

V. C. Summer Nuclear Station

October 7, 2009

Final Report - Radiological Emergency Preparedness Program

January 29, 2010



FEMA

FEMA Region IV





FEMA

Final Exercise Report

V. C. Summer Nuclear Station

Licensee: **South Carolina Electric & Gas Company**

Exercise Date: **October 7, 2009**

Report Date: **January 29, 2010**

**U.S. DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY
REGION IV**

**3003 Chamblee Tucker Road
Atlanta, Georgia 30341**

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I. EXECUTIVE SUMMARY

On October 7, 2009, the Federal Emergency Management Agency Region IV, Radiological Emergency Preparedness Program staff evaluated a plume exposure pathway exercise in the emergency planning zone around the V. C. Summer Nuclear Station. During the weeks of July 6, August 25, and October 5, 2009 the State of South Carolina and Fairfield, Lexington, Newberry and Richland Counties, as affected, conducted the following out-of-sequence demonstrations: protective actions for schools, State and county traffic control points, emergency worker monitoring and decontamination, reception and congregate care. The purpose of the exercise was to assess the level of State and local preparedness in responding to a radiological emergency. This exercise was held 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 was conducted on October 2, 2007. The qualifying emergency preparedness exercise was conducted on November 13, 1981.

FEMA wishes to acknowledge the efforts of the many individuals from Fairfield, Lexington, Newberry and Richland Counties, the State of South Carolina, the American Red Cross, Department of Energy's (DOE) Radiological Assistance Program (RAP) Team and the volunteers, who participated in this exercise. 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. Cooperation and teamwork of all the participants were evident during this exercise.

On October 2, 2009, a reactor trip occurred unrelated to any safety systems. The analysis and correction of the problem precluded the site's full participation in the exercise. However, SCE & G supported the exercise by establishing a control cell at their Emergency Operations Facility (EOF) to provide plant information to and coordination with the offsite authorities; activating the joint information center at their new facility and providing liaisons to the State and County EOCs. The actions taken by SCE&G were commendable.

The DOE RAP Team participated in this exercise as part of an ongoing effort by DOE to provide assistance to State governments. The RAP Team provided an additional field monitoring team and coordinated their efforts with South Carolina Department of Health and Environmental Control (DHEC).

State and local organizations, except where noted demonstrated the knowledge of their emergency response plans and procedures and successfully implemented those plans and procedures. No Deficiencies or Areas Requiring Corrective Action (ARCA) were identified.

II. INTRODUCTION

On December 7, 1979, the President directed the Federal Emergency Management Agency (FEMA) to assume the lead responsibility for all offsite nuclear planning and response. FEMA became a part of the Department of Homeland Security with its creation in 2002. The Radiological Emergency Preparedness (REP) Program conducts its activities pursuant to Title 44 Code of Federal Regulations (CFR) Parts 350, 351 and 352. These regulations are a key element in the REP Program that was established following the Three Mile Island Nuclear Station accident in March 1979.

Title 44 CFR 350 establishes the policies and procedures for the REP Program's initial and continued approval of State and local governments' radiological emergency planning and preparedness for commercial nuclear power plants. This approval is contingent, in part, on State and local government participation in joint exercises with licensees.

FEMA's responsibilities in radiological emergency planning for fixed nuclear facilities (FNF) include the following:

- Taking the lead in offsite emergency planning and in the review and evaluation of Radiological Emergency Response Plans (RERP) and procedures developed by State and local governments;
- Determining whether such plans and procedures can be implemented on the basis of observation and evaluation of exercises of the plans and procedures conducted by State and local governments;
- Responding to requests from the Nuclear Regulatory Commission (NRC) to the REP Program pursuant to the Memorandum of Understanding between the NRC and FEMA (Federal Register, Vol. 58, No. 176, September 14, 1993).
- Coordinating the activities of Federal agencies with responsibilities in the radiological emergency planning process:
 - Department of Agriculture
 - Department of Commerce
 - Department of Energy
 - Department of Health and Human Services
 - Department of Homeland Security
 - Department of the Interior
 - Department of Transportation
 - Environmental Protection Agency
 - Food and Drug Administration and
 - Nuclear Regulatory Commission.

Field representatives of these agencies serve on the FEMA Region IV Regional Assistance Committee (RAC), which is chaired by FEMA.

Formal submission of the RERPs for the V. C. Summer Nuclear Station to FEMA Region IV by the State of South Carolina and involved local jurisdictions occurred on March 31, 1981. Formal approval of the RERPs was granted by FEMA on November 13, 1981, under Title 44 CFR 350.

A REP exercise was evaluated on October 7, 2009, during the weeks of July 6, August 25, and October 5, 2009, the State and Fairfield, Lexington, Newberry and Richland Counties, as affected, conducted the following out-of-sequence demonstrations: protective actions for schools, State and county traffic control points, emergency worker monitoring and decontamination, reception and congregate care in Fairfield, Lexington, Newberry and Richland Counties.

FEMA assessed the capabilities of State and local emergency preparedness organizations to implement their RERPs and procedures to protect the public health and safety during a radiological emergency involving the V. C. Summer Nuclear Station. This report presents the results of the exercise and findings on the performance by offsite response organizations (ORO) during a simulated radiological emergency.

The findings presented are based on the evaluations of the Federal evaluator team, with final determinations being made by the RAC Chair.

The criteria utilized in the evaluation process are contained in:

- NUREG-0654/FEMA-REP-1, Rev. 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980;
- FEMA "Interim Radiological Emergency Preparedness Manual," dated August 2002.

Section III, entitled "Exercise Overview," presents basic information and data relevant to the exercise. This section contains a description of the plume pathway EPZ, a listing of all participating jurisdictions and functional entities, which were evaluated, and a table presentation of the time of actual occurrence of key exercise events and activities.

Section IV, entitled "Exercise Evaluation and Results," presents summary information on the demonstration of applicable exercise criteria at each jurisdiction or functional entity evaluated in a results only format.

III. EXERCISE OVERVIEW

This section contains data and basic information relevant to the October 7, 2009 exercise and out-of-sequence activities that occurred during the weeks of July 6, August 25, and October 5, 2009. The purpose of the exercise was to test Federal, State and local response capabilities in the area surrounding the V. C. Summer Nuclear Station (VCSNS).

A. Plume Emergency Planning Zone Description

The VCSNS is located approximately 30 miles northwest of Columbia, South Carolina at the southern end of the Monticello Reservoir and near the western border of Fairfield County. The 10-mile EPZ includes portions of Fairfield, Lexington, Newberry and Richland Counties. The land use in the EPZ is rural in nature. The estimated permanent population in the EPZ is 10,880. Lake Monticello is the major recreational area in the EPZ. The State of South Carolina has divided the EPZ into 13 local planning zones.

B. Exercise Participants

The following agencies, organizations, and units of government participated in the VCSNS exercise on October 7, 2009.

FEDERAL GOVERNMENT

Department of Energy

STATE OF SOUTH CAROLINA

Office of the Adjutant General, Emergency Preparedness Division
Department of Health & Environmental Control, Bureau of Land Waste
Management, Division of Health & Environmental Control
Department of Social Services
Department of Public Safety, Bureau of Protective Services and Highway
Patrol
Department of Natural Resources, Law Enforcement Division

RISK JURISDICTIONS

Fairfield County
Lexington County
Newberry County
Richland County

PRIVATE/VOLUNTEER ORGANIZATIONS

American Red Cross
Fairfield County Volunteer Fire Department
Radio Amateur Civil Emergency Service
State Guard

C. Exercise Timeline

Table 1, on the following page, presents the time at which key events and activities occurred during the VCSNS exercise on October 7, 2009. Included are times notifications were received or action was taken by the participating jurisdictions/functional entities.

Table 1. Exercise Timeline

DATE AND SITE: October 7, 2009 – V. C. Summer Nuclear Station

Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received or Action Was Taken							
		SEOC	DHEC	MOC	JIC	FAIRFIELD COUNTY	LEXINGTON COUNTY	NEWBERRY COUNTY	RICHLAND COUNTY
Unusual Event	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Alert	0810	0825	0825	0838	0831	0817	0832	0827	0815
Site Area Emergency	0915	0926	0926	0950	0917	0926	0930	0928	0925
General Emergency	1105	1110	1110	1108	1112	1114	1110	1117	1114
Simulated Rad. Release Started	1105	1110	1110	1108	1112	1114	1130	1117	1114
Simulated Rad. Release Terminated	Ongoing	Ongoing	Ongoing	Ongoing	Ongoing	Ongoing	Ongoing	Ongoing	Ongoing
Facility Declared Operational		0850	0850	0815	0849	0929	0900	0800	0927
Declaration of State of Emergency:									
State		0855	0855	0936	0856	0915	0855	0914	0909
Local								0917	0937
Exercise Terminated	1217	1215	1235	1223	1210	1218	1212	1220	1215
Early Precautionary Actions:									
Clearing Lake Monticello		0843				0915			0909
Agriculture Advisory		0941			1030	1020	1016	1010	1016
1 st Protective Action Decision: Public Warning		1001	1001	1001	1001	1001	1001	1001	1001
1 st Siren Activation		1005	1005	1005	1005	1005	1005	1005	1005
1 st EAS Message		1010	1010	1010	1010	1010	1010	1010	1010
2 nd Protective Action Decision:									
Evacuate Zones: A0, B1, B2, C1, and C2		1145	1145	1145	1145	1145	1145	1145	1145
Shelter Zones: All Other Zones									
2 nd Siren Activation		1150	1150	1150	1150	1150	1150	1150	1150
2 nd EAS Message		1155	1155	1155	1155	1155	1155	1155	1155
KI Decision: Distribute		0941			1025	1020	1034	1030	1021
KI Decision: Ingest		1145	1145	1145		1154	1148	1143	1150

IV. EXERCISE EVALUATION AND RESULTS

This section contains the results and preliminary findings of the evaluation for all jurisdictions and functional entities that participated in the exercise on October 7, 2009 and out of sequence activities during the weeks of July 6, August 25, and October 5, 2009. The exercise tested the offsite emergency response capabilities of State and local governments within the 10-mile EPZ around the V. C. Summer Nuclear Station.

Each jurisdiction and functional entity was evaluated based on their demonstration of criteria as delineated in REP Exercise Evaluation Methodology, dated August 2002. Detailed information on the exercise criteria and the extent-of-play agreement used are found in Appendix 3 of this report.

A. Table 2: Summary of Results of Exercise Evaluation

The matrix presented in Table 2, on the following page, presents the status of all exercise criteria that were scheduled for demonstration during this exercise, by all participating jurisdictions and functional entities. Exercise criteria are listed by number. The demonstration status of those criteria is indicated by the use of the following letters:

- M - Met (No Deficiency or ARCAs assessed and no unresolved ARCAs from prior exercises)
- D - Deficiency assessed
- A - ARCA(s) assessed or unresolved ARCA(s) from prior exercise(s)
- N - Not Demonstrated (Reason explained in Subsection B)

Table 2. Summary of Exercise Evaluation

DATE AND SITE: October 7, 2009 – V. C. Summer Nuclear Station

ELEMENT/Sub-Element	SEOC	DHEC	EOF	JIC	FAIRFIELD COUNTY	LEXINGTON COUNTY	NEWBERRY COUNTY	RICHLAND COUNTY
1. EMERGENCY OPERATIONS MANAGEMENT								
1.a.1. Mobilization	M	M	N	M	M	M	M	M
1.b.1. Facilities			N	M				
1.c.1. Direction and Control	M	M	N		M	M	M	M
1.d.1. Communications Equipment	M	M	N	M	M	M	M	M
1.e.1. Equipment & Supplies to Support Operations	M	M	N	M	M	M	M	M
2. PROTECTIVE ACTION DECISION MAKING								
2.a.1. Emergency Worker Exposure Control	M	M			M	M	M	M
2.b.1. Rad Assessment & PARs & PADs Based on Available Info	M	M	N					
2.b.2. Rad Assessment and PARs and PADs for the General Public	M	M			M	M	M	M
2.c.1. Protective Action Decisions for Special Populations					M	M	M	M
2.d.1. Rad Assessment & Decision Making for Ingestion Exposure								
2.e.1. Rad Assmt & Decision Making for Relocation, Re-entry & Return								
3. PROTECTIVE ACTION IMPLEMENTATION								
3.a.1. Implementation of Emergency Worker Control	M	M			M	M	M	M
3.b.1. Implementation of KI Decisions	M	M			M	M	M	M
3.c.1. Implementation of PADs for Special Populations					M	M	M	M
3.c.2. Implementation of PADs for Schools						M	M	
3.d.1. Implementation of Traffic and Access Control	M				M	M	M	M
3.d.2. Impediments to Evacuation and Traffic and Access Control	M				M	M	M	M
3.e.1. Implementation of Ingestion Decisions Using Adequate Info								
3.e.2. Implementation of IP Decisions Showing Strategies & Instruct. Mat.								
3.f.1. Implementation of Relocation, Re-entry and Return Decisions								
4. FIELD MEASUREMENT and ANALYSIS								
4.a.1. Plume Phase Field Measurement & Analysis Equipment		M						
4.a.2. Plume Phase Field Measurement & Analysis Management	M	M						
4.a.3. Plume Phase Field Measurements & Analysis Procedures		M						
4.b.1. Post Plume Field Measurement & Analysis								
4.c.1. Laboratory Operations								
5. EMERGENCY NOTIFICATION & PUBLIC INFO								
5.a.1. Activation of Prompt Alert and Notification	M				M	M	M	M
5.a.2. Activation of Prompt Alert and Notification 15-Minute (Fast Breaker)								
5.a.3. Activation of Prompt Alert & Notification Backup Alert & Notification	M				M	M	M	M
5.b.1. Emergency Info and Instructions for the Public and the Media	M	M		M	M	M	M	M
6. SUPPORT OPERATIONS/FACILITIES								
6.a.1. Monitoring & Decon of Evacuees & EWs and Registration of Evacuees					M	M	M	M
6.b.1. Monitoring and Decon of Emergency Worker Equipment					M	M	M	M
6.c.1. Temporary Care of Evacuees					M	M	M	M
6.d.1. Transport and Treatment of Contaminated Injured Individuals								

LEGEND: = Met **D** = Deficiency **A** = ARCA **N** = Not Demonstrated

B. Status of Jurisdictions Evaluated

This subsection provides information on the evaluation of each participating jurisdiction and functional entity in a jurisdictional results based format. Presented below is a definition of the terms used in this subsection relative to Criterion demonstration status.

- **Met** - Listing of the demonstrated exercise criteria under which no Deficiencies or ARCAs were assessed during this exercise and under which no ARCAs assessed during prior exercises remain unresolved.
- **Deficiency** - Listing of the demonstrated exercise criterion under which one or more Deficiencies was assessed during this exercise. Included is a description of each Deficiency and recommended corrective actions.
- **Area Requiring Corrective Actions** - Listing of the demonstrated exercise criterion under which one or more ARCAs were assessed during the current exercise or ARCAs assessed during prior exercises that remain unresolved. Included is a description of the ARCA assessed during this exercise and the recommended corrective action to be demonstrated before or during the next biennial exercise.
- **Not Demonstrated** - Listing of the exercise criteria, which were not demonstrated as scheduled during this exercise and the reason, they were not demonstrated.
- **Prior ARCAs - Resolved** – Description(s) of ARCA(s) assessed during previous exercises, which were resolved in this exercise and the corrective actions demonstrated.
- **Prior ARCAs - Unresolved** – Description(s) of ARCA(s) assessed during prior exercises, which were not resolved in this exercise. Included is the reason the ARCA remains unresolved and recommended corrective actions to be demonstrated before or during the next biennial exercise.

The following are definitions of the two types of exercise issues, which may be discussed in this report.

- A **Deficiency** is defined in the FEMA Interim REP Manual as "...an observed or identified inadequacy of organizational performance in an exercise that could cause a finding that offsite emergency preparedness is not adequate to provide reasonable assurance that appropriate protective measures can be taken in the event of a radiological emergency to protect the health and safety of the public living in the vicinity of a nuclear power plant."
- An **ARCA** is defined in the Interim REP Manual as "...an observed or identified inadequacy of organizational performance in an exercise that is not considered, by itself, to adversely impact public health and safety."

1. STATE OF SOUTH CAROLINA

1.1 State Emergency Operations Center

The Operation's Chief, acting as the Governors' Authorized Representative (GAR), provided effective direction and control throughout the exercise. With the assistance of his staff all personnel were kept aware of the situation and prepared for any changes in status. The State Emergency Operations Center (SEOC) Public Information Officer (PIO) successfully coordinated the initiation and dissemination of timely and accurate information to the Emergency Alert Station (EAS) and Joint Information Center (JIC). The 24-hour Warning Point and overall SEOC Communications capabilities are extensive. Protective action recommendations from the utility were reviewed by the Department of Health and Environmental Control (DHEC) and then presented to the Operation's Chief and agency staff for review and concurrence and subsequently presented to the counties on the decision line.

- a. **MET:** Criteria 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.2, 5.a.1 and 5.b.1
- b. **DEFICIENCY:** NONE
- c. **AREA REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** NONE
- f. **PRIOR ARCAs - UNRESOLVED:** NONE

1.2 Dose Assessment

DHEC dose assessment personnel were diligent in monitoring and evaluating plant, radiological, and meteorological data. They effectively utilized the V. C. Summer Nuclear Station Liaison in the DHEC area to answer plant related questions. Dose projections were performed independently by two (2) DHEC individuals to validate the dose assessments performed by SCE & G. The Emergency Response Coordinator (ERC) provided effective leadership to all DHEC personnel through frequent reminders and regular plant status reports over the state wide hand held 800 MHZ radio. The ERC provided timely precautionary actions and timely Protective Action Recommendations (PAR) to the GAR. The Department of Energy (DOE), Radiological Assistance Program (RAP) participated in the exercise with field monitoring team and dose assessment personnel. DHEC has upgraded their communications to use more modern information technology solutions to record and display information at all DHEC locations including field monitoring team data and dose assessment results. DHEC personnel were knowledgeable, effectively utilized their procedures and demonstrated good teamwork.

- a. **MET:** Criteria 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.1, 2.b.2 and 4.a.2
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** NONE
- f. **PRIOR ARCAs - UNRESOLVED:** NONE

1.3 Mobile Operations Center

The DHEC Mobile Operations Center (MOC) provided direction to field monitoring teams (FMT) to locate and track a simulated radiological plume. The MOC Coordinator and Field Director provided excellent direction and control of the MOC and FMT personnel. They worked closely with the DOE RAP team, to ensure appropriate exposure control for emergency workers and plume monitoring. The Exposure Control Site Safety Officer provided a thorough safety and radiological briefing to the MOC team. Overall, the members of the MOC staff were very committed to their tasks, understood their specific procedures, and efficiently and effectively performed their duties.

- a. **MET:** Criteria 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 3.a.1 and 4.a.2
- b. **DEFICIENCY:** NONE
- c. **AREA REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** NONE
- f. **PRIOR ARCAs - UNRESOLVED:** NONE

1.4 Radiological Field Monitoring Team

Two DHEC field teams and one non-evaluated DOE RAP field team were deployed during this exercise. Field team members demonstrated surveying methods and sampling techniques used to accurately identify the location of the plume for this exercise. Ample equipment and supplies were available to characterize the radiological release. Exposure control was well maintained and monitored. Personnel displayed teamwork and cooperation in their participation for this exercise.

- a. **MET:** Criteria 1.a.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 4.a.1, 4.a.2 and 4.a.3

- b. **DEFICIENCY: NONE**
- c. **AREA REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

1.5 Emergency Operations Facility

On October 2, 2009, a reactor trip occurred unrelated to any safety systems. The analysis and correction of the problem precluded the site's participation in the exercise. However, SCE & G to support the exercise established a control cell at their Emergency Operations Facility (EOF) that provided plant information to and coordination with the offsite authorities.

- a. **MET: NONE**
- b. **DEFICIENCY: NONE**
- c. **AREA REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: 1.a.1., 1.b.1., 1.c.1, 1.d.1, 1.e.1, 2.b.1**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

1.6 Joint Information Center

South Carolina demonstrated its capability to disseminate timely and accurate information to the media and public through the new V.C. Summer Joint Information Center (JIC). The South Carolina Emergency Management Director (SCEMD) Deputy PIO, aided by the DHEC PIO and representatives of Fairfield, Lexington, Newberry and Richland Counties worked closely with SCE&G personnel in meeting the tenets of the JIC concept. Personnel in the public inquiry cell remained abreast of a changing situation and were able not only to respond to the public, but identify trends and aid in rectifying erroneous information.

- a. **MET: Criteria 1.a.1, 1.b.1, 1.d.1, 1.e.1 and 5.b.1**
- b. **DEFICIENCY: NONE**
- c. **AREA REQUIRING CORRECTIVE ACTION: NONE**

- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** NONE
- f. **PRIOR ARCAs - UNRESOLVED:** NONE

1.7 LP-1 Radio Station (WCOS) - Emergency Alert System Station

WCOS (97.5 FM), the designated LP-1 radio station, successfully demonstrated the process for receiving and transmitting an Emergency Alert System (EAS) messages upon receiving the request via fax from the SEOC. The EAS message was authenticated and a simulated broadcast was made in a timely manner. The process demonstrated was conducted in accordance with established procedures.

- a. **MET:** Criterion 5.a.1
- b. **DEFICIENCY:** NONE
- c. **AREA REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** NONE
- f. **PRIOR ARCAs - UNRESOLVED:** NONE

1.8 Traffic Control Points

The South Carolina Highway Patrol (SCHP) successfully discussed the process by which it would establish, support and maintain traffic control points (TCP) and clear impediments during out of sequence evaluations at the Fairfield County Emergency Operations Center (FCEOC). Personnel from SCHP and Fairfield County Emergency Management Agency participated in the discussion and were well trained in the areas assigned, and fully prepared to assist evacuees from the 10-mile EPZ.

- a. **MET:** Criteria 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.d.1 and 3.d.2
- b. **DEFICIENCY:** NONE
- c. **AREA REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** NONE
- f. **PRIOR ARCAs - UNRESOLVED:** NONE

1.9 Lake Clearance

Lake clearance was discussed out of sequence on August 25, 2009 by two (2) Department of Natural Resources (DNR) officers. Appropriate signage was prominently posted at the two Lake Monticello public boat landings reviewed during this exercise. The officers gave a very detailed description of how they would conduct the lake clearing operation to ensure it would be accomplished in a timely manner. The officers were well trained, knowledgeable of emergency worker exposure control, use of dosimetry and Potassium Iodide (KI). The officers possessed sufficient equipment and communications to accomplish their assigned duties.

- a. **MET:** Criteria 1.a.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, and 5.a.3
- b. **DEFICIENCY:** NONE
- c. **AREA REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** NONE
- f. **PRIOR ARCAs - UNRESOLVED:** NONE

2. RISK JURISDICTIONS

2.1 FAIRFIELD COUNTY

2.1.1 Emergency Operations Center

The Fairfield County Emergency Management Director (EMD) exhibited solid direction and control of the FCEOC. Staff briefings were concise and prompt as exercise events transpired. The seasoned EOC Staff was knowledgeable and well versed in their duties. Teamwork was highly visible and reinforced with positive energy. The 911 communications center personnel promptly and accurately recorded emergency notification forms (ENF) and monitored V.C. Summer's dedicated line. Technical information from the ENFs was thoroughly explained to the EOC Staff by the VCSNS EOC representative. The capability to fully understand every detail of plant emergency operations is an immense advantage to any county. County level support was evident; as the County Council Chairman and County Administrator observed operations for a brief period.

- a. **MET:** Criteria 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 and 5.b.1

- b. **DEFICIENCY: NONE**
- c. **AREA REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

2.1.2 Traffic Control Points

County Sheriff's Deputies discussed the process by which they would establish, support and maintain traffic control points and clear impediments during out of sequence (OOS) evaluations at the White Oak Conference Center. Personnel from Sheriff's Office and Emergency Management Agency participated in the discussion and were well trained in the areas assigned, and fully prepared to assist evacuees from the 10-mile EPZ.

- a. **MET: Criteria 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.d.1 and 3.d.2**
- b. **DEFICIENCY: NONE**
- c. **AREA REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

2.1.3 Emergency Worker Decontamination

The Fairfield County Volunteer Fire Department displayed good techniques and procedures in the demonstration of emergency worker and vehicle monitoring and decontamination. The area was clearly laid out, there was ample signage and personnel were very deliberate in the accomplishment of their tasks.

- a. **MET: Criteria 1.e.1, 3.a.1, 6.a.1 and 6.c.1**
- b. **DEFICIENCY: NONE**
- c. **AREA REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**

- f. **PRIOR ARCAs - UNRESOLVED: NONE**

2.1.4 Reception and Congregate Care

County personnel demonstrated the process by which they would monitor, decontaminate, register and shelter evacuees during an out of sequence evaluation at the White Oak Conference Center. Personnel from Fairfield County Emergency Management, Department of Social Services (DSS), Sheriff's Office, Volunteer Fire Department and the Central Carolina Chapter of the American Red Cross (ARC) participated. The demonstration indicated that personnel were well trained in the areas assigned, able to establish the site in a timely manner, and fully prepared to assist evacuees from the 10-mile EPZ.

- a. **MET: Criteria 1.e.1, 3.a.1, 6.a.1 and 6.c.1**
- b. **DEFICIENCY: NONE**
- c. **AREA REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

2.1.5 Back-up Route Alerting

County Sheriff's Deputies discussed the process by which they would complete back-up route alerting in the event of a siren failure during an out of sequence evaluation at the White Oak Conference Center. Interviewed deputies had area maps which indicated siren locations, coverage areas and instructions on completing back-up route alerting. Interviewed deputies estimated it would take no more than 40 minutes to complete the assigned back-up route alerting of any given location within the county.

- a. **MET: Criteria 3.a.1 and 5.a.3**
- b. **DEFICIENCY: NONE**
- c. **AREA REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

2.2 LEXINGTON COUNTY

2.2.1 Emergency Operations Center

The Emergency Management Director displayed good direction and control of the Lexington County Emergency Operations Center (LCEOC). LCEOC staff members were professional and highly proficient in their approach to tasks, fully conversant with plans and procedures, and proactive in their implementation. The full participation by an Assistant County Commissioner demonstrated the county's commitment to protecting the citizens of the county in the event of an emergency at VCSNS. Particularly worthy of note was the WebEOC Administrator's prompt posting of information into the computer-based WebEOC system and its projection for the continuous use by EOC staff. All personnel in the EOC performed professionally and displayed excellent teamwork.

- a. **MET:** Criteria 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 and 5.b.1
- b. **DEFICIENCY:** NONE
- c. **AREA REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** NONE
- f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.2.2 Protective Action for Schools

Lexington County demonstrated its ability to safeguard students, staff and faculty in the event of a radiological release from VCSNS during an interview at the Alternative Academy for Success. Representatives from School District Five of Lexington and Richland Counties knowledgeably discussed the manner in which they would relocate students as a precautionary measure.

- a. **MET:** Criterion 3.c.2
- b. **DEFICIENCY:** NONE
- c. **AREA REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** NONE

- f. **PRIOR ARCAs - UNRESOLVED: NONE**

2.2.3 Traffic Control Points

During an interview at Crossroads Middle School two (2) County Sheriff's Deputies discussed the appropriate procedures to establish and maintain TCPs and remove impediments to evacuation. The Deputies were knowledgeable of emergency worker exposure control, use of KI and dosimetry. The Deputies also possessed sufficient communications and other equipment to perform their duties.

- a. **MET: Criteria 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.d.1 and 3.d.2**
- b. **DEFICIENCY: NONE**
- c. **AREA REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

2.2.4 Emergency Worker Decontamination

County Emergency Worker Decontamination (EWD) was evaluated during an OOS evaluation at the Cross Roads Middle School on July 9, 2009. EWD was staffed with personnel from the Lexington County Fire Service, Emergency Medical Services, and Sherriff's Office. Personnel professionally performed their duties. They were knowledgeable of exposure control and demonstrated the techniques for monitoring and decontaminating emergency workers.

- a. **MET: Criteria 1.e.1, 3.a.1, 6.a.1 and 6.b.1**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs – RESOLVED: NONE**
- f. **PRIOR ARCAs – UNRESOLVED: NONE**

2.2.5 Reception Center

The County Reception Center was evaluated during an OOS evaluation at the Cross Roads Middle School on July 9, 2009. The center was staffed with personnel from the Lexington County Fire Service, Emergency Medical Services, and Sherriff's Office. The emergency workers were knowledgeable of radiological exposure control, demonstrated monitoring techniques and contamination control.

The Reception Center was staffed by the ARC, DSS, and County DHEC personnel. The DSS and ARC personnel worked together to register evacuees and provide for their housing needs. DSS has established agreements with local hotels to house evacuees as needed. The ARC was prepared to feed, cloth and address other evacuee needs at the hotels. The ARC also demonstrated the use of the Safe and Well system. This web based system provides an avenue for evacuees to register on-line so that family and friends can check on their current status. DHEC personnel demonstrated their role of issuance of KI to the evacuees, if necessary, in a professional and efficient manner.

- a. **MET:** Criteria 1.e.1, 3.a.1, 6.a.1 and 6.c.1
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs – RESOLVED:** NONE
- f. **PRIOR ARCAs – UNRESOLVED:** NONE

2.2.6 Back-up Route Alerting

County Sheriff's Deputies discussed the process by which they would complete back-up route alerting in the event of a siren failure during OOS evaluations at the Cross Roads Middle School. The Deputies had sufficient equipment, communications, maps and instructions to complete the assigned back-up route alerting in a timely manner. The Deputies were knowledgeable of emergency worker exposure control and use of dosimetry. The deputies understood the relationship between their assignment and emergency notification of the public.

- a. **MET:** Criteria 3.a.1 and 5.a.3
- b. **DEFICIENCY:** NONE
- c. **AREA REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE

- e. **PRIOR ARCAs - RESOLVED:** NONE
- f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.3 NEWBERRY COUNTY

2.3.1 Emergency Operations Center

The Emergency Services Director (ESD) exhibited good command and control throughout the exercise. He conducted frequent briefings and polled the Newberry County Emergency Operations Center staff to insure they were aware of the situation, knew what actions they should have completed and were aware of potential actions due to changing conditions. All agencies worked well together, coordinated their activities, and were proactive in their planning. The PIO was also proactive in preparing news releases with the ESD reviewing each release prior to it being sent to the JIC for public release.

- a. **MET:** Criteria 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, 5.a.1, 5.a.3 and 5.b.1
- b. **DEFICIENCY:** NONE
- c. **AREA REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** NONE
- f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.3.2 Protective Action for Schools

The Principal and staff of Little Mountain Elementary School were experienced in the implementation of their emergency plan and were well equipped to carry out the relocation of students and staff.

- a. **MET:** Criterion 3.c.2
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** NONE

- f. **PRIOR ARCAs - UNRESOLVED: NONE**

2.3.3 Traffic Control Points

County Sheriff's Deputies discussed the process by which they would establish, support and maintain TCPs and during OOS at the NCEOC. The interviewed deputies were knowledgeable in the areas assigned, and would be prepared to assist evacuees from the Newberry County portion of the 10-mile EPZ.

- a. **MET: Criteria 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.d.1 and 3.d.2**
- b. **DEFICIENCY: NONE**
- c. **AREA REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

2.3.4 Emergency Worker Decontamination

The HazMat Response Team (HRT) demonstrated the capability to monitor and decontaminate emergency workers and their equipment at the Career Center. They demonstrated knowledge of monitoring and decontamination techniques for emergency personnel and equipment. HRT firefighters performed their duties in a professional manner at all times. They also demonstrated they were aware of their responsibilities in controlling their own exposure.

- a. **MET: Criteria 1.e.1, 3.a.1, 6.a.1 and 6.b.1**
- b. **DEFICIENCY: NONE**
- c. **AREA REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

2.3.5 Reception and Congregate Care

Newberry City Fire Department, DSS, State Guard personnel and a Sheriff's Deputy demonstrated evacuee monitoring, decontamination, registration and congregate care. Fire Department personnel had established a good traffic pattern for vehicles and personnel flow to insure no cross contamination could occur. All workers were knowledgeable in monitoring, decontamination techniques, exposure limits and contamination control.

- a. **MET:** Criteria 6.a.1 and 6.c.1
- b. **DEFICIENCY:** NONE
- c. **AREA REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** NONE
- f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.3.6 Back-up Route Alerting

County Sheriff's Deputies discussed the process by which they would complete back-up route alerting in the event of a siren failure during out of sequence evaluations at the NCEOC. Interviewed deputies had area maps which indicated siren locations, coverage areas and instructions on completing back-up route alerting. The interviewed deputies estimated it would take no more than 40 minutes to complete the assigned back-up route alerting of any given siren location within the County.

- a. **MET:** Criteria 3.a.1 and 5.a.3
- b. **DEFICIENCY:** NONE
- c. **AREA REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** NONE
- f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.4 RICHLAND COUNTY

2.4.1 Emergency Operations Center

The County Emergency Management Coordinator provided effective leadership throughout the exercise in conjunction with the Emergency Services Director. The Emergency Management Coordinator kept the EOC staff informed of the VCSNS conditions and involved the staff in responding to emergency operations in the county. The EOC staffs, composed of multiple county and municipal agencies, worked as a team, were well trained, proactive, and had comprehensive procedures that ensured accurate notification of emergency conditions to all appropriate parties.

The County Executive Group, made up of County Commissioners, Emergency Management Coordinator and Sheriff or representative, was competent and professional. Throughout the exercise, the Executive Group was proactive and analytical in resolving issues and clarifying policies. The Executive Group was continuously aware of conditions in the county and quickly made concurrence decisions that supported the mutually agreed-upon PAD.

- a. **MET:** Criteria 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 and 5.b.1
- b. **DEFICIENCY:** NONE
- c. **AREA REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** NONE
- f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.4.2 Traffic Control Points

County Sherriff's deputies discussed the process by which it would establish, support and maintain TCPs and clear impediments during OOS evaluations at the Dutch Fork High School. Personnel were well trained in the areas assigned, and fully prepared to assist evacuees from the 10-mile EPZ.

- a. **MET:** Criteria 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.d.1 and 3.d.2
- b. **DEFICIENCY:** NONE
- c. **AREA REQUIRING CORRECTIVE ACTION:** NONE

- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** NONE
- f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.4.3 Emergency Worker Decontamination

County Emergency Worker Decontamination was evaluated during an OOS evaluation at the Dutch Fork High School on July 8, 2009. EWD was supported by the Columbia Fire Department Hazardous Material (CFDHM) team and County Emergency Services. Both groups worked as a team to provide the emergency workers with excellent monitoring and decontamination support. The emergency workers worked effectively in monitoring their exposure and controlling the potential spread of contamination.

- a. **MET:** Criteria 1.e.1, 3.a.1, 6.a.1 and 6.b.1
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs – RESOLVED:** NONE
- f. **PRIOR ARCAs – UNRESOLVED:** NONE

2.4.4 Reception Center

The County Reception Center was evaluated during an OOS evaluation at the Dutch Fork High School on July 8, 2009. The center was supported by the CFDHM team and County Emergency Services. Both groups worked as a team to provide the evacuees with excellent monitoring and decontamination support. The emergency workers worked effectively to control their exposure and to control the potential spread of contamination.

The Reception Center was staffed by the ARC and DSS personnel. The DSS and ARC personnel were well organized and efficient in their duties. DSS had established agreements with local hotels to house evacuees as needed. The ARC demonstrated the Safe and Well system. This web based provides an avenue for evacuees to register on-line so that family and friends can check on their current status. The demonstration was professionally conducted with personnel displaying knowledge and adherence to procedures.

- a. **MET:** Criteria 1.e.1, 3.a.1, 6.a.1 and 6.c.1
- b. **DEFICIENCY:** NONE

- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs – RESOLVED: NONE**
- f. **PRIOR ARCAs – UNRESOLVED: NONE**

2.4.5 Back-up Route Alerting

County Sheriff's Deputies discussed the process by which they would complete back-up route alerting in the event of a siren failure during OOS evaluations at the Dutch Fork High School. Interviewed deputies had area maps which indicated siren locations, coverage areas and instructions on completing back-up route alerting. The interviewed deputies estimated it would take no more than 30 minutes to complete the assigned back-up route alerting of any given location within the County.

- a. **MET: Criteria 3.a.1 and 5.a.3**
- b. **DEFICIENCY: NONE**
- c. **AREA REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

APPENDIX 1

ACRONYMS AND ABBREVIATIONS

The following is a list of the acronyms and abbreviations, which may have been used in this report.

ARC	American Red Cross
ARCA	Area Requiring Corrective Action
CFDHM	Columbia Fire Department Hazmat
CFR	Code of Federal Regulations
DHEC	Department of Health and Environmental Control
DHHS	Department of Health and Human Services
DNR	Department of Natural Resources
DOE	Department of Energy
DSS	Department of Social Services
EAS	Emergency Alert System
ECL	Emergency Classification Level
EMD	Emergency Management Division
EMS	Emergency Medical Services
ENF	Emergency Notification Form
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EPZ	Emergency Planning Zone
ERC	Emergency Response Coordinator
ESD	Emergency Services Director
ESF	Emergency Support Functions
ESSX	Electronic Switch System Exchange
FCEOC	Fairfield County Emergency Operations Center
FEMA	Federal Emergency Management Agency
FMT	Field Monitoring Team
FR	Federal Register
GAR	Governor's Authorized Representative
GE	General Emergency
HRT	Hazmat Response Team
JIC	Joint Information Center
KI	Potassium Iodide

LCEOC	Lexington County Emergency Operations Center
MOC	Mobile Operations Center
MRL	Mobile Radiological Laboratory
NCEOC	Newberry County Emergency Operations Center
NUREG-0654	NUREG-0654/FEMA-REP-1, Rev. 1, <i>"Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980</i>
OEM	Office of Emergency Management
ORO	Offsite Response Organization
PAD	Protective Action Decision
PAR	Protective Action Recommendation
PIO	Public Information Officer
RAC	Regional Assistance Committee
RAP	Radiological Assistance Program
REA	Radiological Emergency Area
REP	Radiological Emergency Preparedness
RERP	Radiological Emergency Response Plan
SAE	Site Area Emergency
SCEMD	South Carolina Emergency Management Division
SCHP	South Carolina Highway Patrol
SCORERP	South Carolina Operational Radiological Emergency Response Plan
SEOC	State Emergency Operations Center
TCP	Traffic Control Point
VCSNS	V. C. Summer Nuclear Station

APPENDIX 2

EXERCISE EVALUATORS

The following is a list of the personnel who evaluated the VCSNS exercise on October 7, 2009. The organization represented by each is indicated by the following abbreviations:

FEMA - Federal Emergency Management Agency
ICF - ICF Consulting, Incorporated
NRC - Nuclear Regulatory Commission

Conrad S. Burnside

RAC Chairman

Lawrence A. Robertson

**Section Chief/
Central Section**

<u>EVALUATION SITE</u>	<u>EVALUATOR</u>	<u>ORGANIZATION</u>
Lead Evaluator	John Ackermann	FEMA
STATE OF SOUTH CAROLINA – Director: Charles R. Platt		
State Emergency Operations Center	Lawrence Robertson	FEMA
	Ron Shaw	FEMA
	Bill Larrabee	ICF
	Robert Spence	FEMA
Radiological Health (SEOC) & Dose Assessment	Reggie Rodgers	ICF
Mobile Operations Center (MOC)	Keith Earnshaw	ICF
Field Monitoring Team #1	Jill Leatherman	ICF
Field Monitoring Team #2	John Zeidler	ICF
Field Monitoring Team DOE	James Hickey	ICF
Emergency Operations Facility	Robert Trojanowski	NRC
Joint Information Center	Jim McClanahan	ICF
	Tana Alert	ICF
EAS Station (WCOS)	Davis Stuhan	ICF
State Traffic Control Point	John Ackermann	FEMA

Lake Warning	Ron Shaw	FEMA
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FAIRFIELD COUNTY – Director: Phyllis Watkins

Emergency Operations Center	Gerald McLemore Marynette Herndon	FEMA ICF
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Traffic Control Points	John Ackermann	FEMA
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Emergency Worker Decontamination	Joseph Harworth Alan Bevan	FEMA ICF
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Reception Center & Congregate Care	Bill Larrabee	ICF
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LEXINGTON COUNTY – Director: Tom Collins

Emergency Operations Center	Michael Dolder Robert Nash Stephen Watts	FEMA FEMA ICF
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Schools	Bill Larrabee	ICF
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Traffic Control Points	Ron Shaw	FEMA
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Emergency Worker Decontamination	Alan Bevan	ICF
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Reception Center & Congregate Care	Alan Bevan	ICF
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NEWBERRY COUNTY – Director: Tommy Long

Emergency Operations Center	Joseph Harworth Alan Bevan	FEMA ICF
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Schools	Jim McClanahan	ICF
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Traffic Control Points	John Ackermann	FEMA
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Emergency Worker Decontamination	Alan Bevan	ICF
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Reception Center & Congregate Care	Ron Shaw	FEMA
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RICHLAND COUNTY – Director: Neil Ellis

Emergency Operations Center	Wendy Swygert John Ackermann	ICF FEMA
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Traffic Control Points	John Ackermann	FEMA
Emergency Worker Decontamination	Alan Bevan	ICF
Reception Center & Congregate Care	Alan Bevan	ICF

APPENDIX 3

EXERCISE CRITERIA AND EXTENT-OF-PLAY AGREEMENT

This appendix lists the exercise criteria, which were scheduled for demonstration in the VCSNS exercise on October 7, 2009 and the extent-of-play agreement approved by FEMA Atlanta Field Office .

A. Exercise Objectives

Attached are the specific radiological emergency preparedness criteria scheduled for demonstration during this exercise.

B. Extent-of-Play Agreement

The extent-of-play agreement on the following pages was submitted by the State of South Carolina, and was approved by FEMA Atlanta Field Office in preparation for the VCSNS exercise on October 7, 2009. The extent-of-play agreement includes any significant modification or change in the level of demonstration of each exercise criterion listed in Subsection A of this appendix.

EXTENT OF PLAY AGREEMENT

V. C. Summer Nuclear Station Radiological Emergency Preparedness Exercise
October 7, 2009

Emergency Operations Management

Sub-element 1.a, Mobilization

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

All participating state and local government personnel will be pre-positioned in the area and will respond as the scenario dictates. Alert recall rosters will be provided to FEMA evaluators. A discussion on recall procedures will be conducted with State and County Warning Point personnel.

Sub-element 1.b, Facilities

Criterion 1.b.1: Facilities are sufficient to support the emergency response. (NUREG - 0654, H)

The JIC is a new facility for the site and will be evaluated to establish a baseline for exercise evaluation criteria. The EOF and JIC are located approximately one quarter of a mile south of exit 97 of I-26 on US Highway 76 (Broad River Rd.)

Sub-element 1.c, Direction and Control

Criterion 1.c.1: 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, A.1.d., 2.a., b.)

Direction and Control will be at the State Emergency Operations Center (SEOC). County Direction and Control will take place at the Fairfield, Lexington, Newberry and Richland County's Emergency Operations Centers (EOC). State Emergency Response Team (SERT) participants include the Emergency Management Division (EMD); ESF 5, Information and Planning; ESF 6, Mass Care (Department of Social Services); ESF 8, Health and Medical Services (Department of Health & Environmental Control); ESF 10, RAD Materials, (Department of Health and Environmental Control); ESF13, Law Enforcement (DNR Law Enforcement and SLED) and ESF 16, Emergency Traffic Management, (Department of Public Safety). A simulation cell will represent the Office of the Governor, Office of the Adjutant General, FEMA Region IV, Georgia, North Carolina and non-playing South Carolina state agencies. All simulated telephone calls will be made by calling the simulation cell.

Sub-element 1.d, Communications

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

The Electronic Switch System Exchange (ESSX) is the primary means of communication to notify off-site response organizations. Backup to the ESSX are commercial telephone lines, satellite telephone and the Local Government Radio (LGR).

WebEOC software will be utilized at Fairfield, Lexington, Newberry and Richland county EOCs, the SEOC and V. C. Summer Nuclear Station during the exercise.

Sub-element 1.e, Equipment and Supplies to Support Operations

Criterion 1.e.1: Equipment, maps, displays, dosimetry, potassium iodide (KI), and other supplies are sufficient to support emergency operations. (NUREG-0654, H., J.10.a., b., e., f., j., k., J.11., K.3.a.)

Potassium Iodide for emergency workers will be simulated by candy or other means (empty envelope marked KI). A supply of KI for emergency workers is stored at the local EOC and/or Region 3 Health Departments and at DHEC's Public Health Emergency Pharmacy in Columbia, S.C.

Quantities of KI for emergency workers, institutionalized individuals, and public will be confirmed at the local EOC (ESF 8) by documentation of the current inventory.

All state/county radiation detection equipment will be inspected, inventoried, and operationally checked before each use. State/county radiation detection equipment will be calibrated or leak tested in accordance with existing plans by the South Carolina Emergency Management Division Radiological Lab or authorized laboratory.

At locations where traffic and access control personnel are deployed, the availability of appropriate equipment (e.g. vehicles, barriers, traffic cones and signs, etc.) will be described by law enforcement personnel.

Staff Assistance Visits (SAV), conducted by FEMA, will take place as follows:

Fairfield County at their EOC in Winnsboro, SC 1:30 pm August 25, 2009.

Lexington County at their EOC in Lexington, SC 2:00 pm August 26, 2009.

Newberry County at their EOC in Newberry, SC 09:00 am October 6, 2009.

Richland County at their EOC in Columbia, SC 9:00 am August 26, 2009.

Protective Action Decision Making

Sub-element 2.a., Emergency Worker Exposure Control

Criterion 2.a.1: OROs use a decision-making process, considering relevant factors and appropriate coordination, to insure that an exposure control system, including the use of KI, is in place for emergency workers including provisions to authorize radiation exposure in excess of administrative limits or protective action guides. (NUREG-0654, K.4.)

Dose limits for emergency workers are pre-determined. In accordance with state and local procedures, emergency workers may voluntarily exceed dose limits only after obtaining approval from state ESF 8 and 10, and being briefed on the effects of radiation and possible consequences of excessive exposure by their supervisor. The staff at county EOCs and the SEOC will discuss the processes with evaluators.

Sub-element 2.b. Radiological Assessment and Protective Action Recommendations and Decisions for the Plume Phase of the Emergency

Criterion 2.b.1: Appropriate protective action recommendations are based on available information on plant conditions, field monitoring data, and licensee and ORO dose projections, as well as knowledge of on-site and off-site environmental conditions. (NUREG-0654, I.8., 10., 11. and Supplement 3.)

Protective action recommendations will be based upon data received from the licensee, DHEC, SCEMD and Risk Counties, independent dose assessments and simulated field monitoring data input. Dose assessment will take place at the SEOC.

Criterion 2.b.2: A decision-making process involving consideration of appropriate factors and necessary coordination is used to make protective action decisions (PADs) for the general public (including the recommendation for the use of KI, if ORO policy). (NUREG-0654, J.9., 10.M.)

The Governor or his designee will demonstrate the ability to make appropriate protective action decisions (PADs) based on recommendations from SCEMD, DHEC and Risk Counties. PADs that require sheltering or evacuation of residents or transients in the 10-mile EPZ will be coordinated with the Chief County elected official or designee.

Sub-element 2.c, Protective Action Decisions Consideration for the Protection of Special Populations

Criterion 2.c.1: Protective action decisions are made, as appropriate, for special population groups. (NUREG-0654, J.9., J10.c., d., e., g.)

Fairfield County, Lexington County, Newberry and Richland County will discuss this criterion with evaluators. A list of potential special population citizens will be provided to the FEMA evaluator.

Protective Action Implementation

Sub-element 3.a, Implementation of Emergency Worker Exposure Control

Criterion 3.a.1: The OROs issue appropriate dosimetry and procedures, and manage radiological exposure to emergency workers in accordance with the plans and procedures. Emergency workers periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. (NUREG-0654, K.3.)

Emergency workers or emergency worker teams will use Self Reading Dosimeters (SRDs) and simulated Thermoluminescent Dosimeters (TLDs) to monitor and control their radiation exposure. Emergency workers in low exposure rate areas will use SRDs.

Dosimeters are distributed through County Emergency Operations Centers. Each county has an adequate inventory to support first-shift personnel. Supplemental dosimeters are provided in accordance with the South Carolina Dosimetry Redistribution Standard Operating Procedures and Matrix, after discussion and consideration at the SEOC. Department of Public Safety, Highway Patrol and the Department of Health and Environmental Control (DHEC) maintain and distribute their own SRDs.

Supplemental dosimeters will not be distributed or transported.

Emergency workers will be interviewed to determine their knowledge of radiation exposure limits.

Sub-element 3.b, Implementation of KI Decision

Criterion 3.b.1: KI and appropriate instructions are available should a decision to recommend use of KI be made. Appropriate record keeping of the administration of KI for emergency workers and institutionalized individuals (not general public) is maintained. (NUREG-0654, E.7., J., 10.e.,f.)

KI is distributed to Emergency Workers prior to their being dispatched. KI is taken by emergency workers on order by the DHEC Commissioner or designee. Record keeping will be discussed at the county EOCs.

Sub-element 3.c, Implementation of Protective Actions for Special Populations

Criterion 3.c.1: Protective action decisions are implemented for special populations other than schools within areas subject to protective actions. (NUREG-0654, E.7., J.9., 10.c., d., e., g.)

Fairfield County, Lexington County, Newberry and Richland County will demonstrate the ability and resources to implement appropriate protective actions for special population groups. A list of people/facilities with special transportation needs will be provided to evaluators. Evacuation assistance will not be demonstrated.

Criterion 3.c.2: OROs/School officials decide upon and implement protective actions for schools. (NUREG-0654, J. 10.c., d., g.)

Lexington County will simulate school evacuations by out-of-sequence interviews with key staff members from each school and with the transportation supervisor from each school on Wednesday August 26 at 10:30 am. FEMA evaluators will meet with the Lexington County Director/designee, and key school officials at the Alternative Learning Center.

Lexington County EPZ schools to be evaluated are: Alternative Learning Center and Chapin High School.

Newberry County will simulate school evacuations by out-of-sequence interviews with key school staff members and the transportation supervisor on Tuesday October 6, 2009 at 10:30 AM. FEMA evaluators will meet with Newberry County Director/designee, key staff members, and the transportation supervisor at Little Mountain Elementary School.

Newberry County EPZ School to be evaluated is: Little Mountain Elementary School.

Criterion 3.d.1: Appropriate traffic and access control is established. Accurate instructions are provided to traffic and access control personnel. (NUREG-0654, J.10.g., j., k.)

Traffic Control Points (TCP's) are pre-determined. The South Carolina Highway Patrol will demonstrate Traffic Control on-scene. FEMA Evaluators will meet their State Highway Patrol escort(s) at the Fairfield County EOC on Tuesday

August 25, 2009 at 10:00 am. The evaluator(s) will then be escorted to the two TCPs that are to be evaluated. State TCPs to be evaluated are:

ST-01 - SC 215 and New Hope

ST-05 – SC 213 & Broad River Road

County/Local Law Enforcement personnel, except Newberry County will discuss county/local TACP operations during each county's reception center evaluation.

Newberry County Local Law Enforcement Personnel will be available at 1:00 PM, October 6, 2009 at the Newberry Career Center, 3413 Main Street, Newberry, SC (county's emergency worker monitoring/decontamination location).

County TACPs to be evaluated are:

Fairfield (7:00 pm 8/25/09) – FTACP2 – Newberry Rd and US 321 Bypass N
FTACP3 – SC213 and US 321 Bypass S

Lexington (9:00 am 7/9/09) – LTACP1 – 126 and Columbia Ave.
LTACP2 – US 76 and Crooked Creek Rd.

Newberry (1:00 pm 10/6/2009) – NTACP3 – SC 219 and Hillbrook Lane
NTACP6 – SC 34 and Hillbrook Lane

Richland (9:00 am 7/8/09) – RTACP1 - Kennerly Rd. and Old Tamah Rd.
RTACP2 – Shady Grove Rd. and Old Tamah Rd.

The South Carolina Department of Natural Resources will demonstrate lake/river clearing operations by discussion only. The Evaluator will meet SCDNR Officer at the Fairfield County EOC on Tuesday August 25, 2009 at 9:30 am for a safety briefing and the issue of radios and equipment. They will then meet at the Lake Monticello West boat landing at 11:00 am for the evaluation. DNR will not be launching boats. The following boat landings will be evaluated:

SCDNR – PBL9 – Lake Monticello West

PBL10 – Sub-impoundment Ramp

Criterion 3.d.2: Impediments to evacuation are identified and resolved. (NUREG-0654, J.10.,k.)

Actions to identify and remove impediments to evacuation will be discussed with the State Highway Patrol personnel at Fairfield County EOC on Tuesday August 25, 2009 at 10:00 am.

County/Local Law Enforcement personnel, except Newberry County will discuss actions to identify and remove impediments to evacuation during each county's reception center evaluation.

Newberry County Local Law Enforcement Personnel will be available at 1:00 PM, October 6, 2009 at the Newberry Career Center, 3413 Main Street, Newberry, SC (county's emergency worker monitoring/decontamination location).

Field Measurement and Analysis

Sub-element 4.a, Plume Phase Field Measurements and Analyses

Criterion 4.a.1: The field teams are equipped to perform field measurements of direct radiation exposure (cloud and ground shine) and to sample airborne radioiodine and particulates (NUREG-0654, H.10. I.7,8, 9)

DHEC will conduct a full mobilization of two field teams and the Mobile Operations Center (MOC). Field teams will receive a pre-deployment briefing and expedited training prior to deployment. Two field teams and sufficient personnel to operate the MOC will be deployed from the State Park 8500 Farrow Rd. Columbia, SC Building 15.

The US Department of Energy Radiological Assistance Program (RAP) Team, consisting of one 4 person team, will be deploying one field team to conduct field measurements. They will be pre-positioned with DHEC MOC and will be deployed by the DHEC Field Director.

Zeolite filter will be simulated with charcoal filters.

Criterion 4.a.2: Field teams are managed to obtain sufficient information to help characterize the release and to control radiation exposure (NUREG-0654, I.8, 11, J.10.a)

Direction and Control of the DHEC Field Teams and the DOE RAP Team will take place from the DHEC Mobile Operations Center (MOC) located at the State Park Complex.

Criterion 4.a.3: 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 by the plan and/or procedures) amount of radioactivity has been collected on the sampling media (NUREG-0654, I.8, 9, 11.)

For all field samples collected, the chain of custody will be discussed. However the samples will not be transported to the DHEC headquarters laboratory located at 2600 Bull Street, Columbia, SC.

Emergency Notification and Public Information

Sub-element 5.a, Activation of the Prompt Alert and Notification System

Criterion 5.a.1: Activities associated with primary alerting and notification of the public are completed in a timely manner following the initial decision by authorized off-site 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. (10 CFR Part 50, Appendix E & NUREG-0654, E.1., 4., 5., 6., 7.)

The State will coordinate Protective Action Decisions (PAD) with the Chief County elected officials or designees. [At possibly Alert and/or Site Area Emergency, the licensee will simulate sounding of the siren system. The Emergency Alert System (EAS) procedures will be demonstrated up to the point of message broadcast. No EAS message broadcast will occur.] Affected Risk/Host Counties will be notified of the need for possible shelter activation. A test EAS message and follow-on news release will be prepared and transmitted to the LP-1 station (WCOS). The LP-1 Station personnel will then describe the broadcast process to the FEMA evaluator. Copies of the test EAS message and news release will be provided to the FEMA evaluator at the SEOC. The LP-1 station will have staff available for interview on October 7, 2009. At General Emergency, activation of the sirens and EAS broadcast will be simulated.

Criterion 5.a.3: Activities associated with FEMA approved exception areas (where applicable) are completed within 45 minutes following the initial decision by authorized off-site emergency officials to notify the public of an emergency situation. Backup alert and notification of the public is completed within 45 minutes following the detection by the ORO of a failure of the primary alert and notification system. (NUREG-0654, E.6., Appendix 3.B.2.c)

*If there is a siren failure, Fairfield County, Lexington County, Newberry County and Richland County will describe their method(s) for back-up alerting system.

Sub-element 5.b, Emergency Information and Instructions for the Public and the Media

Criterion 5.b.1: OROs provide accurate emergency information and instructions to the public and the news media in a timely manner. (NUREG-0654, E. 5., 7., G.3.a., G.4, a., b., c.)

The State, Fairfield County, Lexington County, Newberry County and Richland County will demonstrate the ability to coordinate the formulation and

dissemination of accurate information and instructions to the news media at the Joint Information Center (JIC). Rumor control for the State will be demonstrated at the JIC. Rumor control for Fairfield, Lexington, Newberry and Richland Counties will be demonstrated at the JIC. Rumor control personnel will provide a rumor calls log to the FEMA Evaluator.

Support Operations/ Facilities

Sub-element 6.a, Monitoring and Decontamination of Evacuees and Emergency Workers, and Registration of Evacuees

Criterion 6.a.1: The reception center/emergency worker facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees and/or emergency workers. (NUREG-0654, J.10.h.; K.5.b.)

Reception Centers will be demonstrated out-of-sequence. At least six people will be monitored and registered. Personnel decontamination will be demonstrated via walk-through and discussion. Water will not be used on personnel. All necessary supplies will be on-hand. Walkways will not be covered with barrier material but briefed to the FEMA evaluator. Demonstration will include the necessary portable portal monitors and monitoring teams required to monitor 20% of the population allocated to the facility within 12 hours. The FEMA evaluator will develop a monitoring productivity rate. Fairfield, Lexington, Newberry and Richland counties will demonstrate vehicle decontamination in accordance with local SOPs:

For Lexington, Newberry and Richland counties, two vehicles will be monitored and one vehicle decontaminated. Water will be used to demonstrate vehicle decontamination procedures.

For Fairfield County, two vehicles will be monitored and parked to demonstrate the determination and separation of contaminated vehicles from clean vehicles per local procedures. SCEMD staff members will serve as the controllers at each Reception Center Monitoring and Decontamination Station.

Reception Centers to be evaluated are:

Fairfield County: White Oak Baptist Conference Center will be evaluated on August 25, 2009 at 6:30 pm.

Lexington County: Crossroads Middle School will be evaluated on July 9, 2009 at 9:00 am.

Newberry County: Newberry High School will be evaluated on October 6, 2009 at 10:30 am.

Richland County: Dutch Fork High School will be evaluated on July 8, 2009 at 9:00 am.

Sub-element 6.b, Monitoring and Decontamination of Emergency Worker Equipment

Criterion 6.b.1: The facility/ORO has adequate procedures and resources for the accomplishment of monitoring and decontamination of emergency worker equipment including vehicles. (NUREG-0654, K.5.b)

Emergency Worker Monitoring and Decontamination will be demonstrated out of sequence. Two emergency workers will be monitored. Personnel decontamination will be demonstrated via walk-thru and discussion. Water will not be used in demonstrating personnel decontamination. One emergency vehicle will be monitored and decontaminated in accordance with local SOPs. Water will be used on vehicles.

The Fairfield County Emergency Worker Decontamination Facility (White Oak Baptist Conference Center) will be evaluated on Tuesday, August 25, 2009 at 6:30 pm.

The Lexington County Emergency Worker Decontamination Facility (Crossroads Middle School) will be evaluated on Thursday, July 9, 2009 at 9:00 am

The Newberry County Emergency Worker Decontamination Facility (Newberry Career Center) will be evaluated on Tuesday, October 6, 2009 at 3:00 pm.

The Richland County Emergency Worker Decontamination Facility (Dutch Fork High School) will be evaluated on Wednesday July 8 at 9:00 am.

Sub-element 6.c, Temporary Care of Evacuees

Criterion 6.c.1: Managers of congregate care facilities demonstrate that the centers have resources to provide services and accommodations consistent with American Red Cross planning guidelines (found in MASS CARE-Preparedness Operations, ARC 3031). Managers demonstrate the procedures to assure that evacuees have been monitored for contamination and have been decontaminated as appropriate prior to entering congregate care facilities. (NUREG-0654, J.10.h., 12.)

County shelters will be demonstrated out-of-sequence and concurrently with Evaluation Area 6.a, above. Procedures assuring that only non-contaminated persons enter shelters will be demonstrated.

APPENDIX 4

EXERCISE SCENARIO

This appendix contains a summary of the simulated sequence of events -- Exercise Scenario -- which was used as the basis for invoking emergency response actions by OROs in the VCSNS exercise on October 7, 2009.

This exercise scenario was submitted by the State of South Carolina and South Carolina Electric and Gas Company and approved by FEMA Atlanta Field Office.

Initial Conditions:

The plant is operating at 100% power, End of Life with equilibrium of Xenon and Samarium.

The week is an "B1" Train Maintenance Week.

Meteorological Conditions has the wind from 260 degrees at 7 miles per hour.

The Operational Plan is to maintain 100% Power.

At T=0, A 500 gpm Steam Generator Tube Rupture occurs on "B" S/G. The Control Room should recognize the Steam Generator Tube Rupture by the decreasing Pressurizer pressure and level, High Radiation Alarm on RMG-19B, and decreasing feed water flow to B S/G.

The Shift Supervisor declares an **Alert based on FA1.1 Any loss or any potential loss of either fuel clad or RCS**. The Shift Supervisor will implement EPP-001.2 and activate the Emergency Response Organization to respond to the Emergency Facilities. Initial Notifications to the State and local governments and the NRC will be made in accordance with EPP-002. ERDs will be aligned to the Simulator Control Room, when activated simulator data will be transmitted to NRC.

On the Reactor Trip, the Control Room Crew should note two adjacent control rods, H6 and G7, stuck out of the core. On the Safety Injection, both Diesel Generators will start and run. The Reactor Building Instrument Air Isolation Valve PVT-2662A will fail to partially open due to the valve stem and actuator being disconnected.

The Control Room will implement EOP-1.0, Reactor Trip Safety Injection Actuation, with eventual transition to EOP-4.0, Steam Generator Tube Rupture.

Approximately 30 minutes into the event a high radiation alarm is received on RML-1 Low Range then High Range radiation monitor indicating fuel damage. The Control; Room will request Chemistry to the RCS for high activity.

The onsite emergency facilities will be staffing and activating to assist with the response to the emergency.

Once the OSC is manned and activated, the B Diesel Generator will trip on over speed indication. A team should be dispatched from the OSC to troubleshoot and repair as needed.

At T=65, Chemistry will report to the TSC or Control Room the RCS I¹³¹ activity is 316 $\mu\text{C}/\text{gm}$.

The Emergency Director should declare a **Site Area Emergency based on FS1.1 Loss or potential loss of any two Barriers**. The ERO initiates EPP-001.3 SAE checklist by announcing

the emergency and a site evacuation to the site and directing the communicator to request EWSS activation per EPP-021. *(Note: The sirens will not actually be sounded, the sounding will be simulated by activating a Silent Test of the siren system).* The ED or OEC shall approve the Emergency Notification Form and directs the Communicator to notify State and local agencies within 15 minutes of emergency declaration. The NRC will be updated on the declaration of a Site Area Emergency.

The Emergency Operations Facility is manned and activated. The Offsite Emergency Coordinator receives a briefing from the Emergency Director and the EOF is fully staffed. The EOF is activated in accordance with EPP-051.

At T=170, A Main Feed water Line Break occurs on “B” S/G feed line causing an unmonitored, unfiltered release from the 436’ Intermediate Building to atmosphere. The Control Room should note the feed water line break by decreasing steam pressure and S/G level in the “B” S/G.

The Emergency Director should declare a **General Emergency based on FG1.1 Loss of any two barriers and Loss or potential loss of third barrier.** The ERO initiates EPP-001.4 GE checklist by announcing the emergency and a site evacuation to the site, directing the communicator to request EWSS activation per EPP-021 and developing PARs for the General Emergency in accordance with EPP-001.4 and EPP-005. The EOF develops PARs based on the General Emergency. The correct PARs are evacuating a 2 mile radius of the plant and 5 miles down wind. The appropriate zones are:

Evacuate: A-0, B-1, C-1

Shelter: A-1, D-1, E-1, F-1, A-2, B-2, C-2, D-2, E-2, F-2

Consider the use of KI in accordance with state plans and policy.

The OEC approves the Emergency Notification Form and provides to the Communicator to notify State and local agencies within 15 minutes of emergency declaration and PARs. A request for the activation of the EWSS will be made to the State and local governments. . *(Note: The sirens will not actually be sounded, the sounding will be simulated by activating a Silent Test of the siren system).*

The exercise is terminated when objectives are satisfied.

APPENDIX 5

RECOMMENDATIONS

1.1 State Emergency Operations Center

- Provide a quality control step during the development of EAS messages and follow-on special news broadcast/releases to ensure that all necessary information to inform the public is captured.

1.4 Field Monitoring Team #2

- Provide maps of sufficient scale that landmarks/street names can be used along with GPS coordinates to pin point monitoring locations.

1.5 Joint Information Center

- Provide sufficient training and equipment for the County PIOs to improve the accomplishment of their mission.

1.9 Lake Clearing

- Ensure that officials clearing the lake have communications equipment that allows them to communicate with the appropriate EOC and other organizations clearing the lake.

2.1.3 Fairfield County Emergency Worker Decontamination

- Revise procedures to ensure that a source check is performed on all the detectors during the operational check of the Ludlum Model 52 Portal Monitor.
- Review and revise as appropriate Annex S, Appendix 5.III.B.1 and the Standard Operating Procedures (SOP) for Monitoring and Decontamination of Evacuees, Sheltering, and Reception Centers to ensure consistency between the documents in the methodology for an individual who is contaminated. The plan states to remove outer clothing and shake vigorously, which may spread contamination, and the SOP states to bag the clothing, which may be a more appropriate method for dealing with contaminated clothing.

2.1.4 Fairfield County Reception and Congregate Care

- FCVFD and EMA should ensure that procedures are followed more closely during demonstrations, i.e. use of appropriate stickers, posting of signage, etc.

- Consider having evacuees waiting in line fill out the registration forms in line to speed up the registration process when reach the registration table.
- Review capacity for the congregate care center. Fairfield County plans state the capacity for the White Oak Conference Center is 1750; however the ARC states that the facility has been surveyed for 250 evacuees.
- Once a capacity figure is decided for the White Oak Conference Center the ARC shelter manager and White Oak staff should develop a diagram that identifies intended use of the available area for specific functions; e.g., nurses stations, reading rooms, senior citizen activity room, teenage activity room, nursery, married couples housing, single men/single women areas, etc. Develop appropriate signage for use in the facility.

2.2.1 Lexington County Emergency Operations Center

- Develop EOC Guide Books for each ESF Work Station that contains functional check lists, phone lists, WebEOC Instructions, and ESF Contacts, etc.
- Develop and load a data file for the Reverse 911 system that contains information on special population clients. Update the data file at least annually.

2.2.2 Lexington County Schools

- Review and revise as necessary Attachment 8 to ensure that the information is current and contains accurate guidance for the relocation of schools within the 10-mile EPZ. The Alternative Academy for Success needs to be added to Attachment 8.
- Consider having risk school personnel visit host schools to determine where the students would be housed until pickup by their parents/guardians.
- Consider having an advance party deploy to the host schools to help prepare for the arrival of the relocated students.

2.2.3 Lexington County Emergency Worker Decontamination

- Review and revise procedures as necessary to ensure that each detector on the portal monitor is operationally checked prior to use.

2.2.4 Lexington County Reception Center

- Establish a separate vehicle decontamination area to speed the process for monitoring vehicles. Current procedures may cause a significant back log if potentially clean vehicles have to wait for the decontamination of a contaminated vehicle.
- Consider allowing the passengers to proceed to the personnel monitoring station, while the driver remains with the vehicle while it is being monitored and decontaminated if necessary.

- Develop check lists for each work area, consider a poster to assist staff in the performance of duties, and a detailed schematic of the set up of Cross Roads Middle School indicating the areas to be used for vehicle and personnel monitoring and decontamination. Also include the set up of the pathways for vehicles and personnel. Provide guidance for how the stations will be set up (postings, equipment and supplies).
- Provide more information to the evacuees about how the Decon Kits are to be used prior to entering the decontamination tents. Currently the kits are given out and instructions are given through the tent wall. This does not allow the staff member to observe if the evacuee is using the kit appropriately. This could become a concern if valuables and clothing are not packaged correctly (cross contamination) or if the identification bracelet is not taken by the evacuee.

2.4.4 Richland Reception Center

- Develop procedural guidance for meeting the transportation, feeding, medical and clothing needs for evacuees sent to hotels after being processed through the reception center.
- Revise the Radiological Emergency Response Plan (RERP) to the Richland County Emergency Operation Plan (EOP) (step 4.L.3) to ensure compliance with State policy on the distribution of KI to the general public