



**FEMA**

October 8, 2013

Victor M. McCree,  
Regional Administrator - RII  
Nuclear Regulatory Commission  
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Atlanta, Georgia 30303

Dear Mr. McCree:

Enclosed is a copy of the final exercise report for the May 21, 2013, hostile action based exercise of the offsite radiological emergency response plans site-specific to the H. B. Robinson Steam Electric Plant. This report addresses the evaluation of the plans and preparedness for the State of South Carolina and Chesterfield, Darlington and Lee Counties within the Plume Exposure Emergency Planning Zone. The Federal Emergency Management Agency Region IV staff prepared the final exercise report. Copies of this report will be forwarded to the State of South Carolina, FEMA Headquarters and NRC Headquarters by my staff.

This exercise represented the first evaluated hostile action based exercise in FEMA Region IV. FEMA evaluators were impressed by the performance and the level of effort demonstrated during the exercise by the State of South Carolina and Chesterfield, Darlington and Lee Counties. The successful exercise was the culmination of extensive preparatory work and planning between representatives from the H. B. Robinson Steam Electric Plant, the State of South Carolina and Chesterfield, Darlington and Lee Counties and FEMA. The preparation for this exercise began well over a year before the exercise where extensive discussions were held on expectations, exercise objectives, demonstration of core emergency response capabilities, and the development of the extent-of-play agreement. Shortly before the May 21<sup>st</sup> exercise, the State, Counties and licensee conducted a well-run table top exercise (TTX) which was facilitated by the licensee. Many lessons were learned during the TTX and many of those lessons were applied by the State and Counties during the dress rehearsal exercise. Both the TTX and the dress rehearsal proved valuable because of the face-to-face interaction of participants during the TTX and subsequent coordination between the same individuals at different locations during the dress rehearsal. The commitment and level of effort demonstrated during the May 21<sup>st</sup> hostile action based exercise exemplified the State of South Carolina and Darlington, Chesterfield and Lee Counties' commitment to public health and safety.

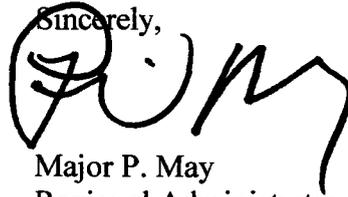
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Exercise participants included Federal, State and County personnel, as well as, numerous volunteers and elected officials participated in this exercise. The State of South Carolina and the counties have dedicated emergency response staff who are serious and professional in executing their duties. FEMA believes that NRC would benefit by becoming an active member of the exercise planning team for those exercises where NRC is going to be a player and interface with offsite authorities.

During the successful exercise FEMA did not identify any Deficiencies or Areas Requiring Corrective Action.

Based on the results of the May 21, 2013, exercise and FEMA's review of the State's Annual Letters of Certification for 2012 and 2013, the offsite radiological emergency response plans for the State of South Carolina and the affected local jurisdictions, site-specific to the H. B. Robinson Steam Electric Plant can be implemented and are adequate to provide a reasonable assurance that appropriate measures can be taken offsite to protect the health and safety of the public in the event of a radiological emergency at the site. The Title 44 CFR, Part 350, approval of the State of South Carolina's offsite radiological emergency response plans and preparedness site-specific to the H. B. Robinson Steam Electric Plant, granted on December 29, 1981, will remain in effect.

Should you have any questions, please contact Conrad Burnside at 770/220-5486.

Sincerely,  
  
Major P. May  
Regional Administrator

Enclosure

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HB Robinson Steam Electric Plant

# After Action Report/ Improvement Plan

Exercise Date - May 21, 2013

Radiological Emergency Preparedness (REP) Program



**FEMA**

*Published October 08, 2013*



HB Robinson Steam Electric Plant

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Unclassified

Radiological Emergency Preparedness Program (REP)

After Action Report/Improvement Plan

HB Robinson Steam Electric Plant

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# HB Robinson Steam Electric Plant After Action Report/Improvement Plan

*Published October 08, 2013*

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## EXECUTIVE SUMMARY

On May 21, 2013 the Department of Homeland Security (DHS), 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 H. B. Robinson Steam Electric Plant (HBRSEP). HBRSEP is located west of the Lake Robinson Dam in western Darlington County and is owned and operated by Duke Energy. The HBRSEP EPZ is divided into 11 emergency response planning zones. The 10-mile EPZ encompasses parts of Chesterfield, Darlington and Lee Counties with a population of approximately 36,000.

FEMA's overall objective of the exercise was to assess the level of state and local preparedness in responding to a hostile action based incident at HBRSEP. This was Region IV's first HAB and presented unique challenges for the State and local governments. The purpose of this report is to analyze exercise results, identify strengths to be maintained and built upon, identify areas for further improvement, and support development of corrective actions. 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 November 15, 2011. The qualifying emergency preparedness exercise was conducted March 11 and 12, 1981.

Officials and representatives from the State of South Carolina; the risk counties of Chesterfield, Darlington and Lee, the Nuclear Regulatory Commission and Duke Energy participated in this exercise. State and local officials demonstrated knowledge of their emergency response plans and procedures and successfully implemented them. FEMA did not identify any Deficiencies or Areas Requiring Corrective Action (ARCA) during this exercise. The strength of the working relationships between the various State and local response agencies in their mission planning and execution throughout all phases of the exercise was obvious. FEMA wishes to acknowledge the efforts of the many individuals who participated and made the exercise a success.

## **SECTION 1: EXERCISE OVERVIEW**

### **1.1 Exercise Details**

**Exercise Name**

HB Robinson Steam Electric Plant

**Type of Exercise**

Plume

**Exercise Date**

May 21, 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 HB Robinson Steam Electric Plant exercise:

State Jurisdictions

State of South Carolina

Risk Jurisdictions

Darlington

Chesterfield

Lee

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

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

DHS/FEMA administers the 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 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 State, Tribal and local governments demonstrate their abilities to implement their plans and procedures to protect the health and safety of the public in the event of a hostile action at the nuclear plant.

The results of this exercise together with review of the RERPs 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 visit enables FEMA to provide a statement with the transmission of this final AAR to the NRC that 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 hostile action; and (2) capable of being implemented.

### **2.2 Exercise Objectives, Capabilities and Activities**

Core Capabilities-based planning allows for exercise planning teams to develop exercise objectives and observe exercise outcomes through a framework of specific action items. Using the Homeland Security Exercise Evaluation Program (HSEEP) methodology, the exercise objectives, which meet the REP requirements and encompass the REP Program's Emergency Preparedness Evaluation Areas – elements and sub-elements were derived and negotiated with the State of South Carolina, Chesterfield, Darlington and Lee Counties. The core capabilities include operational coordination, public information and warning, environmental response /health and safety, on-scene security and protection, critical transportation, mass care and public health and medical services.

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

Objective 1: Demonstrate the ability for Direction and Control through the Counties' and State Emergency Operations Centers (EOCs) and Incident Command Post (ICP) providing protective action decision-making for State and County emergency workers and the public through exercise play and discussions of plans and procedures.

Objective 2: Demonstrate the ability to physically implement protective actions for State and County emergency workers and the public through exercise demonstration.

Objective 3: 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) and HBRSEP ENC for public and private sector emergency information communications.

Objective 4: Demonstrate the ability to coordinate the use of off-site resources with on-site personnel in case of a hostile action taken against HBRSEP.

## **2.3 Scenario Summary**

At 0733 security observes commercial armored vehicle on Silo Road. At 0735 adversaries set explosive charges on Owner Controlled Area Gate and attack and destroy protected area fencing. Due to the rapid escalation of scenario events, the Shift Manager declared a Site Area Emergency (SAE) based on notification from Security of hostile events. Security observes armored vehicle driving backwards through two gates near the Fuel Building. Adversary opens rear door of armored vehicle and uses shoulder fired military style weapon to blast through Spent Fuel Pool Cooling Heat Exchanger (SFPC HX) Room door. Security officer observes explosion in area of SFPC HX Room door. Smoke/flame engulfs area of SFPC HX Room door and intruding vehicle. Security neutralizes all adversaries and completes post event assessment.

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

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

This section contains the results and findings of the evaluation of jurisdictions and functional entities that participated in the May 21, 2013 HAB partial 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 Demonstrated

### **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**

		SC	SC JIS	Darlington County	Chesterfield County	Lee County
DATE: 2013-05-21 SITE: HB Robinson Steam Electric Plant, SC M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated						
<b>Emergency Operations Management</b>						
Alert and Mobilization	1a1	M	M	M	M	M
Facilities	1b1					
Direction and Control	1c1	M		M	M	M
Communications Equipment	1d1	M	M	M	M	M
Equipment and Supplies to Support Operations	1e1	M	M	M	M	M
<b>Protective Action Decision Making</b>						
Emergency Worker Exposure Control	2a1	M		M	M	M
Dose Assessment & PARs & PADs for the Emergency Event	2b1					
Dose Assessment & PARs & PADs for the Emergency Event	2b2	M		M	M	M
PADs for the Protection of persons with disabilities and access/functional needs	2c1			M	M	M
Radiological Assessment and Decision-making for the Ingestion Exposure Pathway	2d1					
Radiological Assessment & Decision-making Concerning Post-Plume Phase Relocation, Reentry, and Return	2e1					
<b>Protective Action Implementation</b>						
Implementation of Emergency Worker Exposure Control	3a1			M	M	M
Implementation of KI Decision for Institutionalized Individuals and the Public	3b1			M	M	M
Implementation of Protective Actions for persons with disabilities and access/functional needs	3c1			M	M	M
Implementation of Protective Actions for persons with disabilities and access/functional needs	3c2			M	M	
Implementation of Traffic and Access Control	3d1	M		M	M	M
Implementation of Traffic and Access Control	3d2	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					
Plume Phase Field Measurement and Analyses	4a3					
Post Plume Phase Field Measurements and Sampling	4b1					
Laboratory Operations	4c1					
<b>Emergency Notification and Public Info</b>						
Activation of the Prompt Alert and Notification System	5a1	M		M	M	M
RESERVED	5a2					
Activation of the Prompt Alert and Notification System	5a3	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
<b>Support Operations/Facilities</b>						
Monitoring, Decontamination, and Registration of Evacuees	6a1					
Monitoring and Decontamination of Emergency Workers and their Equipment and Vehicles	6b1					
Temporary Care of Evacuees	6c1					
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**

##### **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.

SCEMD State Emergency Operation Center (SEOC) personnel demonstrated the ability to notify essential personnel to support the H.B. Robinson Steam Electric Plant (HBRSEP). The State Warning Point (SWP) utilized a dedicated phone line, the Selective Signaling System (SSS) to receive HBRSEP information and verified that the counties had received the information. The SWP Communications Supervisor directed the Communications Specialist to notify key SCEMD staff; Department of Health and Environmental Control (DHEC); and key support agencies to immediately report to the SEOC due to an incident at HBRSEP. Notification was conducted utilizing the South Carolina Emergency Notification System (REACHSC), a text, email and voice message notification system.

The primary communication system used by the SWP was the SSS and the SEOC's management of information to and from the OROs during off-site response was a teleconferencing bridge line. Backup to the SSS was commercial telephone, satellite phone and fax. The fax machine failed initially but was quickly repaired and performed without failure along with the SSS and all other communications systems during the entire exercise. Alternate communications system available to SWP staff were the low band VHF Local Government Radio (LGR), 800 megahertz (MHz) radio network, satellite telephone, National Warning System (NAWAS), numerous commercial telephones, and cell phones.

Access to the SEOC was controlled through electronic entrances into the main building. The

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entire facility, including the Situation Room and surrounding breakout rooms for the Emergency Support Functions (ESFs), was well equipped with hard-copy plans and procedures. Computers at each workstation allowed electronic access to all SEOC information along with telephones for each position.

SEOC staff in leadership roles, the Chief of Operations (CO) and the SCEMD Director, 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 protective actions decisions (PADs) for the general public and emergency workers, including the consideration of the use of KI. The CO actively coordinated providing support for the incident with law enforcement and the counties. He coordinated all PADs with the risk and host counties. The CO used the conference bridge line effectively to hold discussions with the counties and get their input and suggestions on potential PADs. Although SCEMD nor DHEC were unable to send liaisons to the on-site EOF, they used a variety of methods to keep informed of the situation at the plant including: conversations with the utility representative at the SEOC, telephone calls between EOF and DHEC personnel, monitoring the utility's WebEOC, and information relayed by NRC personnel at the SEOC.

South Carolina Highway Patrol (SCHP), and the South Carolina Law Enforcement Division (SLED) successfully demonstrated establishment and maintenance of three pre-determined Traffic Control Points (TCPs) in conjunction with and as requested by the Darlington County Sheriff's Office (DCSO). The SLED Program Manager and Supervisor of ESF 16 had sufficient training and equipment to successfully complete the mission at hand. Both were thoroughly knowledgeable of radiological exercise requirements and of their capacity to perform during a hostile action exercise. SCHP, SLED and DNR liaisons in the SEOC were in constant communications with the Incident Command Post (ICP) and Darlington County staffs to provide assistance and resources as needed. There were no impediments to traffic control during this exercise.

For this capability the following REP criteria were MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.2, 3.d.1, 3.d.2

Public Information and Warning – SEOC:

SCEMD personnel successfully demonstrated the capability to promptly alert, notify and warn the public of an emergency at HBRSEP by; providing accurate emergency information and instructions to the public and the news media in a timely manner. The SEOC Public Information Officer (PIO) delivered: coordinated, prompt, and reliable information to the whole community through the use of clear, consistent, accessible methods to effectively relay information regarding the emergency at HBRSEP. The PIO and his staff prepared for the CO approval three news releases and one Emergency Alert System (EAS) Message. All the information released to the media was consistent with the appropriate PAD, Emergency Classification Level (ECL), and current SEOC updates. Messages were emailed and/or faxed to the appropriate agencies, Joint Information Center (JIC) and media for their release, in a timely manner. All information was also released to various social media programs/outlets.

Although sirens were not activated for this exercise, the Risk Counties requested that the State activate the calling system 'REACHSC' to alert the population within the 10 mile Emergency Planning Zone (EPZ) around HBRSEP. The PIO developed a message to be used in the REACHSC notification and simulated activating the system.

Rumor Control staff was provided with the appropriate material and instruction to manage calls from the media and the public, the PIO assured that any rumors or trends were addressed in subsequent news media briefings and/or news releases.

For this capability the following REP criteria were MET: 5.a.1, 5.b.1

Public Information and Warning – EAS:

Broadcast capability for an EAS message was successfully demonstrated by WJMX (103.3 FM/970 AM) personnel. WJMX serves as the Local Primary (LP-1) radio station for the HBRSEP Emergency Planning Zone. During the demonstration, the radio station's Lead Engineer received an EAS message from the SEOC via email. He authenticated the message and then directed a professional broadcaster to broadcast the message over the radio at a predetermined time. He explained that the EAS message would then be recorded on their Sage Digital Endec (encoder/decoder) system and rebroadcast at 15 minute intervals, or as specified by the State EOC. The radio station is not staffed 24 hours a day; during off hours, the State EOC could record and broadcast EAS messages using the Sage Digital Endec system. The EAS message would override normal broadcasting of the radio station. The radio station was powered

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by a priority power line, common with an adjacent hospital. Diesel generators were available to supply back up power for both the radio station and the transmitter site.

For this capability the following REP criteria were MET: 1.d.1, 1.e.1, 5.a.1

Environmental Response/Health and Safety - Dose Assessment:

DHEC personnel demonstrated the ability to ensure the availability of guidance and resources to address all hazards including radiological materials and acts of terrorism in support of the responder operations and the affected communities.

The dose assessment function was staffed by employees of the DHEC who reported to the SEOC. The DHEC Emergency Response Coordinator provided a recommendation at 0850 to the Governor's representative that no protective action was necessary at that time. The dose assessment staff had the capability to perform dose projections using the RASCAL code, version 4.2; however there were no indications that any critical safety functions were damaged by the intruders. Based on interviews, the staff was knowledgeable and proficient in the use of the RASCAL code. The staff performed a dose assessment run based on "what if" assumption since the radiological monitors had normal readings. In accordance with the extent of play agreement, no field teams were deployed during this exercise.

For this capability the following REP criteria were MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1 and 2.b.2

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

- a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.2, 3.d.1, 3.d.2, 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

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### 3.3.1.2 South Carolina Joint Information System

#### Joint Information Center:

The agencies of the JIC successfully demonstrated this core capability by developing, coordinating and disseminating emergency public information. 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 HBRSEP. The JIC operated within a Joint Information System (JIS) structure. The structure of the JIS is defined and supported through multiple agencies at different locations; this included the SEOC in Columbia; Duke Energy's Corporate Office in Charlotte, NC; HBRSEP onsite Emergency Operations Facility (EOF); and the risk county EOC's of Darlington, Lee and Chesterfield.

Activation of the JIC was a joint decision between the State of South Carolina and the Utility and was initiated following the declaration of Site Area Emergency (SAE). For this exercise, in accordance with the Extent of Play Agreement (EOPA), the JIC staff was prepositioned. The JIC was well equipped and had redundancy in communications, which included landline phones, facsimiles, and internet connectivity. Both primary and secondary systems were established and maintained throughout the exercise with no failures observed. The JIC was maintained by the utility and offered ample space for the PIO's and supplemental technical staff from the utility, State of South Carolina, risk counties and the Federal agencies to perform the duties required of them.

The process for preparing and distributing news releases varied among the different agencies. In discussions with state and local representatives it was confirmed that all news releases were prepared and approved at their respected EOCs and forwarded to the JIC for dissemination to the assembled media and JIC staff. The initial news release by the Utility was prepared by the corporate PIO staff from Charlotte with all follow-on releases being prepared in the EOF then forwarded to the JIC for release. Since this was a hostile action based (HAB) event, the releases were vetted for Law enforcement sensitive information prior to final release approval. Prior to the JIC activation the Darlington County Sheriff's Office PIO screened the releases and upon activation of the JIC, the SLED PIO performed this review. It was through close coordination and collaboration that effective and unified emergency information for the public was achieved within the South Carolina JIS structure. The agencies provided accurate emergency information and instructions to the public and the news media in a timely manner.

A total of 13 press releases and 1 EAS message was received and distributed in the JIC during the exercise. There were two media briefings during the exercise. The spokespersons answered all questions asked of them and were able to discuss what actions had been taken by their organizations. The SLED PIO answered all questions concerning the actions of local and State law enforcement officials.

The State and the three risk counties performed rumor control at their respective EOCs with the Utility's rumor control functions being performed by the Customer Service Center (CSC) in Charlotte. The spokespersons were aware of the calls received and addressed trends and rumors during the media briefings.

For this capability the following REP criteria were MET: 1.a.1, 1.d.1, 1.e.1, 5.b.1

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

- a. MET: 1.a.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 Darlington County**

#### **Operational Coordination - EOC**

The Darlington County EOC staff successfully demonstrated the ability to conduct Operational Coordination, Public Information and Warning, and Critical Transportation Core Capabilities in response to a hostile action event at HBRSEP during this exercise.

The EOC was suitable and appropriately equipped with supplies and redundant communications equipment to successfully conduct emergency response activities.

The Emergency Services Director (ESD) and Emergency Management Special Programs Coordinator provided expert leadership in managing direction and control of the multi-agency

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staff in the EOC, including special staff from the State and the Utility, and coordinated special operations with the Incident Command Post (ICP). They were assertive and decisive and established unquestionable credibility.

Staff updates were scheduled and occurred at prescribed times, provided situational awareness and aided in more deliberative, timely coordination and decision making. All personnel were knowledgeable of their responsibilities, proactive, efficient and successfully performed their assigned duties, coordinating with internal and external agencies. Organizational activities were registered and archived for retrieval. Position binders and checklists served as quick reference job aids and ensured consistent, thorough procedural compliance.

Information for release to the media and public was reviewed and approved by the proper authorities prior to dissemination, and the primary notification system, which included sirens and EAS was appropriately coordinated.

Emergency responders were experienced and proficient in their responsibilities, including the use of KI, management of TCPs, evacuation, resource management, reporting, and other activities and procedures.

School officials demonstrated knowledge of procedures for ensuring the safety and accountability of students and staff following well established, conditioned procedures.

For this capability the following REP criteria were MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.2, and 2.c.1

#### Operational Coordination - ICP

The Darlington County Sheriff's Office (DCSO) personnel and several other response 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 this core capability.

Per the extent of play agreement (EOPA), response personnel were authorized to be pre-positioned at the ICP however, the Incident Commander (IC) chose only to have those responders who would have traveled from outside the county to be pre-positioned. These pre-

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positioned agencies included the South Carolina State Law Enforcement Division (SLED), South Carolina Highway Patrol (SCHP), South Carolina Department of Natural Resources Law Enforcement (SCDNR), Chesterfield County Sheriff's Office liaison and the Federal Bureau of Investigation (FBI) liaison from the Columbia Field Office. Darlington County resources responded as dispatched by the 911 center per the IC's order in real time.

The ICP had sufficient equipment and supplies to support the response. Redundant communication capabilities included 800 MHz radio, cell phone, satellite and WebEOC. While no one method was described as the primary means of communication, all were used at one time or another during this exercise and all operated without failure. All operations, communications and equipment were conducted and used from and around a 40 foot recreational trailer modified for emergency response command and control operations.

For this exercise the Darlington County Sheriff's Office Operations and Planning Officer was the IC and with that, the IC had the responsibility for the direction and control as well as coordination of the ORO response to HBRSEP. A unified command approach was used in this exercise with the IC delegating specific functions to various support agencies. As an example, the FBI liaison was the deputy IC, the SLED representative was the tactical response commander, the SCHP representative was the traffic control commander and the Darlington County Fire representative was the fire commander. While this delegation of duties is not specifically outlined in the county's plans, it is indicative of a law enforcement type of unified response.

Coordination with the HBRSEP security liaison was constant and thorough with all HBRSEP specific and ORO response activities being vetted prior to implementation. The ICP kept the county and state updated on response actions and was subsequently solicited by those decision makers in the PAD making process. All personnel at the ICP were continuously aware of the response and plant conditions. There were numerous law enforcement sensitive response discussions and decisions being made throughout this exercise and all were completed in a well-coordinated and unified manner.

For this capability the following REP criteria were MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.2

Public Information and Warning:

The ability of the Darlington County PIO to ensure that the public was alerted to and informed of actions to take during an emergency incident at the HBRSEP was successfully demonstrated. The nature of the initiating event for this potential radiological incident varied from historic radiological exercises and the ESD and EOC PIO proved themselves to be forward thinking and decisive in implementing actions to safeguard the public.

The PIO, recognizing that the nature of the threat precluded waiting for the activation of entities involved in determining and authorizing release of information to the public, developed and issued a timely emergency information message to the public to allay their fears and convey confidence in an ongoing law enforcement response.

Due to the nature of the event and a concern for unintended consequences of actions that the public might take, the ESD actively sought and attained a deviation in standard emergency alert and notification procedures. This deviation resulted in the release of an Emergency Alert System (EAS) message without preceding siren activation and the use of the system to contact residents telephonically.

The PIO frequently coordinated with State and County personnel at the JIC to ensure that media releases and media briefings accurately represented the interests of Darlington County and its citizens. He also ensured that citizens initiating public inquiries received accurate and timely responses. PIO activities for events at the ICP were coordinated and released through the Darlington County EOC.

Although there was not a siren activation during the exercise, an interview with responsible parties indicated that in the event of a siren failure, Darlington County had resources available to perform back-up route alerting.

For this capability the following REP criteria were MET: 5.a.1, 5.a.3, 5.b.1

On-Scene Security and Protection - ICP:

Law enforcement assets working out of the Darlington County ICP successfully demonstrated

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the ability to rapidly establish critical traffic control points (TCPs) effectively preventing the unsuspecting public from entering into a hostile environment. These TCPs also played a key role in containing a criminal element from the public. Excellent coordination between the ICP and the TCP's enabled rapid insertion of key assets into the controlled area in support of critical missions.

Access Control Points (ACPs) were also established at HBRSEP and the ICP by responding law enforcement personnel, providing a safer and more secure environment to work.

Law enforcement assets responding from the ICP had adequate resources and equipment to safely perform their assigned missions. An excellent radiation protection program was utilized to ensure workers were provided instructions on how to keep their exposure to radiation as low as reasonably achievable. Workers were provided appropriate dosimetry to monitor their exposures, potassium iodide to take should it be required and the proper forms to document exposure and consumption. Both dosimetry and potassium iodide are documented to be within calibration and shelf life.

Impediments to traffic flow were not present in the scenario, but by interview it was determined the capability was there and personnel were trained to handle diverse situations.

For this capability the following REP criterion was MET: 3.d.1, 3.d.2

Critical Transportation - Protective Actions for Schools (Interview):

The Darlington County School District representatives from Southside Early Childhood Center, Washington Street Elementary School, Hartsville Middle School, Eastside Christian Academy, and Lakeview Baptist Preschool were interviewed and successfully discussed the ability to implement protective measures to ensure the health and safety of the students and staff. Plans and procedures to implement protective action decisions to ensure the health and safety of children and staff were in place and comprehensive. The notification systems (School Connects and Tone Alert Radios) were capable of notifying parents and staff of any protective action decisions in a timely manner and notify parents where to pick up their children. The staff had effective procedures in place to track the students while relocated. The County had sufficient transportation resources available to ensure student and staff relocation would be accomplished promptly and in one trip.

The staff was well trained in the established protocols, knowledgeable of their responsibilities, plans and procedures, and very professional. All responses were in accordance with established plans, policies, and procedures

For this capability the following REP criterion was MET: 3.c.2

#### Public Health and Medical Services:

During the out-of-sequence Medical Service Drill, Darlington County Emergency Medical Services successfully demonstrated the ability to safely treat and transport a contaminated injured patient from a radiological contaminated area to a medical facility capable of providing the needed medical services. This challenge was accomplished while keeping exposure of the medical team and patient as low as reasonably achievable. Personal dosimetry was issued and appropriate documentation was maintained. Potassium iodide was consumed and documented by the team as directed.

Upon arrival at the incident site the patient was medically evaluated by the EMS personnel. The patient was provided necessary treatment to stabilize her injuries, cocooned to limit spread of contamination and was transported within ten minutes of the EMS teams arrival at the incident site. The team continually updated Carolina Pines Regional Medical Center (CPRMC) on the patient's condition and of their anticipated arrival time. When the team arrived at the hospital the patient was transferred to the hospital's gurney and the hospital staff was provided a patient briefing.

CPRMC personnel demonstrated appropriate medical treatment of a contaminated injured patient during this drill. The CPRMC Radiological Response Team set up the hospital's Radiological Emergency Area (REA) for the purpose of contaminated patient reception. Adequate space, appropriate equipment, supplies, dosimetry and potassium iodide were available. Hospital personnel were assisted by HBRSEP Health Physics (HP) Technicians for radiological support. Radiation exposure control was managed by the Imaging Services Director and HBRSEP HP Technicians. The patient was surveyed for contamination and when required, decontaminated with medical care taking priority. Appropriate contamination controls were demonstrated during decontamination efforts and survey of the REA for return to normal operations.

For this capability the following REP criterion was MET: 1.e.1, 3.a.1, 6.d.1

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

- a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.2, 2.c.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.a.1, 5.a.3, 5.b.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

#### **3.3.1.4 Chesterfield County**

Operational Coordination:

The Chesterfield County Emergency Management Director (EMD) and the EOC staff successfully demonstrated the ability to protect the safety of its citizens in the event of an incident at HBRSEP. This included the rapid EOC activation, notification, staffing, management, direction, control, and coordination of response activities. It also included coordination of efforts among neighboring governments and the State. Although EOC personnel were prepositioned the EMD explained the normal callout system and the ability to insure the EOC could be activated in a timely manner.

The EMD successfully demonstrated excellent direction, control and coordination of response activities at the EOC. His periodic informative briefings enabled the assembled EOC staff to effectively plan response actions and to support mutual aid requests from the Darlington County EOC, which coordinated all requests from the ICP.

The EOC had sufficient equipment and communications for conducting operations and communicating with other State and local governments and agencies. The Chesterfield County EOC was equipped with sufficient maps, phones, TVs, computers, notebooks, wall monitors, projectors, printer/copy/fax, Wi-Fi, VCR/DVR, cameras, administrative supplies and a NOAA

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Weather Radio to conduct emergency response operations in accordance with established plans and procedures. Additional means of notification and/or communication were fax, commercial land line, pager, 800 MHz radio, and cell phones.

The EMD effectively demonstrated the ability to provide direction and control of all support agencies and to make proper decisions depending upon the conditions. For example, his concurrence on the decision to issue a warning message (Stay tuned), but not to activate the sirens at the Site Area Emergency ECL demonstrated flexibility of response in ensuring the safety of the general population. The EMD also demonstrated the ability to protect special needs populations of Chesterfield County in the event conditions deteriorated and further protective actions were required, as persons with disabilities and access/functional needs would have received the REACH notifications which were activated at 0920.

The effective sense of teamwork, both at the Chesterfield County level as well as with the other risk counties, demonstrated the ability of the local communities and State agencies to respond to a hostile action involving the nearby nuclear power plant. Staff personnel were knowledgeable, professional and performed their duties proactively and in response to rapidly changing requirements.

For this capability the following REP criteria were 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.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2.

#### Public Information and Warning:

Chesterfield County Emergency Management successfully demonstrated the coordination of public information and warning; and maintenance of the information and communication necessary for coordinating response activities. The initial activation of the Chesterfield County alert and notification system was conducted by the Chesterfield County EM Director after coordination with the SEOC (host of the conference calls using the Bridge Line) to ensure consistent emergency response by all the affected counties (Darlington and Lee) as well as the SCEMD. While the sirens were not sounded due to the desire not to initiate unnecessary self-evacuation by area residents, the EAS that was prepared was very logical and appropriate to the situation. The message informed the public of the responding agencies; requested citizens to stay indoors and for them to stay tuned to local radio and television stations. The EAS message was sent for broadcast to radio stations WJMX (LP-1) and WYNN (LP-2) in Florence, SC

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(simulated).

Rumor control and public assistance calls were fielded and quickly diverted to the appropriate Chesterfield County authority to ensure concerned citizens had the most up-to-date information.

For this capability the following REP criteria were MET: 5.a.1, 5.b.1.

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

- a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.2, 2.c.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 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

### 3.3.1.5 Lee County

#### Operational Coordination:

Lee County Emergency Management Agency(LCEMA) personnel and EOC staff successfully demonstrated the capability to provide multi-agency coordination for incident management by activating and operating an EOC during a HAB incident at HBRSEP. This capability included the alerting, notification and mobilization of emergency personnel, EOC activation, direction and control, decision-making, dissemination of accurate and reliable information and warning of the public.

The Lee County Director of Emergency Management (LCDEM) and the Assistant LCDEM (ALCDEM) notified emergency personnel and EOC staff of an incident at HBRSEP using landline telephones. Upon arrival at the EOC, staff had sufficient equipment, communications and displays, to include, workstations equipped with landline phones, ESF specific plans and internet access, necessary to support emergency response. The SSS was the primary means of communication with the decision-line and landline telephones as the secondary.

The LCDEM and ALCDEM jointly provided successful direction and control of the EOC staff.

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Briefings were conducted in a timely fashion, when warranted, and actions were appropriately delegated to specific EOC staff. Coordination, planning and preparation for emergency response were conducted in a timely fashion and the staff was kept thoroughly informed of the current status of the emergency. Under the leadership of the LCDEM and ALCDEM, the staff worked seamlessly and efficiently, ensuring that all appropriate emergency response was conducted in accordance to established plans and procedures.

Although the emergency at the HBRSEP did not warrant any PADs from Lee County, the LCDEM, via interview, thoroughly explained actions to be taken at each ECL and in the event of a radiological release at HBRSEP.

The LCDEM successfully demonstrated the capability to implement protective actions for functional needs and disabled persons. The LCDEM indicated that the county Department of Social Services (DSS) representative maintained a confidential list of special needs citizens, and city and county police representatives demonstrated through interview that ample staff and vehicles were available to pick up and transport these individuals to nearby reception centers.

During an interview, the Lee County Radiological Officer (RO) was asked to simulate a radiation safety briefing as if there were a release. The RO provided emergency workers a radiation safety briefing and issued appropriate personal radiation protection equipment to include KI. The briefing was comprehensive and effective and selected emergency workers were able to answer evaluator questions related to their equipment, callback and turn-back levels, and personal protection methods in a potentially contaminated environment.

The ability to successfully establish traffic and access control at two locations and resolve any problems resulting from impediments was demonstrated by interview with two police representatives from the Lee County Police Department and City of Bishopville Police Department. These police representatives were familiar with the locations and best routes to each location. The representatives were also familiar with local evacuation assembly areas, alternate traffic and access control points, use of dosimetry and exposure limits, and the use of KI. Impediments would be resolved by using local towing companies contracted by the City of Bishopville and Lee County.

For this capability the following REP criteria were 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.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2

### Public Information and Warning:

The LCDEM and PIO successfully demonstrated the ability to develop, coordinate, and disseminate accurate and timely information to the public prior to and during an emergency. While no sirens were activated during the exercise and only one Emergency Alert System (EAS) message was prepared at the Lee County EOC and sent to the SEOC, the LCDEM and PIO clearly described the process that would be followed to disseminate the information and instructions with a sense of urgency and undue delay. Timely dissemination of information to the media would occur in the form of news releases and press conferences generated and released from the State JIC.

The ability to conduct backup route alerting and notification of the public in a timely manner following the detection of a failure of the primary alert and notification system was demonstrated by Sheriff's representatives in the EOC from the City of Bishopville and Lee County, who were interviewed regarding the procedures they would use to facilitate the notification of residents in Lee County. They were knowledgeable of their responsibility to provide prescribed messages to be broadcast and the maps of the areas requiring backup route alerting. Both law enforcement representatives expressed confidence that backup route alerting could be accomplished within 45 minutes.

For this capability the following REP criteria were MET: 5.a.1, 5.a.3, 5.b.1

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

- a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.2, 2.c.1, 3.a.1, 3.b.1, 3.c.1, 3.d.1, 3.d.2, 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

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## SECTION 4: CONCLUSION

Overall, the Region's first hostile action based REP exercise was a success. Officials and representatives from the State of South Carolina, the risk counties of Chesterfield, Darlington and Lee, and Duke Energy, as well as numerous volunteers participated in the exercise. 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. The introduction of a hostile action based 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 response at all levels.

State and local emergency response organizations demonstrated knowledge of their emergency response plans and procedures and successfully implemented them.

During this exercise, FEMA did not identify any Deficiencies or ARCA's.

# APPENDIX A: EXERCISE TIMELINE

**Table 1 - Exercise Timeline**  
**DATE: 2013-05-21, SITE: HB Robinson Steam Electric Plant, SC**

Emergency Classification Level or Event	Time Utility Declared	SC	SC JIS	Darlington County	Chesterfield County	Lee County
Unusual Event	N/A	N/A	N/A	N/A	N/A	N/A
Alert	N/A	N/A	N/A	N/A	N/A	N/A
Site Area Emergency	0746	0746	N/A	0801	0801	0801
General Emergency	N/A	N/A	N/A	N/A	N/A	N/A
Simulated Rad. Release Started	N/A	N/A	N/A	N/A	N/A	N/A
Simulated Rad. Release Terminated	N/A	N/A	N/A	N/A	N/A	N/A
Onsite - Lee County		N/A	N/A	N/A	N/A	0700
Onsite - Darlington County		N/A	N/A	0705	N/A	N/A
Onsite - SEOC and JIC		0710	0710	N/A	N/A	N/A
Onsite - ICP		N/A	N/A	0715	N/A	N/A
Onsite - Chesterfield County		N/A	N/A	N/A	0730	N/A
Warning Point notified of an incident		N/A	N/A	0739	N/A	N/A
Darlington Sheriff's Office notified of an incident		N/A	N/A	0740	N/A	N/A
NRC notified of incident; discussed with FNF Manager		0745	N/A	N/A	N/A	N/A
SAE declared by Utility		0746	N/A	N/A	N/A	N/A
Chesterfield and Lee Notified by Darlington of incident		N/A	N/A	0749	0749	0749
Chesterfield EOC operational		N/A	N/A	N/A	0757	N/A
Lee County personnel notified to report to EOC		N/A	N/A	N/A	N/A	0800
Utility notified SEOC of SAE		0800	N/A	N/A	N/A	N/A
SLED tactical assets in air from Columbia, SC		N/A	N/A	N/A	N/A	N/A
Selective Signaling System notified all Counties of SAE		0801	N/A	N/A	N/A	N/A
Lee EOC operational		N/A	N/A	N/A	N/A	0802
ENF #1 received at Lee		N/A	N/A	N/A	N/A	0802
ICP activated		N/A	N/A	0803	N/A	N/A
Chesterfield Sheriff's Office tactical resources responded		N/A	N/A	N/A	0803	N/A
Chesterfield schools on lock-down		N/A	N/A	N/A	0803	N/A
ENF #1 received at Darlington		N/A	N/A	0805	N/A	N/A
SEOC began graduated mobilization of personnel		0807	N/A	N/A	N/A	N/A
Darlington EOC operational		N/A	N/A	0808	N/A	N/A
EMS deployed to ICP		N/A	N/A	0808	N/A	N/A
ENF #1 received at Chesterfield		N/A	N/A	N/A	0809	N/A
Press Release #1 - Stay inside and off roads for Zone A0		N/A	0814	N/A	N/A	N/A
Lee PIO representative dispatched to JIC		N/A	N/A	N/A	N/A	0819
HBR reported all known adversaries down to tactical commander		N/A	N/A	0822	N/A	N/A
Darlington Declaration of Emergency		N/A	N/A	0823	N/A	N/A

**Table 1 - Exercise Timeline**  
**DATE: 2013-05-21, SITE: HB Robinson Steam Electric Plant, SC**

Emergency Classification Level or Event	Time Utility Declared	SC	SC JIS	Darlington County	Chesterfield County	Lee County
43rd CST was requested by Incident Commander		N/A	N/A	0826	N/A	N/A
Buses in Darlington were staged to move school children		N/A	N/A	0826	N/A	N/A
HBR reported two injured staff and two fires; requested assistance		0826	N/A	N/A	N/A	N/A
State PIO communication test via email		0827	0827	N/A	N/A	N/A
Lee PIO distributed Press Release #1 to local media		N/A	N/A	N/A	N/A	0830
NRC prioritized fire response; prioritization verified by Utility		0831	N/A	N/A	N/A	N/A
ICP offsite fire and EMS personnel received safety briefings		N/A	N/A	0833	N/A	N/A
SLED tactical assets arrived from Columbia, SC		N/A	N/A	0835	N/A	N/A
SEOC activated		0835	N/A	N/A	N/A	N/A
Chesterfield dispatched SWAT resources		N/A	N/A	N/A	0835	N/A
Duke Press Release reviewed by law enforcement at Darlington EOC		N/A	N/A	0837	N/A	N/A
SLED tactical assets received safety briefing and reported to staging area; FBI HR team requested via ICP liaison; JIC alternate facility staffed at raceway		N/A	N/A	0839	N/A	N/A
Darlington requested dosimetry redistribution plan from SEOC		N/A	N/A	0840	N/A	N/A
SEOC requested a flight restriction, confirmed at 0924		0840	N/A	N/A	N/A	N/A
HBR announced HAB threat is neutralized; ERO staff to report to EOF		0843	N/A	N/A	N/A	N/A
SCEMD Press Release #1		0846	N/A	N/A	N/A	N/A
HBR liaisons arrived at ICP		N/A	N/A	0847	N/A	N/A
Chesterfield Sheriff's Office dispatched two men, one APC, one SWAT truck and a blood hound team		N/A	N/A	N/A	0847	N/A
LP-1 communication received via fax		0849	N/A	N/A	N/A	N/A
Lee notified that all known adversaries are neutralized		N/A	N/A	N/A	N/A	0851
Lee ESF and Tri County ARC notified to begin RCCC operations at Lee Central HS		N/A	N/A	N/A	N/A	0852
South Carolina Highway Patrol assumes all TCPs from Darlington		N/A	N/A	0854	N/A	N/A
Conference call; follow up EAS distributed - stay inside 0-2 miles and stay tuned 3-10 miles; EAS to be released at 0920; decision made to not sound sirens; State REACH to notify community		0856	N/A	N/A	N/A	N/A
Duke released Press Release #1 to media from corporate information center (reviewed by Darlington)		0856	N/A	0856	N/A	N/A

**Table 1 - Exercise Timeline**  
**DATE: 2013-05-21, SITE: HB Robinson Steam Electric Plant, SC**

Emergency Classification Level or Event	Time Utility Declared	SC	SC JIS	Darlington County	Chesterfield County	Lee County
ICP requests dosimetry from EOC for Darlington personnel		N/A	N/A	0858	N/A	N/A
Buses in Darlington loaded; began relocating students to Florence Civic Center (2,200 students, 150 buses)		N/A	N/A	0900	N/A	N/A
Fire and EMS staged at ACP		N/A	N/A	0904	N/A	N/A
ENF #2 received at Lee		N/A	N/A	N/A	N/A	0905
1st EAS Message drafted at SEOC - stay tuned		0905	N/A	N/A	N/A	N/A
NRC reported that an explosion occurred near spent fuel pool		0908	N/A	N/A	N/A	N/A
NRC issued corrected Press Release		0908	N/A	N/A	N/A	N/A
HBR liaison notified ICP planning staff that a vehicle is fire		N/A	N/A	0909	N/A	N/A
Darlington distributed Press Release #2 - law enforcement activities		N/A	N/A	0912	N/A	N/A
LP-1 communication received via fax		0913	N/A	N/A	N/A	N/A
ICP established challenged movement procedures between onsite and offsite personnel and equipment		N/A	N/A	0913	N/A	N/A
LP-1 received message via email to be broadcast at 0920		0917	N/A		N/A	N/A
EAS Message #1 broadcast - stay inside 0-2 miles and stay tuned 3-10 miles		0920	N/A	N/A	N/A	N/A
HBR non-essential personnel to be released; request denied		N/A	N/A	0921	N/A	N/A
Press Release #2 from State - stay inside 0-2 miles and stay tuned 3-10 miles (prepared)		0922	N/A	N/A	N/A	N/A
State REACH activated with stay tuned message		0923	N/A	0923	N/A	N/A
Darlington confirmed no fly zone and railroad blockage in place		N/A	N/A	0924	N/A	N/A
NRC reported HBR is no longer on lock-down		0924	N/A	N/A	N/A	N/A
Students in Darlington arrived at Florence Civic Center		N/A	N/A	0926	N/A	N/A
HBR begins coordinating requests for resources and movement with Incident Commander		N/A	N/A	0926	N/A	N/A
Incident Commander requests bus transportation for non-essential personnel at plant (requested delayed due to transport of school students)		N/A	N/A	0927	N/A	N/A
SLED tactical assets go onsite; FBI HR team is backing up SLED - being kept in reserve, all teams have EOD and medical assets		N/A	N/A	0929	N/A	N/A
DSS notified EMS to begin evacuation of functional needs in Darlington		N/A	N/A	0936	N/A	N/A
ICP onsite; fires are out		N/A	N/A	0936	N/A	N/A
SLED confirmed with SEOC that HBR is still on lock-down		0937	N/A	N/A	N/A	N/A

**Table 1 - Exercise Timeline**  
**DATE: 2013-05-21, SITE: HB Robinson Steam Electric Plant, SC**

Emergency Classification Level or Event	Time Utility Declared	SC	SC JIS	Darlington County	Chesterfield County	Lee County
3rd ICP briefing confirmed one boat on water; requested two additional boats with personnel		N/A	N/A	0940	N/A	N/A
Press Release #2 from State - stay inside 0-2 miles and stay tuned 3-10 miles (released)		0941	N/A	N/A	N/A	N/A
Lee Press Release #1 - notification of event at HBR		N/A	N/A	N/A	N/A	0942
EOF activated, including full NRC Incident Team; no State personnel at EOF throughout exercise		0944	N/A	N/A	N/A	N/A
PIO staff at raceway moved to JIC (simulated)		N/A	0945	N/A	N/A	N/A
ICP began discussions on movement of non-essential from HBR to raceway		N/A	N/A	0946	N/A	N/A
JTTF Columbia, SC personnel at raceway conducting interviews		N/A	N/A	0946	N/A	N/A
FBI evidence response team on stand-by		N/A	N/A	0948	N/A	N/A
Duke released Press Release #2		0952	N/A	N/A	N/A	N/A
ENF #3 received at Darlington		N/A	N/A	0953	N/A	N/A
Selective Signaling System reported non-working fax; ENF #3		0958	N/A	N/A	N/A	N/A
ENF #3 received at Lee		N/A	N/A	N/A	N/A	1000
ENF #3 received at State		1010	N/A	N/A	N/A	N/A
JIC activated		N/A	1025	N/A	N/A	N/A
FBI Regional SWAT arrived at ICP		N/A	N/A	1025	N/A	N/A
SLED PIO coordinated with Darlington Sheriff's Office POI on nature of threat ; it has been eliminated		N/A	N/A	1026	N/A	N/A
Press release #3 from State		1030	N/A	N/A	N/A	N/A
Press Release #3 from Utility		1030	N/A	N/A	N/A	N/A
Press Release #2 from NRC		1039	N/A	N/A	N/A	N/A
1st Media Briefing at JIC		N/A	1043	N/A	N/A	N/A
ENF #4 received at Darlington		N/A	N/A	1053	N/A	N/A
ENF #4 received at Chesterfield		N/A	N/A	N/A	1055	N/A
ENF #4 received at Lee		N/A	N/A	N/A	N/A	1058
Specific crime scene processing procedures established with HBR security		N/A	N/A	1105	N/A	N/A
SEOC bridge conference call		1109	N/A	N/A	N/A	N/A
Darlington EMS notified that Carolina Pines Hospital is evacuating non-critical patients and diverting incoming critical patients		N/A	N/A	1110	N/A	N/A
Press Release #4 from Utility - JIC is activated		1111	N/A	N/A	N/A	N/A
Two patients from HBR were diverted from Carolina Pines Hospital to McLeod due to hospital capabilities, not evacuation		1127	N/A	N/A	N/A	N/A
NRC reported State is considering evacuation if spent fuel is boiling		1135	N/A	N/A	N/A	N/A

**Table 1 - Exercise Timeline**  
DATE: 2013-05-21, SITE: HB Robinson Steam Electric Plant, SC

Emergency Classification Level or Event	Time Utility Declared	SC	SC JIS	Darlington County	Chesterfield County	Lee County
EOF called DHEC liaison (simulated) and requested number of batches of spent fuel in pool and the time to boil		1145	N/A	N/A	N/A	N/A
ICP evacuation preparatory discussions began with Highway Patrol on managing general population evacuation		N/A	N/A	1145	N/A	N/A
EOF called DHEC liaison to report 21 batches of spent fuel in pool		1152	N/A	N/A	N/A	N/A
2nd Media Briefing at JIC		N/A	N/A	1152	N/A	N/A
ENF #5 - follow up		1155	1155	N/A	N/A	N/A
EOF called DHEC liaison to report water was being added to spent fuel pool and time to boil was 22.1 hours		1156	N/A	N/A	N/A	N/A
ICP reported 130 buses at staging area		N/A	N/A	1201	N/A	N/A
Evacuation corridor for non-essential personnel being open and secured by SLED		N/A	N/A	1202	N/A	N/A
15 buses moved from staging to TCP		N/A	N/A	1207	N/A	N/A
Buses moved onsite to remove non-essential HBR personnel		N/A	N/A	1215	N/A	N/A
ENF #6 - end exercise		1226	N/A	N/A	N/A	N/A

## APPENDIX B: EXERCISE EVALUATORS AND TEAM LEADERS

DATE: 2013-05-21, SITE: HB Robinson Steam Electric Plant, SC

LOCATION	EVALUATOR	AGENCY
State of South Carolina	*Joe Harworth Lisa Rink Alex Sera	FEMA FEMA FEMA
South Carolina Joint Information System	Roy Smith *Robert Spence	ICFI FEMA
Darlington County	JT Ackermann Matthew Bradley Walt Cushman Willis Larrabee Ronald Shaw *Odis Spencer	FEMA FEMA FEMA ICFI FEMA FEMA
Chesterfield County	*Michael Dolder Gerald Mclemore	FEMA FEMA
Lee County	Keith Earnshaw *Quintin Ivy	ICFI FEMA
* Team Leader		

## APPENDIX C: ACRONYMS AND ABBREVIATIONS

Acronym	Meaning
AAC	After Action Conference
AAR	After Action Report
ARC	American Red Cross
ARCA	Areas Requiring Corrective Action
ARES	Amateur Radio for Emergency Services
CFR	Code of Federal Regulations
DHS	Department of Homeland Security
DNR	Department of Natural Resources
DOT	Department of Transportation
DRD	Direct Reading Dosimeter
DSS	Department of Social Services
EAL	Emergency Action Level
EAS	Emergency Alert System
ECL	Emergency Classification Level
EEG	Exercise Evaluation Guide
EMA	Emergency Management Agency
EMD	Emergency Management Director
EMS	Emergency Medical Services
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EOPA	Extent of Play Agreement
EPA	Environmental Protection Agency
EPZ	Emergency Planning Zone
ESF	Emergency Support Function
EW	Emergency Worker
EWD	Emergency Worker Decontamination
FEMA	Federal Emergency Management Agency
FMT	Field Monitoring Team
FOUO	For Official Use Only
GE	General Emergency
HAZMAT	Hazardous Materials
HBRSEP	H.B. Robinson Steam Electric Plant
HQ	Headquarters
HSEEP	Homeland Security Exercise and Evaluation Program

IC	Incident Commander
IP	Improvement Plan
IPZ	Ingestion Pathway Zone
JIC	Joint Information Center
KI	Potassium Iodide
LP-1	Local Primary -1
MOU	Memorandum of Understanding
mR	milliroentgen
mR/h	milliroentgen per hour
NGO	Non-Governmental Organization
NOUE	Notification of Unusual Event
NRC	Nuclear Regulatory Commission
NWS	National Weather Service
OOS	Out-of-Sequence
ORO	Offsite Response Organization
PAD	Protective Action Decision
PAG	Protective Action Guide
PAR	Protective Action Recommendation
PIO	Public Information Officer
PPE	Personal Protective Equipment
PRD	Permanent Record Dosimetry
R	Roentgen
R/h	Roentgen(s) per hour
RAC	Regional Assistance Committee
RACES	Radio Amateur Civil Emergency Service
REA	Radioactive Emergency Area
REM	Roentgen Equivalent Man
REP	Radiological Emergency Preparedness
RERP	Radiological Emergency Response Plan
RO	Radiological Officer
SAE	Site Area Emergency
SCHP	South Carolina Highway Patrol
SEOC	State Emergency Operations Center
SIMCELL	Simulation Cell
SIP	Shelter-in-Place
SOG	Standard Operating Guide
SOP	Standard Operating Procedure
SRD	Self-Reading Dosimeter
SSS	Selective Signaling System
TCL	Target Capabilities List

TCP	Traffic Control Point
THD	Technological Hazard Division
TLD	Thermoluminescent dosimeter
UTL	Universal Task List
VFD	Volunteer Fire Department

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