonstrated the Environmental Response/Health and Safety capability. The DHEC team was pre-positioned per the extent-of-play agreement. Following notification from the reverse calling system, the team mobilized to the SEOC and the mobile operations center and initiated response operations to manage the incident.

At the SEOC, the Emergency Response Coordinator (ERC) demonstrated effective leadership and delegated tasks appropriately for the DHEC staff. The team had sufficient equipment and supplies and communicated with their counterparts via landline telephones, cellular telephones, 800 MHz radio, facsimile and electronic mail. The DHEC responsibilities for the ESF-10 function included making Protective Action Recommendations (PARs), recommending KI, performing dose assessments, and operating field teams. The DHEC Commissioner or designee was responsible for authorization of the use of KI (ESF-8 group). For this hostile action based (HAB) exercise, there was no radiological release; however, they analyzed plant and field team

data and produced projected plume plots.

The DHEC Lead Liaison in the MOC communicated with DHEC liaisons in each county, the EOF, and the ICP. The route of the field monitoring teams (FMT) to the downwind zones was determined to avoid any areas near the hostile action. Based on wind direction and hostile activities, the MOC Operations Section Chief and the Field Director discussed initial deployment locations for the FMTs. They discussed the safest and most direct route for the FMTs and, if necessary, the most expedient route for their withdrawal. FMTs were dispatched after all adversaries had been neutralized.

The Lead Liaison communicated with the DHEC ICP Liaison to ensure that FMTs could be dispatched to the area. The ERC was in contact with the Lead Liaison and the MOC to make sure FMTs dispatch was a coordinated effort. FMTs were directed to downwind locations approximately six miles from VCSNS. FMT survey results of background were transmitted to the ERC, verifying that there had been no radiological release.

The State and counties determined PADs via the conference bridge phone line. The ERC attended all staff briefings and conference bridge line calls. The initial PAD was based on the declaration of a SAE at VCSNS due to a hostile action attack with no radiological release. The initial PAD determined by the State and counties was to “go inside and stay inside” for people located in Emergency Response Zone A-0, and to stay tuned for further information. At the request of the Incident command Post, the sirens were not sounded. A subsequent PAD was issued for lake clearing, river clearing, and hunter warnings.

Personnel at the MOC successfully demonstrated the availability of guidance and resources to address all hazards in support of field operations. The MOC was under the direction of MOC Operations Section Chief. The MOC Operations Section Chief and the Field Director discussed initial deployment locations for the two FMTs, based on the hostile action and downwind areas. Throughout the exercise, the Field Director was aware of the changing wind direction and the most efficient way to position the two FMTs in the downwind areas. Although no release had occurred, the Field Director determined the need for monitoring and sampling in the downwind area to reassure the public that there was no release.

The Bravo and Charlie FMTs successfully demonstrated field monitoring activities. The FMTs were equipped with supplies and equipment to perform field monitoring, air sampling, and

deposition sampling. FMT supply and equipment kits were pre-assembled and stored at the MOC. When directed to take an air sample, FMT Charlie found that they did not have an air sample head could not take a sample. They contacted the Field Director and a relay team was deployed to deliver an air sample head to FMT Charlie. The lack of an air sample head caused a 70-minute delay in obtaining an air sample.

The FMTs used Motorola 800 MHz radios and cellular telephones to communicate with personnel at the MOC. FMT personnel were issued dosimetry at the MOC and exposure control and record keeping was effectively demonstrated throughout the exercise. Although KI was not recommended, proper use and record keeping for thyroid protective drugs was described.

The Field Director briefed the FMTs on plant status and the HAB incident. He provided appropriate assignments that would enable the teams to locate a radioactive plume and take representative air samples if a release of radioactive material were to occur, taking the area of hostile action into account. As no release occurred, the Field Director directed the teams to take surveys and samples validating that the offsite environment was not contaminated. FMTs demonstrated their capability to determine if they were in the plume. FMTs monitored ambient radiation levels and obtained air samples for particulates and iodides. FMT Charlie also obtained soil and vegetation samples for radioactive deposition. The FMTs each analyzed their air samples and reported results to the Field Director. Samples were transferred to a relay team for transport to the State mobile laboratory.

In summary, the status of DHS/FEMA criteria for this location is as follows:

- a. MET: 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.1, 2.b.2, 2.c.1, 2.d.1, 2.e.1, 3.a.1, 3.b.1, 3.d.1, 3.d.2, 4.a.2, 4.a.3, 4.b.1, 4.c.1, 5.a.1, 5.a.3, 5.b.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES - RESOLVED: None
- g. PRIOR ISSUES - UNRESOLVED: None

### **3.3.1.2 South Carolina Joint Information System**

#### **Core Capability: Public Information and Warning**

The agencies of the JIC demonstrated this core capability by developing, coordinating, and disseminating emergency public information. Upon activation, the JIC serves as the central point of contact for the distribution and release of information to the media and public during an emergency at the VCSNS. For this exercise and in accordance with the EOPA, State and county public information officers (PIOs) were pre-positioned in the area and responded to the JIC upon notification by their agencies of the SAE.

The JIC was well equipped and had redundancy in communications, which included landline phones, facsimiles, and internet connectivity. The primary means of communication for State and county personnel were WebEOC and electronic mail, with commercial landline and cell phones as backup. Equipment and supplies were sufficient to support JIC operations. Mission specific equipment was supplied by each jurisdiction. The facilities provided ample space to conduct public information activities.

The public information function at the JIC operated within a Joint Information System (JIS) structure. It was through coordination and collaboration that effective and unified emergency information for the public was achieved within this structure. A total of ten State and local news releases and two EAS messages were distributed during the exercise. The news release development and coordination process included development of draft news releases at the State and county EOCs. News releases were coordinated with all parties via an email distribution list. Each agency restricted their emergency public information to the activities within their specific Area of Operations. The South Carolina Law Enforcement Division (SLED) PIO vetted all releases for sensitive law enforcement information prior to release. The PIOs maintained a good knowledge of their jurisdiction's response efforts and had continuous contact with their counterparts in their respective EOCs throughout the exercise.

The media briefings were conducted in media briefing room in the facility. There were two media briefings during the exercise. Prior to each briefing agency spokespersons discussed and coordinated their message for the briefing. They discussed who would say what, and in which order the briefing would be conducted. The SLED PIO spoke first and answered all questions concerning the actions of local and State law enforcement officials.

Public inquiry/rumor control was coordinated by PIOs within the State, counties and ICP. The JIC was the primary hub for inquiries. The JIS had an extensive public inquiry function that resulted in several rumors being corrected at subsequent media briefings.

### Waterway Warning

The Department of Natural Resources (DNR) demonstrated the capability to effectively deliver prompt, reliable and actionable information regarding an emergency at the VCSNS in a clear and timely manner during a waterway warning demonstration on August 14, 2013. The demonstration occurred on Lake Monticello and was facilitated by DNR officers. The DNR officers knew that they would receive notification from the law enforcement liaison in the SEOC and that they would receive their safety and radiological brief from Fairfield County Emergency Management. The public would receive notification through the boat public announcement system and face to face interaction in the event of an incident at VCSNS and the order to evacuate Lake Monticello. The DNR officers were very familiar with the lake and key locations where the public would be located and were able to complete warning in 30 minutes.

In summary, the status of DHS/FEMA criteria for this location is as follows:

- a. MET: 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 5.b.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES - RESOLVED: None
- g. PRIOR ISSUES - UNRESOLVED: None

### 3.3.1.3 Fairfield County

Core Capability: Operational Coordination

EOC

The Fairfield County Emergency Management Director (EMD), Fairfield County Emergency Coordinator and EOC staff effectively demonstrated the capability to establish and maintain an



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operational structure in response to HAB events at the VCSNS. Upon the receipt of notification of hostile actions within the protected area, Fairfield County Emergency Management alerted and mobilized key staff and county officials in a timely manner. The dispatchers, working within the EOC communications room, used a manual call down list to notify all necessary staff of an event at the plant and report to the EOC. Fairfield Emergency Management had sufficient facilities, equipment, and communications systems to sustain and support emergency.

Fairfield County Emergency Management leadership successfully provided direction and control to the EOC staff as necessary to support response to the hostile actions at VCSNS. The EMD and Emergency Management Coordinator worked hand and hand and set the tone for coordination between staff, the incident command post, as well as Richland, Newberry, and Lexington Counties, and the SCEMD. Leadership also addressed coordination and planning concerning county schools and persons with functional needs.

The Emergency Management Coordinator, who also served as the county radiological officer, utilized appropriate measures in order to manage the possibility of radiological exposure to responders deployed to the staging area and ICP. The Emergency Management Coordinator provided over 160 doses of KI and 160 dosimeters to Emergency Medical Services (EMS), Fire Services and law enforcement, and effectively followed procedures to request 20 additional dosimeters from SCEMD.

## ICP

The Fairfield County Sheriff's Office personnel and several other response agencies successfully demonstrated the capability to establish and maintain a unified and coordinated operational structure from the ICP in support of this core capability.

For this exercise, a Fairfield County Sheriff command-rank deputy was the incident commander(IC). The IC had the responsibility for the direction and control as well as coordination of the county's response to the VCSNS incident. The IC used the Incident Command System (ICS) in establishing the ICP and directing control of the response. Using a unified command approach, the Operations Section Chief position was held by the SLED representative. With these delegations of authority, the IC retained responsibility for the overall direction and control of the incident.

Coordination with the VCSNS liaisons was consistent and thorough. The IC kept the county EOC updated on response actions and was subsequently solicited by county decision makers in the protective action decision making process. All personnel at the ICP were aware of the response and plant conditions.

Per the extent of play agreement, personnel assigned to the ICP were allowed to be pre-positioned in the area of the ICP. Fairfield County emergency response organizations chose not to pre-position and responded in real time as notified. This real time activation and response provided for better realism in a simulation driven exercise. Response agencies included SLED, SCEMD, DHEC, DNR, SCHP, Fairfield County Fire, Fairfield County EMS, Winnsboro Police, Ridgeway Police, Newberry County Sheriff's Office, and the (Federal Bureau of Investigations) FBI.

The ICP was located in a fixed facility. Access to the ICP and security was controlled by the sheriff's office and a positive identification, sign in and badging system was maintained throughout the exercise. The facility had ample space and furnishings for the assigned mission. It had redundant communication capabilities and while no one method was described as the primary means of communication, cell phone was the most used method. All communications were used throughout the exercise and all consistently operated. Additionally, equipment and other supplies used to support the response were sufficient and readily available.

#### Core Capability: Public Information and Warning

The Fairfield County EMD, Emergency Management Coordinator, and PIOs successfully demonstrated the capability to develop, coordinate, and disseminate accurate alerts and emergency information to the media and the public prior to an impending emergency with the JIC and other counties. The PIO consistently provided documentation to the EMD for review and approval prior to release to the JIC. Information messages distributed were accurate, consistent and timely.

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

Fairfield County Emergency Management demonstrated its ability to conduct monitoring, decontamination and registration operations on August 14, 2013 during an out of sequence event. Operations were conducted at White Oak Conference Center.

Fairfield County Radiological Protection Services and Radiological Emergency Response Team (RERT) members had sufficient supplies, personal protective and surveying equipment, and dosimetry to conduct operations. Fairfield County effectively used a Ludlum model vehicle portal monitor at the entrance to the facility to conduct initial surveys of vehicles. Personnel were knowledgeable on correctly placing surveying equipment into service, operational checks, contamination and exposure limits. Emergency workers (EWs) were thoroughly briefed by the Radiological Officer and utilized proper exposure records. EWs demonstrated correct zeroing of Direct-reading Dosimeters (DRDs) and understood to ingest KI only when directed to.

The monitoring and decontamination team were trained and well prepared. Teams were thorough and used DHEC personnel effectively when needed. Correct documentation was used to record vehicle readings and dosimetry was read every 15 minutes. The vehicle and personnel monitoring and decontamination stations were well placed and sufficient measures were taken to prevent cross contamination. The facility signage was effective and vehicle and personnel flow was sufficient to accept 20 percent of the county population if necessary. Evacuee and EW monitoring and decontamination was demonstrated and all contaminated waste collected and sealed for proper disposal. All activities were conducted in accordance with Fairfield County monitoring and decontamination procedures.

#### Core Capability: Critical Transportation

Fairfield County's McCrorey-Liston School of Technology (MLST) staff and officials discussed their ability to safeguard students, faculty and staff in the event of a radiological incident at VCSNS. The interview was conducted with the Principle and Assistant Principle, District Safety and Security Director, and the EMD at the school on August 12, 2013. Participating staff effectively discussed receipt of a notification of an event at VCSNS and alerting of the students and staff. MLST had sufficient transportation at the school in the event of an order to evacuate to White Oak Conference Center and effective procedures were in place in the event of an order to shelter at the school. The staff was knowledgeable, trained and well prepared to carry out their assigned duties and maintain continuous accountability and care of students.

### Core Capability: On-Scene Security and Protection

Representatives from the Fairfield County Sheriff's Department demonstrated expert understanding of proper traffic control practices and expert knowledge of radiological emergency preparedness actions. The officers understood the consequences of a radiological emergency at VCSNS and demonstrated, through interview, the ability to protect themselves and the public during the event.

In summary, the status of DHS/FEMA criteria for this location is as follows:

- a. MET: 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.c.1, 3.a.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.a.1, 5.a.3, 5.b.1, 6.a.1, 6.b.1, 6.c.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES - RESOLVED: None
- g. PRIOR ISSUES - UNRESOLVED: None

#### **3.3.1.4 Lexington County**

##### Core Capability: Operational Coordination

Lexington County emergency support personnel demonstrated the capability to establish and maintain a unified and coordinated operational structure and process that appropriately integrated all critical stakeholders and supported the execution of core capabilities.

The Assistant County Fire Chief acted as the EMD, substituting for EMD, who was unavailable for the exercise. The EMD used effective procedures to alert, notify, and mobilize emergency personnel and activated facilities in a timely manner. The EMD demonstrated the use of the county's reverse calling system to efficiently alert and notify county emergency response personnel to respond to the EOC.

Although the EOC was new and all resources and systems were not yet fully functional, the county demonstrated that two communications systems were available, operational, and managed

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to support emergency operations. The EOC had sufficient equipment, displays, computers, and supplies to support emergency operations.

The EMD provided direction and control for the overall response effort in coordination with the other agencies present in the EOC, as well as with the other counties and the State. Although no radiological release occurred, the need for protective action due to the hostile action and ongoing assessment of plant conditions was made in a coordinated process with the State and other counties. A PAD to have the population in zone A-0 to “go inside, stay inside” was made and an EAS message to “Stay Tuned” was issued. The decision was made that no KI was necessary at that time.

Although the exercise was simulated as if it were occurring on a Saturday, the EMD discussed reaching out to the school district to ensure that no activities were in progress that would need to be cancelled. He also said that they would have EOC staff initiate notifying persons with access/functional needs. The EMD also explained that he would have dosimetry and KI transported to the reception center.

#### Core Capability: Public Information and Warning

The Lexington County EMD and PIO demonstrated the capability to deliver coordinated, prompt, reliable, and actionable information to the whole community through the use of clear, consistent, accessible, and culturally and linguistically appropriate methods. They also demonstrated the ability to effectively relay information regarding any threat or hazard and, as appropriate, the actions being taken and the assistance that was being made available.

The Lexington County EMD took part in a conference call with the SEOC and other risk counties to discuss the ongoing hostile action emergency at VCSNS and decide if any protective actions were deemed appropriate. The decision was made to recommend residents residing in zone A-0 “go inside, stay inside.” The initial EAS message would be transmitted to notify all other residents in the EPZ to stay tuned to local news outlets for additional updates regarding the incident. In this case, the sirens were not going to be activated in accordance with instructions from law enforcement. The information would be released to the media through the JIC.

The EMD reported that siren activation was controlled by VCSNS and if a siren had failed in Lexington County, the State would notify the EOC immediately. Sheriff’s Office deputies, fire

and EMS personnel would then be dispatched to conduct a backup-route alerting to notify the citizens to tune to EAS stations for information. The EMD advised that local plans outlined the specific routes necessary for specific siren failures.

The PIO for the Lexington County EOC was tasked with public inquiries and media contact. He handled numerous public inquiries and requests for information. He handled all calls appropriately and maintained contact and coordination with the PIO at the JIC. The EOC PIO kept logs and tracked all activities and calls, and kept the EMD informed of press releases and rumors.

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

Lexington County Emergency Management Agency, Lexington County Fire Services (LCFS) and Lexington County EMS, successfully demonstrated the capability to conduct monitoring and decontamination of emergency workers and evacuee vehicles, in the event of a radiological incident at VCSNS. The supervisor, trained monitor, recorder and a LCFS member assigned to conduct decontamination operations were able to successfully monitor three vehicles with no issues. Proper personal protective equipment and dosimetry were properly checked, utilized and recorded. Vehicle intake systems, grills, bumpers, wheels and wheel wells were monitored and recorded, and contamination controls were in effect. Contaminated and “clean” vehicles and personnel were easily identifiable with pink and green tape.

Lexington County emergency worker and evacuee monitoring was also successfully demonstrated. Monitoring and decontamination teams were trained and knowledgeable of contamination limits, exposure levels, call back and turn back values, exposure limits, wear and use of dosimetry, use of potassium iodide and operation of survey instruments. Teams were knowledgeable about where to direct contaminated and non-contaminated personnel. Procedures were effectively in place to ensure that evacuees had been monitored and or decontaminated prior to entering the reception facility. County EWs were utilized to assist in the controlled movement of evacuees during operations at the reception center.

#### Core Capability: On-Scene Security and Protection

Representatives from the Lexington County Sheriff’s Department demonstrated a thorough understanding of response actions and radiological emergency preparedness procedures during

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an interview. The three members selected to participate in the interview used a team approach to sufficiently answer questions regarding traffic and access control, and radiological emergency and personnel protective measures through extensive use of comprehensive instructions inside three-ring binders possessed by all officers. The officers answered questions and knew they would be able to call for assistance if needed.

In summary, the status of DHS/FEMA criteria for this location is as follows:

- a. MET: 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.c.1, 3.a.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.a.1, 5.a.3, 5.b.1, 6.a.1, 6.b.1, 6.c.1, 6.d.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES - RESOLVED: None
- g. PRIOR ISSUES - UNRESOLVED: None

### **3.3.1.5 Newberry County**

Core Capability: Operational Coordination

Newberry County EOC's staff successfully demonstrated their ability to maintain a unified and coordinated operational structure and process that appropriately integrated all critical stakeholders. The HAB exercise scenario did not allow the county to demonstrate their full capabilities, but through interviews and discussions it was evident that they were well prepared to handle an escalating incident. The EOC facility can accommodate all of the EOC personnel with sufficient equipment and resources, and is fully capable of sustaining prolonged activation. Redundant communications capabilities in the EOC provide a reliable means of coordinating with others.

The Newberry County Law Enforcement Communications Center received the initial call from the utility and mobilized staff via e-mail, mobile and landline phone. Following receipt of each emergency notification, the County Emergency Manager briefed personnel at the EOC and conducted round table discussions of the actions of all EOC staff. This kept EOC staff informed of all county response actions. County actions were communicated and coordinated with other stakeholders through multiple innovative means including WebEOC, teleconference, and Google Earth map overlays shared among EOC Staff. PADs were discussed, approved and coordinated

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with the State and other risk counties over State conference calls. All EOC staff made timely decisions and followed county plans and procedures when responding to exercise injects.

Newberry County Emergency Management's ability to make and implement PADs was demonstrated through interviews and discussions. Considerations were discussed for the residents of Newberry County, including those with access and functional needs, to ensure their safety throughout the incident. Although they were notified fairly quickly that the threat had been neutralized and that no protective actions were needed for the public, personnel remained proactive in ensuring resources were in place in case actions were needed. Newberry County was also prepared to provide emergency workers with radiation exposure controls prior to them being dispatched to the EPZ. The responders working in the Newberry County EOC demonstrated a team approach in directing incident response. They all made timely decisions and followed county plans and procedures when responding to exercise injects.

#### Core Capability: Public Information and Warning

Newberry County successfully demonstrated their ability to coordinate alert and notification of the public following a protective action decision. The prompt notification system consisted of sirens that cover the entire 10 mile EPZ and are activated from VCSNS. No sirens were activated during this exercise. EAS messages were broadcast from the SEOC. Two EAS messages were coordinated with all counties and broadcast during the exercise.

In the event of a siren failure, backup route alerting would be accomplished by the Newberry County Sheriff's Office or the county fire and rescue team. A Google Earth map overlay displayed siren coverage and routes needed to be run for failed sirens could easily be identified using the system.

The EOC PIO maintained contact with the PIO at the JIC at all times. One press release was generated from the Newberry County EOC. The PIO insured that the press release followed proper channels for review and approval of the message. The first version of the press release advised residents of Newberry County to go inside and lock their doors due to the security threat. Following its submittal to the JIC, it was retracted since that message had not been coordinated with the surrounding counties. The press release was re-released and contained accurate and approved information that was consistent with protective action decisions discussed with the



State of South Carolina and other risk counties. It also contained specific information on EAS radio and television stations to monitor for additional information. The press release detailed references to other printed materials and a county public inquiry telephone number. Several public inquiry calls were received at the EOC and were fielded appropriately.

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

Newberry County Emergency Worker Decontamination (EWD) and Reception and Congregate Care Center (RCCC) activities were evaluated during out of sequence activities on August 13, 2013 at the Newberry County Career Center and Newberry County High School located adjacent to each other. Newberry County Fire Department (NCFD), HAZMAT (NCFDH) Team, and Newberry Public Safety demonstrated their ability to radiologically monitor and decontaminate evacuees, EWs, and vehicles due to events at the VCSNS and register evacuees at the congregate care center if necessary. Sufficient quantities of equipment, dosimetry and supplies were available to support monitoring and decontamination operations and documentation was maintained appropriately. EWs were knowledgeable of the prescribed contamination and exposure limits, operational checks and proper operation of survey equipment. Monitoring and decontamination teams used good practices to prevent cross contamination of personnel and vehicles and demonstrated their ability to process 20% of the county population in a twelve hour time frame.

#### Core Capability: Critical Transportation

Newberry County School District officials and staff successfully discussed their ability to safeguard students, faculty and staff in the event of an incident at VCSNS. An interview was conducted with the Pomaria–Garmany Elementary School Principle, the Director of Transportation, County Sheriff’s Deputy, and the County EMD. All representatives were professional and knowledgeable of their emergency plans and procedures and effectively communicated the necessary coordination process for safeguarding both students and staff. The school district provided sufficient transportation to supplement Pomaria-Garmany’s four buses which were staged at the school, if ordered to relocate staff and students. The staff was prepared to care of and maintain accountability of students until their release to their parents or guardians. All staff members were made knowledgeable of their responsibilities and tasks in the event of a

radiological incident.

#### Core Capability: Mass Care

In accordance with the extent of play agreement, DSS personnel and volunteers from the Columbia Chapter of the ARC, Palmetto South Carolina Region successfully demonstrated the ability to establish and maintain a congregate care facility for evacuees arriving at the Newberry High School complex. Participants demonstrated effective procedures to ensure evacuees were monitored and decontaminated (if necessary) prior to entering the facility.

Two ARC participants processed six evacuees, guiding them through registration and asking appropriate questions to determine their need for shelter, subsistence, and medical assistance. The ARC participants demonstrated genuine empathy, offered water and snacks, then offered to escort each evacuee on a tour of the facility before assigning them to a shelter location based on their needs and gender.

In summary, the status of DHS/FEMA criteria for this location is as follows:

- a. MET: 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.2, 2.c.1, 3.a.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.a.1, 5.a.3, 5.b.1, 6.a.1, 6.b.1, 6.c.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES - RESOLVED: None
- g. PRIOR ISSUES - UNRESOLVED: None

#### **3.3.1.6 Richland County**

##### Core Capability: Operational Coordination

The Richland County EMD and the EOC staff successfully demonstrated the ability to protect the safety of its citizens in regard to an incident at the VCSNS. The EMD demonstrated direction, control, and coordination of response activities during a HAB exercise. The executive staff/ decision-makers sought out answers from the VCSNS liaison to key questions in order to provide concurrence for PARS, thus ensuring public safety. The EOC staff were experienced,

well trained, and extremely knowledgeable in the performance of their duties; they accomplished their duties in a timely manner and with a sense of urgency. The EOC was sufficient to accomplish emergency response and coordination operations.

#### Core Capability: Public Information and Warning

Richland County Public Information successfully demonstrated the capability to develop, coordinate, and disseminate accurate emergency information to the media and the public. The county PIO maintained constant coordination between the EMD and the county PIO liaison at the JIC; ensuring press releases were reviewed prior to publication by the EMD. All members of the county leadership team and elected officials gave prior approval before distribution to the public. Public inquiry was successfully demonstrated at the Richland County EOC with trained staff, who maintained a phone log indicating time and actions taken.

The ability to effectively and efficiently inform the public of emergency actions and information related to a HAB exercise at VCSNS was successfully demonstrated through interview with the Richland County Deputy Director for Law Enforcement. Although the PAR was for Fairfield County, Richland County demonstrated the process whereby citizens within the county would be notified should there be a notification/warning failure.

In response to a request for backup route alerting, Richland County law enforcement personnel would be dispatched to the zone with pre-scripted message and a requirement to run the designated route as part of notification and warning. Public address systems in the patrol cars would be used to accomplish this task. Efforts would be completed in accordance with the approved plan and identified resources. These messages would provide the residents with sufficient information to take actions which would safeguard them based on the evolving emergency.

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

Richland County RCCC and evacuee and emergency worker decontamination were demonstrated simultaneously during out of sequence activities on July 18, 2013 at Dutch Fork High School. Activities were conducted by the Richland County Emergency Operations Team and the Columbia Fire Department.

The RCCC and EWD sites were well laid out and provided adequate signage throughout the area to guide evacuees and minimize the possibility of cross contamination. EWs had sufficient monitoring equipment, supplies and forms to support emergency worker and evacuee vehicle and personnel monitoring and decontamination. EWs were knowledgeable on monitoring and decontamination procedures, equipment checks and KI ingestion guidance. Direct Reading Dosimeters (DRDs) were read and recorded at regular intervals throughout the demonstration and recorded on the appropriate exposure cards. EWs were knowledgeable on cross-contamination prevention and performed glove changes as needed.

Vehicle monitoring procedures and operational checks used by the monitoring team were properly employed. All tires and wheel wells, door handles, and the interior of each of the three vehicles were monitored. Contaminated vehicles were marked with a red sticker and driven to the quarantined area by the driver; while clean vehicles were marked with green stickers and parked in the “clean” parking lot. Evacuees and EWs were provided with adequate instruction throughout the monitoring and decontamination process.

The evacuee monitoring station was well laid out and provided sufficient cross-contamination prevention. The evacuee monitoring team demonstrated proper source check procedures with the assistance of SCEMD staff. The team was knowledgeable on placing the Ludlum Model 3 survey meter into service and conducting a background check. DRDs were checked at set intervals and proper Personal Protective Equipment (PPE) was worn.

Evacuees and EWs were monitored at the same monitoring station. “Clean” evacuees were guided to the reception center, while an escort guided contaminated evacuees to the shower for decontamination. EWs demonstrated very good monitoring techniques and were knowledgeable on what to do regarding evacuees who were difficult or who were not decontaminated successfully.

#### Core Capability: Critical Transportation

Richland County School District 5 successfully discussed their capability to safeguard students and staff members in the event of a radiological incident at VCSNS. The interview was conducted at the Center for Advanced Technical Studies and included the Superintendent, the Academy for Success principle and assistant principle, and the Springhill High School principle.

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They explained in detail the process of notification from VCSNS and District 5 and their ability to notify staff and teachers without notifying students using custodians. Staff was well versed in the district plan for sheltering in place and explained that the plan was similar across the district. Sufficient transportation was available in the event of an order to evacuate the school and included wheel chair accessible vehicle when needed. The staff emphasized the importance of accountability of students and staff and their ability to ensure the care and positive control of students at the reception center accompanied by designated sheriff's deputies. The leadership was professional and knowledgeable of their plans and procedures.

#### Core Capability: On-Scene Security and Protection

Representatives from the Richland County Police Department demonstrated an understanding of traffic and access control measures and a thorough understanding of radiological emergency and personal protective actions during an evaluation by interview. The officers demonstrated the use of dosimetry and knowledge of potassium iodide, and possessed sufficient equipment and communications capability to establish traffic control.

#### Core Capability: Mass Care

The Richland County DSS and the Central South Carolina Chapter of the ARC demonstrated the availability of resources to provide services and accommodations for evacuees arriving at the Dutchfork High School reception and congregate care center. Procedures were effectively in place to ensure that evacuees had been monitored and or decontaminated prior to entering the facility.

The County DSS Director was responsible for the notification/mobilization of all DSS staff, the initial notification of ARC congregate care center staff and registration of evacuees. The Central South Carolina ARC was responsible for managing the congregate care facility in Richland County. The ARC mass care operation addressed not only evacuee needs for food and shelter, but also medical and mental health needs and provisions for service animals. DSS also deployed a trailer that had the capabilities to decontaminate and shelter pets.

It should be noted that the county plans to transition from providing contract hotel accommodations for evacuees to providing actual shelter space at local high schools. This process was evolving and the Assistant EMD indicated that it should be completed soon.

In summary, the status of DHS/FEMA criteria for this location is as follows:

- a. MET: 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.2, 2.c.1, 3.a.1, 3.c.1, 3.d.1, 3.d.2, 5.a.1, 5.a.3, 5.b.1, 6.a.1, 6.b.1, 6.c.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES - RESOLVED: None
- g. PRIOR ISSUES - UNRESOLVED: None

## SECTION 4: CONCLUSION

Overall, the HAB was a success. Officials and representatives from the federal government, State of South Carolina, the risk counties of Fairfield, Lexington, Richland, and Newberry, and SCE&G, as well as numerous volunteer organizations participated in the exercise.

State and local emergency response organizations effectively demonstrated the core capabilities identified for the exercise and their knowledge of their emergency response plans and procedures. They successfully implemented them and maintained coordination. The State and county leadership provided effective direction and control throughout the exercise.

The introduction of a HAB scenario into the design phase of the exercise was embraced by the team, and they exhibited a high degree of eagerness to improve emergency management and planning at all levels. The cooperation and teamwork of the participants was evident throughout all phases of the exercise. FEMA wishes to acknowledge the efforts of the many individuals who participated and made this exercise a success. Protecting the public health and safety is the full-time job of some of the exercise participants and an additional assigned responsibility for others. Still others have willingly sought this responsibility by volunteering to provide vital emergency services to their communities.

During this exercise, FEMA did not identify any Deficiencies or ARCA's. An ARCA (061-11-1c1-A1) identified during the 2011 VCSNS exercise that concerned the inaccurate content of an EAS message and news release issued by the State of South Carolina was successfully corrected during this exercise.

# **APPENDIX A: EXERCISE TIMELINE**



**Table 1 - Exercise Timeline**  
**DATE: 2013-11-20, SITE: V.C. Summer Nuclear Station, SC**

Emergency Classification Level or Event	Time Utility Declared	SC	SC JIS	Fairfield County	Lexington County	Newberry County	Richland County
Unusual Event							
Alert		0850		0835		0840	
Site Area Emergency			0903	1005/0843	0915	0851	0843
General Emergency							
Simulated Rad. Release Started							
Simulated Rad. Release Terminated							
Facility Declared Operational		0918	0915	0920/0859	0815	0854	0858
Warning Point Notified of Incident		0850		0827/0828	0913		0853
Evaluators Arrive on Station		0730	0730	0730	0730	0730	0730
FC- First Call into Warning Point from VC Summer Security over Comm. Line				0827			
FC- Received call of hostile action at VC Summer from Warning Point				0827			
FC-First call to On-Shift LE Commander for Fairfield Co. from Warning Point				0830			
ENF 1		0850	0903	0843	0915	0851	0843
First contact between IC and On-site security				0838			
Beginning of EOC Activation (EOF)							
FC/ICP- SRT notified for staging / utility sends security							
SEOC - First Call into Warning Point		0843					
ICP Ordered Activated							
State Warning Point Contacted SLED		0856					
Chief Operations - Code Red		0857					
Activate EWSS request from VC Summer - 0850		0918		0850		0931	
Code Red Recall for SERT		0903					
Staging Area Established ? Primary and Secondary				0906			
Advised of Plant Personnel Injuries at VC Summer			0911	0909			
SEOC sent REMS to Counties		0910					
SEOC request SLED dispatch SWAT, EOD, and quick react team		0911					
FC EMD contacted all other counties to inform of ICF/EOC activation				0913	0916		0950
EOF fully activated - 0915							
Activated TCP, Red Cross on Standby, notified hospital					0917		
SC Tactical resources arrived FC				0918			
Request sent to FC EOC to close airspace				0920			
FC - notifications to staff completed				0921			
Initial briefing to staff		0925	0925	0924	0917	0855	0914

**Table 1 - Exercise Timeline**  
**DATE: 2013-11-20, SITE: V.C. Summer Nuclear Station, SC**

Emergency Classification Level or Event	Time Utility Declared	SC	SC JIS	Fairfield County	Lexington County	Newberry County	Richland County
Protected area penetrated by adversarial perp.				0924			
SC Highway Patrol/Sheriff liaison arrived FC				0928			
News Release 1 - SEOC Activation		0930	0930		0930	0930	
Conference Call with State		0930		0930	0930	0930	0930
ENF 2		0952	0942	0937	0933	0936	0932
Utility news release 1			0933				
VC Summer request OROs to extract injured plant personnel				0938			
Newberry news release 1 requested 4 zones go inside/stay inside			0941				
ICP requests no sirens		0945		0945			
ICP requested KI and dosimetry to staging areas from FC EOC, 100 units				0946			
FC dispatched KI and dosimetry, 50 units				0947			
FBI spokesperson arrived in JIC			0948	0948			
ORO onsite to retrieve injured through ACP				0950			
State Issued News Release 2- JIC Activated		0950	0953				
ICP requested backfill officers from Chester Co.				0953			
Conference Call with Counties/State		0957		0957	0957		0957
VC Summer security requesting investigative support to secure evidence/adversary bodies				0959			
Newberry Press Release 1 retracted by Newberry PIO at JIC							
Injured personnel removed from onsite, remanded to EMS for treatment				1003			
SLED manned ACP for VC Summer				1005			
PAD Concur - Go inside/stay inside A-0, Stay Tuned, No Sirens		1008	1008	1008	1008		1008
SLED PIO arrives at JIC			1008				
State News Release 3 Gov. State of Emergency		1015	1015	1015	1015		1015
Offsite tactical forces begin sweeps of owner-controlled areas				1017			
EAS 1, law enforcement message- no siren, stay inside A-0, stay tuned		1020	1020	1020	1020		1020
ENF 3		1030	1021	1021	1021		1025
Door to Door notification begins by FC Sheriff				1026			
State Media Advisory 1- retracting State of Emergency		1030					
State notifies Fed. Agencies- NCEM, FEMA, NRC, GEMA and IPZ counties		1030					
JIC First Media Briefing			1030				
FC Director briefs City Counsel and senior county officials of situation at VC Summer				1035			
Newberry News Release 1 retraction received		1052	1052	1052			1052

**Table 1 - Exercise Timeline**  
**DATE: 2013-11-20, SITE: V.C. Summer Nuclear Station, SC**

Emergency Classification Level or Event	Time Utility Declared	SC	SC JIS	Fairfield County	Lexington County	Newberry County	Richland County
ENF 4		1116	1113	1112	1109		1111
DNR Briefing - clearing lakes and rivers and warning hunters		1120					
JIC Media Briefing 2			1130				
Newberry Press Release 1 sent (new) ? residents in E-1, E-2, F-1, F-2 stay tuned			1131				
Explosive Device located inside PA; PA cleared with no other assistance				1135			
Conference Call		1140	1140	1140	1140		1140
ICP requested 60 additional units KI and dosimetry through FC Sheriff Rep.				1152			
ENF 5		1158		1158	1159		
State News Release 5 - zone description and lake cleared		1130	1201				
Received first information of elevated RAD readings onsite				1211			
VC Summer requested offsite personnel that were onsite be re-positioned due to release potential				1215			
EAS 2 - clearing lakes, rivers and wooded areas		1220	1220	1220	1220		1220
End Exercise		1245	1234	1237	1236		1237

## APPENDIX B: EXERCISE EVALUATORS AND TEAM LEADERS

DATE: 2013-11-20, SITE: V.C. Summer Nuclear Station, SC

LOCATION	EVALUATOR	AGENCY
State of South Carolina	Marcy Campbell Keith Earnshaw Willis Larrabee Jill Leatherman *Ronald Shaw John D. Simpson	ICFI ICFI ICFI ICFI FEMA FEMA
South Carolina Joint Information System	Henry Christiansen *Robert Spence	ICFI FEMA
Fairfield County	JT Ackermann Gary Bolender Mark Dalton Michael Dolder *Quintin Ivy	FEMA ICFI ICFI FEMA FEMA
Lexington County	*Joe Harworth Bart Ray	FEMA ICFI
Newberry County	Alex Sera	FEMA
Richland County	*Gerald Mclemore Brenda Rembert	FEMA ICFI
* Team Leader		

## APPENDIX C: ACRONYMS AND ABBREVIATIONS

Acronym	Meaning
ARC	American Red Cross
ARCA	Areas Requiring Corrective Action
DHEC	Department of Health and Environmental Control
DNR	Department of Natural Resources
DRD	Direct Reading Dosimeter
DSS	Department of Social Services
EAS	Emergency Alert System
ECL	Emergency Classification Level
EMD	Emergency Management Director
EMS	Emergency Medical Services
ENF	Emergency Notification Form
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EOPA	Extent Of Play Agreement
EPZ	Emergency Planning Zone
ERC	Emergency Response Coordinator
ESF	Emergency Support Function
EW	Emergency Worker
EWD	Emergency Work Decontamination
FBI	Federal Bureau of Investigation
FEMA	Federal Emergency Management Agency
FMT	Field Monitoring Teams
HAB	Hostile Action Based
HSEEP	Homeland Security Exercise and Evaluation Program
IC	Incident Commander
ICP	Incident Command Post
JIC	Joint Information Center
JIS	Joint Information System
KI	Potassium Iodide
MACCS	Multi Agency Coordination Center System
MCC	Mobile Command Center
MOC	Mobile Operations Center
PAD	Protective Action Decision
PAR	Protective Action Recommendation

PIO	Public Information Officer
RCCC	Reception and Congregate Care Center
REP	Radiological Emergency Preparedness
RERP	Radiological Emergency Response Plan
RERT	Radiological Emergency Responce Team
SAE	Site Area Emergency
SCEMD	South Carolina Emergency Management Division
SEOC	State Emergency Operations Center
SERT	State Emergency Responce Team
SLED	South Carolina Law Enforcement Division
SRD	Self Reading Dosimeter
SSS	Selective Signaling System
VCSNS	V. C. Summer Nuclear Station

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# APPENDIX D: EXTENT OF PLAY AGREEMENT

## EXTENT OF PLAY AGREEMENT

### 2013 V.C. Summer Nuclear Station

#### PLUME PHASE FULL 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), Emergency Operations Facility (EOF) and Incident Command Post (ICP)*

**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.

**Capability Target: Emergency Operations Management**

**Performance Measure:** *Procedures to alert and notify personnel will be demonstrated and personnel will respond only upon notification. Identified communications will be operational. Equipment, monitoring instruments and dosimetry must be available and will be operational which includes an affixed current calibration and range of readings sticker if applicable; quantities of Potassium Iodide (KI) and expirations will be verified.*

**Critical Task:** 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.

*Critical Task:* Facilities are sufficient to support the emergency response (NUREG-0654/FEMA-REP-1, H.3; G.3.a; J.10.h, J.12; K.5.b; Criterion 1.b.1).

The State EOC, County EOCs, and the ICP will be evaluated during the exercise.

*Critical Task:* 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).

In accordance with plans and procedures

*Critical Task:* 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).

All necessary equipment and supplies will be prepositioned at the Incident Command Post (ICP).

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

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

SAV locations, dates, and times are as follows:

South Carolina: SCEMD and DHEC on July 15, 2013 at 1:30 p.m.

Fairfield County: County EOC on August 12, 2013 at 4:00 p.m.

Lexington County: County EOC on July 16, 2013 at 2:00 p.m.

Newberry County: County EOC on August 13, 2013 at 2:00 p.m.

Richland County: Dutch Fork High School on July 18, 2013 at 2:00 p.m.

**Capability Target: Protective Action Decision Making**

**Performance Measure:** *Key personnel with leadership roles will provide direction and control; protective action decision (PAD) making will be demonstrated by the OROs.*

*Critical Task:* 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.3; C.4, 6; Criterion 1.c.1).

State direction and control will be at the State Emergency Operations Center (SEOC). Direction and Control for the incident will occur at the ICP and the overall County direction and control will occur at the County EOCs. The ICP



location will be located at 5509 Old Airport Rd, Winnsboro, SC and will be evaluated based on plans and procedures. All telephone calls to non-participating agencies will be made by calling the simulation cell (simcell). FEMA evaluator will be given access to the simcell as needed.

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

In accordance with plans and procedures

*Critical Task:* 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).

In accordance with plans and procedures

*Critical Task:* Protective action decisions are made, as appropriate, for groups of persons with disabilities and access/functional needs (NUREG-0654/FEMA-REP-1, D.4; J.9; J.10.d, e; Criterion 2.c.1).

By discussion, if necessary, at the County EOCs

**Capability Target: Protective Action Implementation**

**Performance Measure:** *Demonstrate the capability to implement emergency worker exposure control; KI decision for institutionalized individuals and the general public; protective actions for persons with disabilities and access/functional needs; schools; traffic and access control and impediments to evacuation.*

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

In accordance with plans and procedures during out-of-sequence activities at the reception centers

By discussion at the County EOCs, ICP, and SEOC

*Critical Task:* KI and appropriate instructions are available if 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 and the general public will be discussed at county EOCs during the exercise.

*Critical Task:* Protective action decisions are implemented for persons with disabilities and 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).

By discussion in each county EOC during the exercise

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

By discussion in each county EOC during the exercise (if applicable)

*Critical Task:* 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)

By discussion in each county EOC or ICP during the exercise

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

By discussion in each county EOC or ICP during the exercise

**Core Capability: Public Information and Warning** – State/County EOCs, ICP, 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.

**Capability Target: Emergency Notification and Public Information**

**Performance Measure:** *Sirens and the EAS System will be activated in a timely manner to alert the general public along with waterway warning and back up route alerting in case of failure of the primary alert and notification system.*

*Critical Task:* Activities associated with primary alerting and notification of the public are completed in a timely manner following the initial decision by authorized offsite emergency officials to notify the public of an emergency 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 Fairfield, Newberry, Lexington, and Richland Counties' chief elected officials or designee, as scenario dictates. At the appropriate decision points and as scenario dictates, a silent test of sirens will be conducted and the Emergency Alert System (EAS) will be activated. The first siren activation will be demonstrated by "silent test". All subsequent siren activations will be simulated. A "test message" EAS message will be transmitted to the Local Primary (LP-1) EAS station (WCOS, Columbia, S.C.). Broadcast of an EAS test message will be simulated and the process will be discussed. Only one EAS message will be sent, and others 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 evaluator at the SEOC.

*Critical Task:* 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: Backup route alerting procedures will be completed via interview at each EOC during the exercise.

Waterway warning: S.C. Department of Natural Resources (DNR) will demonstrate lake clearing at the East and West boat ramps on Lake Monticello on August 14, 2013 at 9:00 a.m.

*Critical Task:* Ensure OROs provide accurate emergency information and instructions to the public and the news media in a timely manner (The responsible ORO personnel/representatives demonstrate actions to disseminate the appropriate information/instructions with a sense of urgency and without undue delay) (NUREG-0654/FEMA-REP-1, E.5, 7; G.3.a; G.4.a, c; Criterion 5.b.1).

The State, Fairfield, Newberry, Lexington, and Richland Counties will demonstrate the ability to disseminate accurate information and instructions to the public and news media through the Joint Information System (JIS). Public inquiry for the state will be demonstrated at the State Joint Information Center (JIC) located at 2779 Fish Hatchery Road, West Columbia, SC 29172. County public inquiries will be demonstrated at the respective county EOCs. Public inquiry personnel will provide the FEMA evaluator with a call log.

**Core Capability: Environmental Response/Health and Safety** – *Dose, Field Teams, Emergency Worker Decontamination (EWD), Reception Center Congregate Care (RCCC)*

**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.

**Capability Target: Protective Action Decision Making**

**Performance Measure:** *OROs authorized to send emergency workers into the plume exposure pathway EPZ must demonstrate a capability to assess and control the radiation exposure received by emergency workers and have a decision chain in place, as specified in the ORO's plans/procedures, to authorize emergency worker exposure limits to be exceeded for specific missions. As appropriate, OROs must demonstrate the capability to make decisions on the distribution and administration of KI as a protective measure for emergency workers. OROs must have the capability to independently project integrated dose from projected or actual dose rates and compare these estimates to the PAGs. OROs must have the capability to choose, among a range of protective actions, those most appropriate in a given emergency.*

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

In accordance with plans and procedures

*Critical Task:* 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).

In accordance with plans and procedures

*Critical Task:* 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).

In accordance with plans and procedures

**Capability Target: Protective Action Implementation**

**Performance Measure:** *OROs must demonstrate the capability to provide emergency workers (including supplemental resources) with the appropriate direct-reading and permanent record dosimetry, dosimeter chargers, KI, and instructions on the use of these items.*

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

DHEC: In accordance with plans and procedures during the exercise

Counties: In accordance with plans and procedures during out-of-sequence activities

**Capability Target: Field Measurement and Analyses**

**Performance Measure:** *OROs will demonstrate the capability to deploy FMTs with the equipment, methods, and expertise necessary to determine the location of airborne radiation and particulate deposition on the ground from an airborne plume. OROs must have the capability to use FMTs within the plume exposure pathway EPZ to detect airborne radioiodine in the presence of noble gases and radioactive particulate material in the airborne plume.*

*Critical Task:* Field teams (two or more) 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).

Mobile Radiological Lab will NOT play. Personal Protective Equipment (PPE) for Field Monitoring Team (FMT) will be simulated. Silver zeolite cartridges will be simulated with charcoal. KI will be simulated with gum or mints.

*Critical Task:* Ambient radiation measurements are made and recorded at appropriate locations, and radioiodine and particulate samples are collected. Teams will move to an appropriate low-background location to determine whether any significant (as specified in the plan and/or procedures) amount of radioactivity has been collected on the sampling media (NUREG-0654/FEMA-REP-1, C.1; H.12; I.8, 9; J.10.a; Criterion 4.a.3).

For all air samples collected, the chain of custody will be discussed; however, the samples will not be transported to the DHEC Radiological Lab, Columbia, SC. Chain of custody forms will be completed and samples will be transported to the Mobile Operations Center (MOC).

**Note:** For the Field Measurement and Analysis evaluation area element 4(a), FEMA Evaluators will need to be present at the MOC one hour before deployment of DHEC field teams for appropriate evaluation purposes.

### **Capability Target: Support Operations and Facilities**

**Performance Measure:** *Radiological monitoring, decontamination, and registration facilities for evacuees and emergency workers must be set up and demonstrated as they would be in an actual emergency. For RCCC, OROs conducting this demonstration must have one-third of the resources (e.g., monitoring teams/instrumentation/portal monitors) available at the facility(ies) as necessary to monitor 20 percent of the population within a 12-hour period; this would include adequate space for evacuees' vehicles. A minimum of six evacuees must be monitored per station using equipment and procedures specified in the plans/procedures. The monitoring sequences for the first six simulated evacuees per monitoring team will be timed by the evaluators to determine whether the 12-hour requirement can be met. For EWD, monitoring of emergency workers does not have to meet the 12-hour requirement, however, appropriate monitoring procedures must be demonstrated for a minimum of two emergency workers and their equipment and at least one vehicle. Monitoring activities shall not be simulated; decontamination of evacuees, emergency workers and vehicles may be simulated and conducted by interview. Provisions for separate showering and same-sex decontamination must be demonstrated or explained. The staff must demonstrate provisions for limiting the spread of contamination; these provisions may be partially simulated to conserve resources. In*

*addition, for any evacuee and emergency worker found to be contaminated, procedures must be discussed concerning handling of potential contamination of vehicles and personal belongings.*

*Critical Task:* 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).

Reception Centers to be evaluated are:

Fairfield County: White Oak Conference Center on August 14, 2013 at 7:00 p.m.

Lexington County: Crossroads Middle School on July 16, 2013 at 9:00 a.m.

Newberry County: Newberry High School on August 13, 2013 at 6:00 p.m.

Richland County: Dutch Fork High School on July 18, 2013 at 9:00 a.m.

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

In accordance with plans and procedures during out-of-sequence activities at the reception centers

*Critical Task:* 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).

In accordance with plans and procedures during out-of-sequence activities at the reception centers

*Critical Task:* 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).

In accordance with plans and procedures during out-of-sequence activities at the reception centers

**Core Capability: On-Scene Security and Protection** – *Traffic Control Points (TCPs)*

**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 all traditional and atypical response personnel engaged in lifesaving and life-sustaining operations.

**Capability Target: Protective Action Implementation**

**Performance Measure:** *Demonstrate the capability to select, establish and staff traffic control and access points; identify and resolve impediments to evacuation; distribute dosimetry and KI; and implement and manage EW exposure control.*

*Critical Task:* Equipment (to include communications), 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).

TCPs to be evaluated are:

South Carolina: S 215/Glenns Bridge (S3), Pearson Rd/Cole Trofel Rd (S4), SC 213/Broad River (S5)

Fairfield County: SC 269/US 321 (F4)

Lexington County: Old Lexington/Murray Linder Rd (L3), St. Peters Church Rd/Westwoods Dr. (L5), Meadowlark Rd/Dreher Island Rd (L7)

Newberry County: US 176/SC 213 (N1)

Richland County: Old Hilton/Three Dog (R3), Mt. Vernon Church/Stone Hill (R4)

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

Will be evaluated by discussion during out of sequence activities at the reception centers



*Critical Task:* 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).

Will be evaluated by discussion during out-of-sequence activities at the reception centers

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

Will be evaluated by discussion during out-of-sequence activities at the reception centers

**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.

**Capability Target: Protective Action Implementation**

**Performance Measure:** *Demonstrate the ability to implement protective actions for schools.*

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

Schools to be evaluated by interview as follows:

Fairfield County: McCrorey-Liston ES on August 12, 2013 at 2:00 p.m.

Newberry County: Pomaria-Garmany ES on July 16, 2013 at 1:00 p.m.

Richland County: Center for Advanced Technology on July 18, 2013 at 1:00 p.m.

**Core Capability: Mass Care** – *Reception/Congregate Care*

**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.

**Capability Target: Support Operations and Facilities**

**Performance Measure:** *The evaluator will conduct a walk-through of the center to determine, through observation and inquiries, that the services and accommodations are consistent with applicable guidance. Congregate care staff must also demonstrate the capability to ensure that evacuees, service animals, and vehicles have been monitored for contamination, decontaminated as appropriate, and registered before entering the facility. Material that would be difficult or expensive to transport (e.g., cots, blankets, sundries, and large-scale food supplies) need not be physically available at the facility(ies). However, availability of such items must be verified by providing the evaluator a list of sources with locations and estimates of quantities.*

*Critical Task:* 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).

In accordance with plans and procedures during out-of-sequence activities at the reception centers

Note: Refer to p.8 for location, date, and time

*Critical Task:* Managers of congregate care facilities demonstrate that the centers have resources to provide services and accommodations consistent with planning guidelines. Managers demonstrate the procedures to assure 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).

In accordance with plans and procedures during out-of-sequence activities at the reception centers

**Core Capability: Public Health and Medical Services – Medical Services Drill**

**Definition:** Provide lifesaving medical treatment via emergency medical services and related operations and avoid additional disease and injury by providing targeted public health and medical support and products to all people in need within the affected area.

**Capability Target: Support Operations and Facilities**

**Performance Measure:** *OROs must demonstrate the capability to transport contaminated injured individuals to medical facilities. The medical facility must demonstrate the capability to activate and set up a radiological emergency area for treatment. Equipment and supplies must be available for treatment of contaminated*

*injured individuals. The medical facility must demonstrate the capability to make decisions on the need for decontamination of the individual, follow appropriate decontamination procedures, and maintain records of all survey measurements and samples taken. All procedures for collection and analysis of samples and decontamination of the individual must be demonstrated or described to the evaluator. Waste water from decontamination operations must be handled according to facility plans/procedures.*

*Critical Task:* 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).

A Medical Service Drill will be conducted on July 17, 2013. The drill will commence at 9:00 a.m., at Crossroads Middle School, 6949 St. Andrews Road, Columbia, SC 29212. The drill will conclude at Lexington Medical Center located at 2720 Sunset Boulevard, West Columbia, SC 29169.

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

Emergency personnel will use a prop to simulate Permanent Record Dosimeters (PRDs) to monitor and control radiation exposure.

Potassium Iodide (KI) for emergency workers will be simulated by using a prop identified as KI if necessary. PPE will be in accordance with the plans and procedures.

*Critical Task:* The facility/ORO has the appropriate space, adequate resources, and trained personnel to provide transport, monitoring, decontamination, and medical services to contaminated injured individuals (NUREG-0654/FEMA-REP-1, F.2; H.10; K.5.a, b; L.1, 4; Criterion 6.d.1).

One FEMA evaluator will travel in the ambulance carrying the patient in order to listen to communications between the ambulance crew and the hospital while patient is en-route. In the event that the ambulance has to respond to real life events, another county owned vehicle will be used to transport the contaminated injured person to the hospital.

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