Department of Homeland Security Region IV 3003 Chamblee-Tucker Road



July 30, 2013

Victor M. McCree, Regional Administrator - RII Nuclear Regulatory Commission One Marquis Tower 245 Peachtree Center Avenue, Suite 1200 Atlanta, Georgia 30303

Dear Mr. McCree:

Enclosed is a copy of the final after action report for the April 30-May 1, 2013, Harris Nuclear Plant Ingestion Pathway exercise of the offsite radiological emergency response plans site-specific to the Harris Nuclear Plant. This report addresses the evaluation of the plans and preparedness that encompasses six Core Capabilities: Operations Coordination; Public Information and Warning; Environmental Response/Health and Safety; On-Scene Security and Protection; Critical Transportation; and Mass Care. The participating agencies of the State of North Carolina and the affected risk and ingestion counties of the Harris Nuclear Plant 50-mile ingestion pathway zone are listed in the report prepared by the staff of Federal Emergency Management Agency Region IV. Copies of this report will be forwarded to NRC Headquarters, FEMA Headquarters, and the State of North Carolina.

FEMA did not identify any Deficiencies or Areas Requiring Corrective Action (ARCA). A previous ARCA (08-10-4.c.1-A-03) identified during the 2010 Brunswick Nuclear Plant exercise concerning the operational status of the High Purity Germanium (HPGe) Gamma Spectrometer and how it failed to correctly identify the isotopes in the Counting Standard. This ARCA was successfully cleared by the Radiation Protection Section (RPS) Mobile Radiological Laboratory's demonstration during this exercise.

The participation of both NRC and FEMA representatives at the State Emergency Operations Center added realism to the exercise and demonstrated a commitment to keep the residents of North Carolina informed during an emergency. There was continued strong leadership in direction and control even with a recent change-over in the State Director position. The State of North Carolina and the risk and ingestion pathway counties have dedicated emergency response staffs as well as numerous volunteers that participated in this exercise who are serious and professional in executing their duties.

Based on the results of the April 30-May 1, 2013, exercise and FEMA's review of North Carolina's Annual Letter of Certification for 2012, the offsite radiological emergency response plans and procedures for the State of North Carolina and the affected local jurisdictions specific to the Harris Nuclear Plant can be implemented and are adequate to provide a reasonable assurance that appropriate

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measures can be taken 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 North Carolina offsite radiological emergency response plans and preparedness site-specific to the Harris Nuclear Plant, granted on April 29, 1989, will remain in effect.

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

merely, loz

Major P. May, Regional Administrator

Enclosure

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 cc: Ms. Vanessa E. Quinn, Branch Chief Federal Emergency Management Agency Headquarters Radiological Emergency Preparedness Branch – NP-TH-RP 1800 South Bell Street Arlington, Virginia 20598-3025

VRC Headquarters Document Control Desk U. S. Nuclear Regulatory Commission Washington, D. C. 20555-0001



Shearon Harris Nuclear Plant After Action Report/ Improvement Plan

Exercise Date - April 30, 2013 Radiological Emergency Preparedness (REP) Program



Published July 30, 2013



Shearon Harris Nuclear Plant

After Action Report/ Improvement Plan

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Unclassified Radiological Emergency Preparedness Program (REP)

After Action Report/Improvement Plan

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Published July 30, 2013

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EXECUTIVE SUMMARY

On April 30 and May 1, 2013, the Department of Homeland Security, Federal Emergency Management Agency (FEMA), Region IV, Radiological Emergency Preparedness (REP) Program staff evaluated an Ingestion Pathway exercise in the 10 mile emergency planning zone (EPZ) and the 50 mile ingestion pathway zone (IPZ) around the Harris Nuclear Plant (HNP). Also included in this report are the out of sequence (OOS) activities evaluated during the week of April 22, 2013. These activities included: traffic control points; protective actions for schools; reception and congregate care centers; emergency worker and equipment monitoring and decontamination; and waterway warning. FEMA's overall objective of the exercise was to assess the level of state and local preparedness in responding to a radiological emergency.

FEMA Region IV has identified a set of Core Capabilities correlating to the REP Demonstration Criteria so that regional REP exercise evaluations using HSEPP exercise documents may occur. The purpose of this report is to analyze exercise results, identify strengths to be maintained and built upon, identify potential areas for further improvement, and support development of corrective actions. 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 was conducted on November 29, 2011. The qualifying emergency preparedness exercise was conducted February 28, 1987.

Participating State and local organizations 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 Federal, State and local response agencies in their mission planning and execution abilities throughout all phases of the exercise was obvious, and confirmed the success of the Harris Task Force organizational structure. The Harris Task Force, co-chaired by representatives from both North Carolina Emergency Management and Duke Energy, has proven to be an excellent example of public and private agency cooperation.

Officials and representatives from the State of North Carolina; the risk counties of Wake,Chatham, Harnett and Lee, the Nuclear Regulatory Commission (NRC) Region II, U.S. Department of Energy's (DOE) Federal Radiological Monitoring and Assessment Center (FRMAC), U.S. Department of Agriculture (USDA), the Environmental Protection Agency (EPA) and Duke Energy as well as numerous volunteers participated in this exercise. FEMA Region IV also played in the exercise by providing response liaison personnel to the State of North Carolina, which contributed to exercise realism. 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 the exercise a success.

During the Ingestion Pathway exercise the State of North Carolina along with risk counties of Wake, Chatham, Harnett and Lee demonstrated good coordination and implementation on protective action decisions which provided for the safety of the general public and emergency workers. They also demonstrated knowledge of their emergency response plans and procedures and successfully implemented them. The activities of the Federal players enabled the State of North Carolina to gain a better understanding of the types of resources the various Federal agencies would bring and how they would integrate with the States' emergency response organizations in response to a radiological event.

The SERT and risk counties also successfully demonstrated their relocation procedures and the return of evacuated individuals and families via the tabletop exercise. During the IPZ portion of the exercise, the involved agencies along with the State of North Carloina, provided an excellent opportunity for IPZ counties to participate in the exercise which better prepared them for a radiological event. There was continued strong leadership in direction and control even with a recent change-over in the State Director position.

An ARCA identified during the 2010 Brunswick Nuclear Plant REP exercise which concerned the operational status of the High Purity Germanium (HPGe) Gamma Spectrometer was successfully cleared by the Radiation Protection Section (RPS) Mobile Radiological Laboratory's demonstration during this exercise.

SECTION 1: EXERCISE OVERVIEW

1.1 Exercise Detail	S	
Exercise Name		
Shearon Harris Nu	clear Plant	
	$(1,1,2,\ldots,n_{n-1}) = \frac{1}{2} \sum_{i=1}^{n-1} (1,1,2,\ldots,n_{n-1}) = \frac{1}{2} $	
Type of Exercise		• • • · · ·
Ingestion	and the second	:
Evercise Nate		`;
April 30, 2013	and a second second Second second	1 - -
Program	$\Phi_{\rm eff} = \Phi_{\rm eff} = 10^{-10}$ and $\Phi_{\rm eff} = 10^{-10}$ and $\Phi_{\rm eff} = 10^{-10}$	
Department of Hor	neland Security/FEMA Radiological Emergency Preparedness	:
Program		

	· ·	· · ·		•
Scenario Type		· . · ·	· · · · ·	
Radiological Emergency	y			•

1.2 Exercise Planning Team Leadership

Kevin Keyes		* .	
Federal Evaluator			· ·
Federal Emergency Management Agency	·	• .	
Section Chief			
3003 Chamblee Tucker Rd			
Atlanta, Georgia, 30341			
770-220-5378			
Kevin.Keyes@fema.dhs.gov			

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Unclassified Radiological Emergency Preparedness Program (REP)

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Carolyn Freitag Exercise Manager North Carolina Department of Public Safety, Division of Emergency Management Exercise Program Manager 4713 Mail Service Center Raliegh, North Carolina, 27699 919-825-2267 Carolyn.Freitag@ncdps.gov

1.3 Participating Organizations

Agencies and organizations of the following jurisdictions participated in the Shearon Harris Nuclear Plant exercise:

State Jurisdictions

- Department of Public Safety (DPS), Division of Emergency Management Department of Public Safety (DPS), State Highway Patrol
- Department of Health and Human Services, Division of Health Service Regulation, Radiation Protection Section (RPS)
- Department of Environment and Natural Resources (DENR), Wildlife Resources Commission, Law Enforcement

	Department of Agriculture
	Department of Transportation
Ri	sk Jurisdictions
	Wake County Board of Commissioners
	Wake County Emergency Services
	Wake County Sheriff's Office
	Wake County Emergency Medical Services (EMS)
•	Wake County Health Department
	Wake County Environmental Service
	Wake County Social Services
	Wake County Schools
	Wake County Animal Center
	Apex Police Department
	Cary Fire Department
	Raleigh Fire Department
	Chatham County Board of Commissioners
	Chatham County Emergency Services
	Chatham County Sheriff's Office
	Chatham County Emergency Medical Services (EMS)
	Chatham County Health Department
	Chatham County Social Services
	Chatham County Schools
	Bonlee Fire Department
	Siler City Fire Department
	Silk Hope Fire Department
	Harnett County Board of Commissioners
	Harnett County Emergency Services
	Harnett County Sheriff's Office
	Harnett County Emergency Medical Services (EMS)
	Harnett County Health Department
	Harnett County Social Services
	Harnett County Animal Control
	Buies Creek Fire Department and Emergency Medical Services (EMS)
	Deep River Volunteer Fire Department

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Lee County Board of Commissioners
Lee County Emergency Services
Lee County Sheriff's Office
Lee County Emergency Medical Services (EMS)
Lee County Health Department
Lee County Social Services
Support Jurisdictions
Alamance County
Caswell County
Cumberland County
Durham County
Franklin County
Granville County
Guilford County
Hoke County
Johnston County
Montgomery County
Moore County
Nash County
Orange County
Person County
Randolph County
Robeson County
Sampson County
Vance County
Wayne County
Wilson County
Private Organizations
Amateur Radio Emergency Services (ARES)
American Red Cross (ARC)
Salvation Army
Federal Jurisdictions
Nuclear Regulatory Commission (NRC)
Department of Energy (DOE), Federal Radiological Monitoring and Assessment
Center (FRMAC)

Department of Agriculture (USDA)

Environmental Protection Agency (EPA)

Department of Commerce, National Oceanic and Atomspheric Administration

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(NOAA), National Weather Service (NWS)

U.S. Army, Corps of Engineers

Federal Emergency Management Agency (FEMA)

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SECTION 2: EXERCISE DESIGN SUMMARY 2.1 Exercise Purpose and Design

The Department of Homeland Security (DHS) Federal Emergency Management Agency (FEMA) administers the Radiological Emergency Preparedness (REP) Program pursuant to the regulations found in Title 44 Code of Federal Regulation (CFR) parts 350, 351 and 352. 44 CFR 350 codifies 16 planning standards that form the basis for radiological emergency response planning for licensee, State, tribal and local governments impacted by the emergency planning zones (EPZs) established for each nuclear power plant site in the United States. 44 CFR 350 sets forth the mechanisms for the formal review and approval of State, tribal and local government Radiological Emergency Response Plans (RERPs) and procedures by DHS/FEMA. One of the REP Program cornerstones established by these regulations is the biennial exercise of offsite response capabilities. During these exercises affected State, tribal and local governments demonstrate their abilities to implement their plans and procedures to protect the health and safety of the public in the event of a radiological emergency at the nuclear plant.

The results of this exercise together with review of the RERPs, 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 After Action Report (AAR) to the Nuclear Regulatory Commission (NRC) that the affected State, Tribal and local plans and preparedness are (1) adequate to protect the health and safety of the public living in the vicinity of the nuclear power facility by providing reasonable assurance that appropriate protective measures can be taken offsite in the event of a radiological emergency; and (2) capable of being implemented.

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 meet the REP Program requirements and encompass the REP Program's Emergency Preparedness Evaluation Areas. These elements and sub-elements were derived and negotiated with the State of North Carolina, Wake, Chatham, Harnett 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 and mass care. These core capabilities when successfully demonstrated meet the exercise objectives. The objectives for this exercise were as follows:

•Objective 1: Demonstrate the ability to provide emergency operations center (EOC) management including direction and control through the State and counties EOC Multi-Agency Coordination Center System (MACCS).

•Objective 2: Demonstrate the ability to provide protective action decision-making for State and county emergency workers and the general public through exercise play and discussions of plans and procedures.

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

•Objective 4: Demonstrate the ability to activate the Prompt Alert and Notification System using the North Carolina Alert and Notification System through exercise play.

•Objective 5: Demonstrate the effectiveness of plans, policies and procedures in the Joint Information Center (JIC) for joint (public and private sector) emergency information communications.

•Objective 6: Demonstrate the ability to conduct independent dose assessment, management of field teams, and mobile or fixed laboratory analysis in response to a radiological release.

•Objective 7: Demonstrate the ability to provide and implement protective action decisionmaking for State and County emergency workers(EW)and residents concerning Recovery, Reentry and Relocation of radiological affected areas.

2.3 Scenario Summary

Unit 1 at 0915 with a 150 gallon per minute leak from the reactor coolant system into containment. At 0930 the reactor is manually tripped with two control rods stuck out of the core. At approximately this time, an Alert is declared due to the potential loss of the reactor coolant system barrier. At 1132, containment pressure exceeds 10 pounds per square inch gauge (PSIG) with a failure of the containment spray system.

At 1147, a Site Area Emergency (SAE) emergency classification level (ECL) is declared due to loss of reactor coolant system and potential loss of containment barrier. At 1245, the reactor coolant system leak suddenly increases, followed by pipe ruptures, and a sudden depressurization of the reactor coolant system. Fuel failure begins and containment high range radiation monitors indicate 150 R/hour at 1315. At 1330, a General Emergency (GE) ECL is declared due to loss of the fuel clad barrier, loss of the reactor coolant system and potential loss of containment barrier.

GE Protective Action Recommendations (PARs) include evacuation of Subzones A, D, and K (2 miles around and 5 miles downwind) and sheltering of all other Subzones (B, C, E, F, G, H, I, J, M, L, and N). At 1400, containment pressure rises to 25 PSIG and a hydrogen explosion causes the Equipment Hatch to fail, resulting in a release to the environment from a hole in containment. Containment high range radiation monitors indicate 400 R/hour. Dose assessment results indicate that a PAR change is required. At 1415, the PARs are revised to evacuate Subzones A, B, C, D, H, I, K, (5 miles around and 10 miles downwind) and shelter all others (E, F, G, J, M, and N). This PAR includes a recommendation for potassium iodide (KI). The release continues for two hours until containment volume is cycled out.

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SECTION 3: ANALYSIS OF CAPABILITIES

3.1 Exercise Evaluation and Results

This section contains the results and findings of the evaluation of all jurisdictions and functional entities that participated in the April 30 - May 1, 2013 Ingestion Phase exercise and Out of Sequence (OOS) 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)

ALC: NOT STATE

• ARCA(s) assessed or unresolved ARCA(s) from previous exercises

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- Deficiency assessed
- Plan Issues
- Not Demonstrated

3.2 Summary Results of Exercise Evaluation

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

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Table 3.1 - Summary of Exercise Evaluation						
DATE: 2013-04-30 SITE: Shearon Harris Nuclear Plant, NC M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated		AC .	Wake County	Chatham County	Harmett County	cee County (NC)
Emergency Operations Management		<u> </u>	-		-	
Alert and Mobilization	1a1	м	м	м	м	м
	161			141	141	M
Direction and Control	101	M	м	M	м	M
Communications Equipment	141	M	M	M	M	м
Equipment and Sumplies to Support Operations	1.01	M	M	M	M	M
Protective Action Decision Making			111	141	141	IVI
Emergency Worker Exposure Control	2a1	м	м	м	м	м
Doce Assessment & PARs & PADs for the Emergency Event	2h1	M			171	
Dose Assessment & PARs & PADs for the Emergency Event	267	M	м	м	м	м
PADs for the Protection of persons with disabilities and access/functional needs	202	141	M	M	м	M
Padialogical Assessment and Decision making for the Ingestion Exposure Pathway	201	M	M	M	M	M
Padialogical Assessment and Decision-making for the Ingestion Exposure Failway	201				IVI	IVI
Reentry, and Return	261	M	Μ	M	М	M
Protective Action Implementation						
Implementation of Emergency Worker Exposure Control	3a1	M	M	М	·M	М
Implementation of KI Decision for Institutionalized Individuals and the Public	3b1	М	М	М	М	М
Implementation of Protective Actions for persons with disabilities and access/functional needs	3c1		М	М	M	М
Implementation of Protective Actions for persons with disabilities and access/functional needs	3c2		М	М	М	М
Implementation of Traffic and Access Control	3d1	<u>M</u>	М	Μ	М	
Implementation of Traffic and Access Control	3d2	М	М	М	М	
Implementation of Ingestion Pathway Decisions	3e1	M	M	М	M	М
Implementation of Ingestion Pathway Decisions	3e2	M	М	М	М	М
Implementation of Post-Plume Phase Relocation, Reentry, and Return Decisions	3f1	M	М	М	М	М
Field Measurement and Analysis						•
RESERVED	4a1					
Plume Phase Field Measurement and Analyses	4a2 -	M		· .		
Plume Phase Field Measurement and Analyses	4a3	M				
Post Plume Phase Field Measurements and Sampling	4b1	M				
Laboratory Operations	4c1	M				
Emergency Notification and Public Info	ļ					
Activation of the Prompt Alert and Notification System	5a1	M	Μ	M	Μ	М
RESERVED	5a2					
Activation of the Prompt Alert and Notification System	5a3		Μ	М	М	М
Activation of the Prompt Alert and Notification System	5a4					
Emergency Information and Instructions for the Public and the Media	561	M	М	М	Μ	M
Support Operations/Facilities					 	
Monitoring, Decontamination, and Registration of Evacuees	6a1		Μ	M	M	
Monitoring and Decontamination of Emergency Workers and their Equipment and Vehicles	6b1		Μ		M	
Temporary Care of Evacuees	6c1		Μ	M	M	
Transportation and Treatment of Contaminated Injured Individuals	6d1	[

3.3 Criteria Evaluation Summaries

3.3.1 North Carolina Jurisdictions

3.3.1.1 State of North Carolina

Operational Coordination:

State Emergency Operations Center (SEOC):

The North Carolina State Emergency Response Team (SERT) effectively demonstrated the state's emergency response actions during a simulated radiological incident involving the Harris Nuclear Plant (HNP). The SERT Team Leader provided commendable leadership in his direction and control of the multiple-agency staff personnel manning the SEOC, the Central Branch Office (CBO) Regional Response Center (RRC), and the various field locations of the activated SERT. The SERT members were knowledgeable of their responsibilities and successfully coordinated necessary actions with the risk counties of Wake, Chatham, Harnett, and Lee, as well as the participating Federal agencies which included the NRC, FEMA and DOE. Periodic status briefings and conference calls fully involved the various agencies and professionally addressed the concerns and recommendations of the county emergency management directors while achieving concurrence on key decisions. All personnel were knowledgeable of their assigned actions.

Central Branch Office (CBO):

The CBO demonstrated the capability to effectively activate and manage the RRC through the activation and deployment of selected staff to liaise with Duke Energy, support the joint information effort, and coordinate jurisdictional response requirements. The Branch Manager consistently held briefings with key staff personnel and considered their input in his resource management decisions. The Branch Manager successfully provided direction and control to the assembled staff and also performed in a response assurance role for SERT actions.

Emergency Operation Facility (EOF):

State personnel from North Carolina Emergency Management and North Carolina Department of

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Health and Human Services (DHHS) Division of Health Service Regulation Radiation Protection Section (RPS) assigned to the EOF worked closely with Duke Energy personnel. They provided the SERT and county decision makers with timely information on plant conditions, ensured the utility was aware of state and county actions, and helped to coordinate state and utility field survey team movements.

Operational Coordination - Ingestion Pathway (Day 2)

The State of North Carolina successfully demonstrated this capability during the 2013 HNP REP Ingestion Pathway Zone (IPZ) Exercise. The assembled SERT effectively and decisively responded to an extended emergency situation at the HNP. Key leaders and supporting staff were present and actively engaged during the second day of activities. Key leadership included the SERT Leader, the Operations Chief, the Plans Chief, REP Technical Advisor, CBO Manager, RPS Chief, and Duke Energy Liaison. The exercise was attended by emergency management personnel from both the 10-mile EPZ counties and all the 50-mile IPZ counties.

The SERT operated in accordance with the State RERP, and included liaison personnel from the following agencies: RPS, Department of Transportation (DOT), North Carolina Wildlife Resources Commission (NCWRC), North Carolina State Highway Patrol (NCSHP), Public Water, State Energy Office American Red Cross, Salvation Army, NRC, DOE, EPA and FEMA.

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RPS staff at the EOC provided the necessary verification and field monitoring simulations. State and various county officials cooperated and readily accomplished the mutual goals of performing accurate radiological assessments to allow reentry and return of the citizens to their homes and businesses, or if not possible, then relocation from affected areas.

The SERT used effective procedures to respond to the simulated incident and emergency personnel maintained continuous contact and coordination with appropriate Federal, State and local agencies throughout the exercise. The GE ECL declared by the Duke Energy EOF remained in effect throughout the day, and the State of North Carolina retained direction and control of the emergency from the Day 1 activities. The SERT Leader clearly remained in control, but was extremely conscientious in gaining the concurrence of the risk and ingestion pathway counties when making key decisions.

The SERT Leader's focus on activities was primarily directed at determining which areas had

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not been contaminated during the release, but had been evacuated during the first day. After determining which zones were safe to allow return (based on the extensive radiological data available from the variety of Federal, State, and Duke Energy sources), the SERT Leader directed the SERT staff to determine readily-identifiable natural boundaries (such as roads and waterways) be used to determine the areas which would remain closed. He directed that this information be provided in the first scheduled press conference, and emphasized complete and total accuracy in providing information to the media and the general public.

The day's actions were primarily concerned with determining the radiological consequences of the accident, and determining the appropriate protective action decisions (PADs). RPS personnel successfully compared analytical results with EPA Protective Action Guidance (PAG) criteria. Impact on the area road network was heavily studied, and alternative routes determined to minimize the adverse impact on traffic flow.

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Ensuring an appropriate level of safe radiation exposure by the general public was a key element in the SERT Leaders guidance and decision-making. A high priority was placed on meetings with SERT members, agencies and county officials to determine the protective action guidance. SERT personnel demonstrated excellent knowledge of radiation exposure conditions, appropriate maximum exposure limits and KI issue to emergency workers (EWs) and the general public. Follow-on activities involved further refinement of determining the precise boundaries of the contaminated areas in the county, and stabilizing those sites to prevent cross-contamination. A heavy emphasis continued on providing information to farmers and food processors. The SERT leadership was keenly aware of the economic impact their decision-making had, both on the local citizens as well as the rest of the state and the nation.

The SERT then developed an overall strategy for authorized reentry of individuals into the restricted zone, to include maximum exposure limits; the maintenance of essential services (such as fire and police protection); the care for farm animals; and the retrieval of important possessions.

The State of North Carolina successfully demonstrated the availability and appropriate use of protective actions regarding food, milk, water supply and agricultural production within the IPZ. In the event of a release, the agricultural community to include home gardeners, livestock owners, farmers, food processors and water supply agencies within the 50-mile IPZ of the HNP will be notified of areas that may be contaminated and advised of protective actions necessary to

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reduce the risk of contamination to farms and livestock, agricultural products, and water supplies.

Precautionary measures coordinated between the State and counties included limiting consumption of food and water, stored feed and water for animals and restricting access to contaminated areas. Protective actions implemented by the State and coordinated with the counties included relocation of the affected population, withholding contaminated milk and washing produce to remove surface contamination. Recommendations were discussed to ingest KI on second and third day down wind and beyond the EPZ for affected populations based upon radiological surveys.

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Appropriate measures and strategies for implementing protective actions for contaminated water, food, milk and agricultural production were demonstrated as well. Samples from area farms were taken to identify the degree of contamination to food, livestock feed, and water supplies. Based on readings, controls on food were implemented and continued past seven days. Daily, weekly and monthly sampling was instituteduntil the area could be cleared. Return would involve deposition clearance on roadways and infrastructure before a phased move-in process could begin. Prior to commencement of recovery and reentry activities, the State Director of Emergency Management will confer with local government officials to determine when the recovery and reentry operations should begin. Agricultural brochures and one-page flyers were available in digital format through the County Cooperative Extension Services Offices.

Decisions regarding controlled reentry, relocation and return were successfully implemented. A sampling plan was created with support from Federal assets. The State Agricultural Commission implemented an embargo for the affected area including a 20-mile boundary around the plume footprint. To accomplish this, the State needed to create re-entry points within affected counties so the public and farmers could care for their property. County extension offices and public information support were necessary to ensure accuracy of information and specifics concerning individual counties.

Public Information and Warning:

The lead Public Information Officer (PIO) and assistant used established protocols to formulate, process and gain approval of one press release prior to activation of the Joint Information Center (JIC). They further coordinated activities for information regarding PADs and coordination

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between the state and risk counties along with the dissemination of information to the media and public, successfully demonstrated their ability to disseminate public information in a timely manner.

The SEOC PIO was apprised of all rumors and their disposition through updates from the JIC, kept the staff abreast of changing conditions, provided situational awareness and aided in greater decision making. Although public information was demonstrated at the JIC, the SEOC has a separate work area that is adequately sized and equipped to accommodate media operations to include external media broadcasts outlets.

The activation of the Alert and Notification System (ANS) was conducted by the State Warning Point (SWP) from the SEOC. Upon notification of the Alert ECL at HNP, the SWP simulated alert and notification of the automated calling system for the SEOC staff. In accordance with plans, the SWP maintained situational awareness and direct communication with Duke Energy throughout the exercise.

Pre-scripted Emergency Alert System (EAS) messages were coordinated with the sounding of sirens and dissemination of those messages over EMNet and the National Weather Service (NWS) was completed in a timely fashion.

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The demonstration of waterway warning and clearance of Lake Jordan, Lake Harris, the Deep and Haw Rivers was demonstrated by representatives of the NCSHP, NCWRC, North Carolina Parks and Recreation, the US Army Corps of Engineers and the Wake County Sheriff's Office. All were well versed in their mission assignments and personal radiological safeguards. The Captain of the NCWRC quickly established effective incident command, assuming the role of the Incident Commander (IC), issued equipment and launched the assigned boats per plans. NCSHP aviation assets also participated, flying a pre-designated pattern over the waterways. All the law enforcement officers were versed in their mission requirements and fully demonstrated the ability to perform the roles assigned to them; thusly, this coordinated deployment of teams successfully demonstrated waterway clearance.

Joint Information Center:

Once operational, the JIC is designed as the focal point for the distribution of news releases and presentation of press briefings by the utility and jurisdictions. The JIC was activated at the Alert

ECL, and in accordance with the Extent of Play Agreement (EOPA), the state participants responded upon notification while county participants were pre-positioned.

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All press releases conformed to protective action decisions and precautionary measures instituted by the jurisdictions. A total of 66 press releases (14 in Spanish) were distributed in the JIC during the exercise. Spanish translation is not required per FEMA guidelines; however, the jurisdictions instituted a proactive practice of translation. Four media briefings were also conducted during the plume portion of the exercise. Prior to each briefing the spokespersons gathered to discuss and coordinate their message for the briefing. The spokespersons answered all questions asked of them and were able to discuss what actions had been taken by their organizations.

The JIC had a robust communications capability and sufficient equipment and supplies to support emergency operations. Communications included dedicated commercial telephones supplemented by cell phones, computers, satellite phone and 800 MHz radio. Additionally, the JIC had adequate external communication capabilities to support the media. Primary and backup communications systems were fully functional at the commencement of the exercise and there were no failures during the exercise.

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Media Monitoring was performed at two locations; in the JIC workroom and from the Duke Energy Corporate Headquarters Building. Both the State and the Duke Energy Public Inquiry function were coordinated in the JIC with the State's public hotline coordinators successfully responded to rumors concerning terrorism, earthquakes, impact of wildlife, fatalities at the plant, and need for evacuation.

Based on the above, representatives from the State of North Carolina and the risk counties located at the HNP JIC successfully demonstrated the Public Information and Warning core capability and performed their roles in accordance with their published plans and procedures.

Public Information and Warning – Ingestion Pathway (Day 2)

The JIC for the IPZ portion of the 2013 HNP exercise was located within the SEOC of the North Carolina Emergency Management Division office building.

JIC participants included the PIOs from the State of North Carolina, the risk counties of Wake,

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Chatham, Harnett and Lee along with the ingestion counties of Cumberland, Johnson and Moore. The PIOs maintained situational awareness of the IPZ tabletop exercise (TTX) via an internal closed circuit TV. Based upon the IPZ TTX information that was being discussed the PIOs generated 15 news releases in support of their respected agencies. The process for preparing, coordinating and distributing news releases was identical to the process demonstrated during the plume phase exercise.

Pre-printed agriculture information and instructions were available in both print and electronic formats and were readily available for reproduction. These materials were created and updated by the NC Department of Agriculture and distributed by the extension agents of each county. The materials were originally created over 17 years ago and updated within the last 10, however, the representative participating in the TTX stated the materials were current and valid for implementation.

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The HNP IPZ Counties demonstrated the availability and proper use of acceptable information regarding water, food supplies, milk, and agricultural production within the HNP IPZ planning zone for implementation of protective actions. There were two time jumps; a three day time jump and a seven day time jump; each concentrating on reentry and return of personnel. Relocation was briefly discussed but the majority of the IPZ Counties implementation discussions focused on reentry and return.

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Environmental Response / Health and Safety:

This core capability was demonstrated successfully by RPS. In accordance with the approved EOPA personnel were prepositioned and all positions were quickly filled and operational shortly after the Alert ECL notification from HNP. The Dose Assessment staff including the Field Team Coordinator (FTC), two field teams and the Mobile Radiological Lab (MRL) participated in the exercise. During the course of the exercise the dose assessment staff demonstrated protective action decision recommendations (PAR) by monitoring both live plant data obtained over the Emergency Response Data System (ERDS) and copies of the plant Dose Assessment printouts versus their own dose projections. When the GE was declared by Duke Energy based upon degrading plant conditions the RPS Director recommended to the SERT Leader Protective Actions to evacuate subzones A, D and K and shelter the remaining 10 mile EPZ. After further monitoring of the plant conditions and based upon the radiation levels inside the containment structure the RPS Director conferred with the SERT Leader and the State Health Director and

determined a PAD for EWs to ingest KI.

During the exercise, the RPS Dose Assessment Leader noted that the rising containment pressure suddenly dropped to zero, an indication of a catastrophic failure of the containment building. Dose projections were run and compared with the Duke Energy projections, and both the Duke Energy and State projections demonstrated a good agreement much less than a factor of 10. New PADs were agreed upon and issued by the State and risk counties involved. Due to the extreme conditions at the plant, numerous additional scenarios were discussed based upon wind shifts and longer duration radiological releases from the facility to ensure all potential areas were accounted for in the protective actions for the general public.

The FTC effectively demonstrated leadership and use of a decision making process to ensure that field monitoring teams were correctly positioned downwind and moved in and out of the area as safely as possible based on radiological conditions. The FTC utilized both 800 MHz radio and cell phones to contact the field teams, mobile lab and sample courier. He conducted a pre-deployment briefing using a briefing checklist and kept all personnel updated on the latest plant and weather conditions throughout the exercise. The field teams were managed to obtain sufficient information that helped characterize the release while protecting the field team members.

The field teams had sufficient equipment to conduct adequate and effective radiological sampling to identify the radiological plume boundaries and strength. They were well trained and utilized their procedures to effectively carry out the requests from the FTC and reported requested field data and also personnel exposure throughout the exercise. They successfully demonstrated conducting radiation surveys and air samples and correctly recording and reporting the data back to the FTC.

The MRL and the Sample Control areas were set up to receive field samples for preparation and analysis. Upon completion of sample preparation the samples were transferred, along with the chain of custody forms, to the MRL. Appropriate contamination controls were used throughout the sample receipt and preparation process to reduce the potential spread of contamination. Most of the preparatory time was for the background, standards and quality control measurements required for operation of the gamma spectroscopy system. The MRL area was adequately equipped and capable of supporting their emergency response function of sample receipt, preparation, and radiological analysis of field samples.

Prior to sample analysis in the MRL, the Technical Analyst in the gamma spectroscopy van was interviewed to determine the equipment calibration methodology and the procedure for conducting daily background and quality control checks. The technician performed a daily background count and quality control check for each of the sample geometries (0.5 liter Marinelli, 1.0 Marinelli, particulate filter, and face loading iodine sample cartridge). Upon completion of quality control checks, he performed a long background count to be used to subtract from the total count in order to determine the sample count. Based on available documentation, all daily checks were determined to be within the recommended parameters for system operation, and calibration sources were National Institute of Standards and Technology (NIST) traceable. The Technical Analyst logged the air, vegetation, and soil samples on a "Logbook for the Mobile Radiological Lab" form. One vegetation sample was counted for 15 minutes and analyzed for demonstration purposes. The Technical Analyst stated that the external exposure rate on the sample container could be entered into the gamma spec system, and that this value would be used to determine the Minimum Detectable Activity (MDA) and establish the sample counting time. This method meets the detection criteria of Environmental Protection Agency's derived intervention limits and effectively reduces counting times, enabling the lab to count more samples per hour. This method would also provide sample results in a timely manner to dose assessment personnel to confirm or formulate protective actions.

Based upon the above, a previous ARCA from the 2010 Brunswick Nuclear Station REP exercise, 08-10-4.c.1-A-03 was cleared. This ARCA concerned the High Purity Germanium (HPGe) Gamma Spectrometer in the RPS MRL not being operational. During that exercise the device could not correctly identify the isotopes in the Counting Standard used to calibrate the system and, therefore, could not be used to count sample media during the exercise.

Environmental Response / Health and Safety – Ingestion Pathway (Day 2)

Although the SERT maintained direction and control of the incident response, the SERT Leader emphasized throughout the exercise that decisions on relocation, reentry, and return would be made in a collaborative process with the affected counties. For instance, when return of the public to previously evacuated areas was discussed, the SERT Leader looked to the counties to delineate the areas of return using appropriate landmarks and to determine if the proper infrastructure and services were in place to allow the return. Similarly, although it was the State Department of Agriculture and Consumer Services which had the authority to place embargoes After Action Report/Improvement Plan

on agricultural products, they coordinated with SERT and affected counties in determining the embargo areas.

There is current information on permanent agribusiness facilities to include: dairies, meat and poultry producers, fisheries, fruit and vegetable growers, grain producers, food processing plants, surface water supplies, and water supply intakes. However, some IPZ counties had not received the NC Agriculture pamphlet but were promised to receive it by the end of the day by the Agriculture representative. Coordination between several counties that share water usage discussed implementation for shutting water intakes as a precautionary measure to prevent contamination. The discussion was informative and perceived as an excellent implementation method.

FRMAC displayed four maps: Predicted Relocation Areas; Aerial Measuring System (Fixed Wing); Worker Protection Areas (exposure rate PAG); and Areas of Concern for Mature Produce (FDA Guidelines for CS-134/137 and I-131). They were useful in determining embargo boundaries, precautionary measures and protective actions. It was discussed among state and county participants that the maps could be used to establish initial transportation monitoring routes and checkpoints into and out of the embargoed areas. The map products were an excellent visual depiction of deposition and initiated a fair amount of discussion among participants.

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Once Reentry Access Points are established, all persons reentering the evacuated or restricted areas are considered EW's and will be treated as EW's for exposure control and personal protection concerns. Radiation levels in evacuated areas must be below radiation protection criteria for relocation before the evacuees can return to their homes. Emergency Management Offices will follow the procedures to ensure utilities, infrastructure, schools, and emergency services are operational in areas set for return.

This core capability was demonstrated successfully by Dose Assessment personnel working in the RPS. Key leaders and supporting staff were present and actively engaged during the second day of activities. RPS staff at the EOC provided the necessary verification and field monitoring simulations to analyze the sample data results and verify the areas that exceeded the Food and Drug Adminstration (FDA) food and livestock PAGs. State and various county officials cooperated and readily accomplished the mutual goals of performing accurate radiological assessments to allow reentry and return of the citizens to their homes and businesses, or if not possible, then relocation and or reentry to restricted areas to feed livestock and or retrieve belongings. FRMAC presented two maps for Predicted Areas of Concern for Mature Produce and Predicted Areas of Concern for Milk Products. These maps showed the areas exceeding FDA Guidelines for I-131 and Cs-134/137, and FRMAC stated that these were predicted areas of concern. These maps were overlaid with known food producers, then field teams were contacted and dispatched to take soil and vegetation samples in those areas. The samples were delivered to the MRL, processed for counting and sample results returned to Dose Assessment staff. The Dose Assessment staff used an RPS computer equipped with a calculation spreadsheet from data generated by the Mobile Lab from soil and vegetation samples. They determined first-year, second-year, and fifty-year doses based upon soil sample data. They then utilized special spreadsheets to determine if the contamination levels exceeded any FDA Derived Intervention Levels (DIL). Sample analysis identified areas that exceeded the EPA 50 year relocation PAG and the dairy and vegetation samples were utilized to establish embargo areas in the Ingestion and the second Pathway. (i) A set of the se

The field teams were assigned to take milk, soil, water and vegetation samples, and were made up of one RPS technician and two agriculture personnel. The teams completed an inventory, operational equipment checks, obtained appropriate dosimetry and completed dose record forms. When dispatched the teams located their assigned locations, and following their procedures correctly obtained milk, water, soil and vegetation samples in accordance with their procedures. Chain of custody forms were completed for each sample and the samples were transferred to a courier. The chain of custody forms were signed upon the transfer and the courier delivered the samples to the MRL technical analyst. Appropriate contamination controls were used throughout the sample receipt and preparation process to reduce the potential spread of contamination.

The MRL and Sample Control area were adequately equipped and capable of supporting the IPZ response function of sample receipt, preparation, and radiological analysis of field samples. The MRL was also capable of providing communication support and field team coordination operations, as needed. The Technical Analyst performed a daily background count and quality control check for each of the sample geometries. Upon completion of quality control checks he performed a long background count to be used to subtract from the total count in order to determine the sample count. Samples were counted for 15 minutes and analyzed, the external exposure rate on the sample container could be entered into the gamma spec system, and this value would be used to determine the (MDA) and establish the sample counting time. The Sample Control and MRL personnel conducted their sample receipt, preparation, and analysis

functions in a competent, professional manner in accordance with their procedures.

On-Scene Security and Protection - Traffic Control Points (TCPs):

NCSHP troopers successfully demonstrated the capability to provide a coordinated traffic management plan and related security protection operations for people and communities located within the affected areas of HNP.

TCP interviews were conducted out of sequence with representatives from the NCSHP. Each trooper was issued a dosimetry kit which included both a Self Reading Dosimeter (SRD) and Permanent Record Dosimeter (PRD). The kits also included KI, (simulated) and included written instructions for its use, limitations, and possible side effects. Enabling traffic flow is a typical daily duty for the patrolmen; as such, they are more than capable to facilitate traffic movement out of the affected area or to authorize reentry as necessary for citizens and authorized emergency workers. Each trooper interviewed was knowledgeable and capable of completing the duties associated with traffic routing and impediment removal of the TCPs within Chatham, Harnett and Lee Counties, as well as dosimetry, KI, turn back values, and exposure record documentation.

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.1, 2.b.2, 2.d.1, 2.e.1, 3.a.1, 3.b.1, 3.d.1, 3.d.2, 3.e.1, 3.e.2, 3.f.1, 4.a.2, 4.a.3, 4.b.1, 4.c.1, 5.a.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

3.3.1.2 Wake County

Operational Coordination:

The Wake County Emergency Operation Director and EOC staff successfully demonstrated their ability to maintain a unified and coordinated operational structure and process while appropriately integrating all critical stakeholders as well as their ability to protect the safety of its

citizens in the event of an incident at HNP. The communications function was seamless and there were no incidents which prevented the primary system from functioning properly. There were redundant systems which would have allowed continued operations had there been a failure in communications. The EOC had sufficient maps, monitors, equipment, computers, phones, faxes, printers and supplies to support their operations.

The Director successfully demonstrated excellent direction, control and coordination of response activities at the EOC. He effectively demonstrated the decision-making process which included relevant factors and appropriate coordination to ensure that an exposure control system, including the use of KI, was in place for EWs and the general public within the 10-mile EPZ. The Director used expert knowledge and there was considerable coordination and discussion between Wake County, the state and the three additional risk counties to make appropriate PADs for the general public as well as timely PADs for persons with disabilities and special needs. Wake County was the lead coordinator for information regarding PADs, siren activations and EAS messages. Staff personnel were knowledgeable, professional and performed their duties proactively and in accordance with established plans and procedures.

Public Information and Warning:

The Wake County Director, EOC staff and the PIOs successfully demonstrated the capability to develop, coordinate, and disseminate accurate alerts and emergency information to the media and the public prior to an impending emergency and activate warning systems to notify those most at-risk in the event of an emergency. The PIO consistently provided documentation to the EOC Manager for review and approval prior to release to the JIC.

The Director coordinated information regarding protective action decisions, siren activations and EAS messages. After successful siren activation of the county alert and notification system, the EOC staff demonstrated actions required for siren failure. Law enforcement officers clearly understood the actions to take upon notification of a siren failure in the county. Maps were based on current Geographic Information System (GIS) points which identified the siren coverage area, routes the officers would need to cover, and how many units would be necessary to complete the route within 45 minutes. Wake County can successfully cover all routes in the event of siren failure.

Additionally, the Apex Fire Department demonstrated Backup Alert and Notification. They had

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the ability and knowledge to conduct and coordinate and provide to the public information and warning to the people in a timely manner. During the exercise the sirens were sounded at SAE ECL and there was a failure of siren W33. Through interview they explained the process of how they would inform the public, the routes they would take, and the message that would be played over the public address (PA) system. Once the notification is completed they would provide. feedback to the Area Command Post and Staging Area Command. This activity would be completed in a timely manner and within the targeted 45 minute time limit. The Apex Fire Department has enough vehicles, public address equipment, and personnel to adequately cover each individual route within the allotted 45 minutes. They were familiar with the 1R administrative limit, and the 5R turnback limit. They were aware of the significance of the limits. They also understood the use of KI. The EW knew how to use dosimeters, when to take readings, and reporting procedures.

Environmental Response/Health and Safety: Emergency Worker and Vehicle Decontamination (EWD)

Wake County successfully demonstrated the ability and resources to address and support responder operations thru emergency worker/vehicle monitoring and decontamination by the City of Raleigh Fire Department's (RFD) out of sequence demonstration. Alert and notification was simulated, however mobilization and EWD activities were observed. The EWD site was setup and appropriately marked to conduct EWD operations. Team members were prepositioned and assembled on site where they received a radiation mission brief by the Wake County EMA staff and a safety brief from the Assistant Fire Chief. Two team members under guidance of the Safety Officer issued, recorded and documented survey instruments and protective equipment issued to personnel. All EWs received directions on exposure and contamination control, and the use of KI. All team members were familiar with the purpose, scope, setup, equipment and conduct of the EWD site and professionally performed their duties. The site was well prepared, laid out and marked in a fashion that was clear, functional and effective in processing personnel and equipment while protecting the health and safety of emergency workers and team members. Team members monitored and decontaminated two vehicles and two emergency workers with proper procedures, techniques and timeliness.

On- Scene Security and Protection - Traffic Control Points (TCPs):

The Apex Police Department successfully demonstrated the capability to provide a coordinated traffic management plan and related security protection operations for people and communities located within the affected areas of Wake County. The ability to effectively establish and maintain traffic control points was demonstrated during the HNP exercise. The officers were accordingly well versed in the law enforcement aspects related to TCP establishment and management to include removal of impediments. The officers were well trained and exhibited sufficient knowledge of dosimetry, personal protective measures, and the pertinent aspects related to the ingestion of potassium iodide. They similarly were equipped with information that could assist them in responding to queries from evacuees regarding shelters and reception centers.

Critical Transportation – Protective Actions for Schools:

The Wake County Public School System demonstrated its ability to execute protective measures for schools through interviews with the staffs of Apex High School, Apex Elementary, Apex Middle School, Lufkin Road Middle School, and Baucom and Olive Chapel Elementary Schools. Additionally, there were representatives from WCPSS Transportation Division, WCPSS Risk Management, Wake County Emergency Management Agency, North Carolina Division of Emergency Management, and the utility. All participants were extremely familiar with plans and procedures and provided a detailed description of how they would execute their responsibilities. They understood the similarities between HNP emergency response measures and other emergency challenges they may face.

Mass Care – Reception and Congregate Care Center (RCCC):

The capability to provide life-sustaining services to an affected population was successfully demonstrated with the out of sequence demonstration for the Wake County RCCC. Alert and notification was simulated, while reception center operations were observed. Personnel were prepositioned at Sanderson High School, which served to facilitate and adequately accommodated RCCC operations. The monitoring and decontamination team was staffed with personnel from Wake County EMA, Public Health, City of Raleigh Police and Fire Departments, Wake County EMS and was augmented with staff assistance from the Wake County Animal Center and State Department of Agriculture.

The Operations Section Chief and Safety Officer provided briefings and along with the Wake County EMA, reviewed procedures and responded to staff questions. EW were equipped with equipment and supplies for monitoring and decontaminating evacuees and wore personal protective equipment at strategic locations. They conducted preoperational checks of survey and monitoring equipment, all of which was serviceable and appropriately calibrated with calibration dates and range of readings stickers affixed to the instruments. Portal monitors were also available for conducting evacuee monitoring. Equipment was issued and tracked by the Safety Officer, who provided guidance on the use, exposure control, call back values, turn back values, exposure limit values, distribution and use of KI.

All team members were familiar with the purpose, scope, setup, equipment and conduct of the RCCC site and their roles and responsibilities. Decontamination team members knew how to instruct evacuees to perform decontamination activities, monitor evacuees, and what actions to take if they could not be decontaminated. Additionally, the State Department of Agriculture and Wake County Animal Center provided guidance for procedures for accommodating companion pets/animals who accompany evacuees or who might be housed at the site.

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

3.3.1.3 Chatham County

Operational Coordination:

Chatham County Emergency Management personnel and the EOC staff successfully demonstrated the capability to establish and maintain a unified and coordinated operational structure and process that appropriately integrated all critical stakeholders and supported the execution of core capabilities. The Emergency Operations Director and Deputy successfully instituted their plans and procedures to manage emergency operations. Although most EOC staff personnel were prepositioned, in accordance with the EOPA, the normal EOC staff callout procedure was demonstrated. The warning point received the initial emergency notification form (ENF) from the HNP and notified the Director of the notification receipt through normal procedures. He then had the County reverse 911 type system activated to alert and mobilize EOC staff.

During the exercise the Director and Deputy demonstrated the proper use of their primary and secondary communication systems and alternate methods. All communications systems operated properly throughout the exercise. The EOC had 10 mile EPZ and 50 mile IPZ maps displayed on walls and other maps and logs could be displayed on a large screen in front of the EOC as necessary. Each EOC staff position was supplied with a Position Notebook that contained checklists for the staff to complete for each ECL. The notebooks also contained appropriate standard operating guides, telephone numbers, paper, messaging note paper, and other information or instructions pertinent to the position. The EOC also had sufficient support equipment such as facsimile machines, copiers, telephones, etc. to support emergency operations.

The Director and Deputy demonstrated the ability to make and implement PADs and coordinate actions and implementation with other counties and the SEOC. The Director and Deputy provided direction and control throughout the exercise. They conducted numerous EOC staff briefings as ECLs changed or when he received new information. They also coordinated the actions of the EOC staff in preparing for an escalation in emergency levels by providing plans and procedures and having the agencies be proactive in developing emergency actions. These actions included relocating a school and special needs individuals early in the event to ensure they were safe if conditions continued to degrade. The Director coordinated lake clearing with other counties and informed them when they were relocating schools. He also coordinated with the NCSHP in establishing the county's TCPs and removal of impediments.

The Director coordinated with the Radiological Officer (RO) and the Fire Marshal to ensure all EWs were issued dosimetry and KI when they were deployed. The Director tasked the RO to track emergency worker exposure and determine if they needed additional radiological equipment. When the order was received for EWs to ingest KI the Fire Marshal insured that all workers were informed to ingest KI and followed-up to ensure they had ingested their KI and track the personnel who had ingested KI. When the order was received for the general public to

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ingest KI the Director coordinated the announcement with the Public Health representative in the EOC. Once the order was confirmed, the Director had the Health Department notify personnel at reception centers and the PIO issued a press release concerning the general public's need to ingest KI.

Public Information and Warning:

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The Chatham County EOC staff successfully demonstrated the capability to deliver coordinated, prompt, reliable, and actionable information to the whole community. The PIO used clear, consistent, accessible, and culturally and linguistically appropriate methods to effectively relay information regarding any threat or hazard and, as appropriate.

The director and PIO staff demonstrated professional skills in assuring timely warnings and related public information was generated to support emergency events in the county. The staff actively coordinated with the SEOC and Wake County for activations of the sirens, EAS and NWS tone alert radios to implement protective action decisions. The PIO assured the Public Information activity supported those decisions with appropriate media releases for the affected public. The PIO interacted with the EOC staff to assure media releases reflected both timely and correct information through the issuance of news releases. The county PIO at the JIC (once activated) and the Director approved all news releases.

The PIO fielded many public inquiries and logged each on a Communications Log form. She obtained and recorded accurate information for callers; referred them to the appropriate information sources, and referenced the HNP Information Brochure.

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The Chatham County Fire Marshal indicated that backup route alerting EWs could be mobilized and deployed to any route where siren failures could occur. Announcements using a pre-scripted message would be made over the vehicle's PA system as they drove the routes. He stated alerting could be performed within a reasonable time, usually within 45 minutes. It was also stated that the clearing of Lakes Harris and Jordan could be accomplished in a timely manner.

Critical Transportation – Protective Actions for Schools:

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This capability to provide transportation for the relocation of schools was successfully demonstrated by the Moncure Elementary school staff. This was done during an out of sequence

interview with the Principal and her staff in which their ability to safeguard students, staff and faculty in the event of an incident involving HNP was discussed. All knew their plans and procedures thoroughly on coordinating a school relocation or shelter in place. Moncure Elementary School has sufficient buses to relocate their students in a timely manner and the relocation facility is prepared to accept the students and assist in their supervision and eventual release to parents/guardians. Moncure Elementary School staffs have specific tasks and these are addressed during annually scheduled school training throughout the school year.

Mass Care – Reception Congregate Care Center (RCCC)

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Chatham County demonstrated the capability to provide life-sustaining services to an affected population with the establishment of the Jordan Mathews High School RCCC Facility in support of HNP. The Chatham County Department of Social Services (DSS) assisted by the First Help Emergency Medical Services (EMS), Health Department, County Fire Departments, the Chatham County Schools, Sheriff's Office, Amateur Radio Emergency Services (ARES), and Emergency Management provided effective management and staffing of the facility. The Lee-Chatham Chapter of the ARC provided staffing and additional resources to support this facility.

The setup and establishment was in accordance with the Annex A, of the Standard Operating Guideline (SOG) for the Reception Center and Congregate Care Facility Operations in Support of the Harris Nuclear Plant, dated January 2011 and the EOPA. The facility was well equipped with appropriate signage and clearly marked paths. A two-step process is incorporated for monitoring of evacuees. This includes initial screening using portal monitors and then secondary monitoring using hand held survey meters if contamination is detected by the portal monitor. Six simulated evacuees were processed through the RCCC. It took about 52 seconds per evacuee to process them through the portal monitor. The estimated population assigned to this location is 12,599, 20% of the population is about 2,520; the plan states that three portal monitors will be used. Processing at the rate demonstrated the expected population of evacuees could be processed within the 12 hour requirement.

Chatham County would prepare to open this facility at SAE ECL, and open the shelter to evacuees at GE ECL.

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

Unclassified Radiological Emergency Preparedness Program (REP)

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- a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.2, 2.c.1, 2.d.1, 2.e.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 3.e.1, 3.e.2, 3.f.1, 5.a.1, 5.a.3, 5.b.1, 6.a.1, 6.c.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None

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- c. DEFICIENCY: Noned. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES RESOLVED: None
- g. PRIOR ISSUES UNRESOLVED: None

3.3.1.4 Harnett County

Operational Coordination:

Harnett County successfully demonstrated their ability to maintain a unified and coordinated operational structure and process while appropriately integrating all critical stakeholders. They demonstrated their ability to effectively alert, notify, and mobilize staff. Multiple communication systems were tested between all stakeholders without fail. Equipment and supplies in the EOC were sufficient to support county response operations.

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Protective action decision making is provided by the Harnett County Emergency Services Director in consultation with the County Commissioners, the State of North Carolina, and the three other risk counties. Protective action decisions for the public were closely considered and coordinated by the director. The director conducted staff briefings and round table discussions for each emergency notification form received from the utility. This insured that all EOC staff members were aware of incident conditions and the actions being taken by others. Position instruction books are provided for each member of the EOC staff. These books contained specific instructions and tasks for each position based on the county plans and SOGs. By utilizing the position instruction books, the staff members were always aware of the actions they were to take based on the emergency classification level. During the round table discussions, the director maintained direction and control of the incident by listening to the staff describe the tasks they were carrying out and providing guidance only where needed. This proved to be an efficient and effective method of maintaining control and situational awareness of the implementation of all protective action decisions. The Harnett County RO maintained exposure control for emergency workers through close monitoring of direct reading dosimeters. During this exercise, all response actions were sufficiently coordinated with local and outside organizations and executed in accordance with county plans and procedures.

Public Information and Warning:

Harnett County successfully demonstrated their ability to provide accurate and timely public information and warning to its citizens. The primary means for alert and notification of the public in Harnett County consists of the Duke Energy fixed siren system, EAS messages, and NWS Alerts. Activation of the siren system primarily lies with Wake County; however, control panels are also located in the County E-911 Center and Duke Energy's EOF. This system was successfully demonstrated using a silent test and was activated three times during the exercise. Siren sounding, EAS, and NWS broadcast times were agreed upon on the decision line with the EAS messages being sent to the primary radio station by the SEOC. Emergency vehicles with sirens and public address systems demonstrated route alerting and would be utilized if any or all of the siren system failed. Harnett County emergency personnel satisfactorily demonstrated or discussed how these systems could be activated and what actions they would take if any part of the system failed.

The County PIO and members of the rumor control staff demonstrated the ability to provide instructional follow up messages to the public in a timely manner and handle public inquiries. The EOC PIO processed three public news releases prior to the activation of the JIC and six additional releases once the JIC was activated. The news releases provided the necessary instructions needed to keep the public informed and were released in a timely manner. The rumor control information gathered was passed and shared with the PIO and Director. With each call received, the staff provided accurate information or referred the caller to the appropriate source. The rumor control staff utilized the HNP Safety Brochure and county news releases to help aide in their response to the calls.

Environmental Response/Health and Safety – Emergency Worker and Vehicle Decontamination (EWD)

The Angier-Black River Fire Department successfully demonstrated the ability and resources to address and support responder operations thru emergency worker and vehicle monitoring and decontamination (EWD) out of sequence. Alert and notification was simulated, however mobilization and EWD activities were observed. The fire station was setup and marked to conduct EWD operations. Team members were pre-positioned and assembled in the fire station where they received a radiation mission brief by a member of the County EMA and a safety brief

from the Assistant Fire Chief. The Team Leader issued, recorded and documented radiation and protective equipment issued to personnel, with directions and its use, exposure control, the use of KI and answered team member questions regarding the mission. All team members were familiar with the purpose, scope, setup, equipment and conduct of the EWD site and performed their duties well. The site was well prepared, laid out and marked clearly. It was functional and effective in processing personnel and equipment while protecting the health and safety of EWs and team members. Team members monitored and decontaminated one vehicle and two EWs, employing proper procedures, techniques and timeliness. All procedures were consistent with established plans and procedures.

Mass Care – Reception and Congregate Care Center (RCCC)

Harnett County demonstrated the capability to provide life-sustaining services to an affected population with the establishment of the Harnett Central Middle School RCCC Facility in support of the HNP. The setup and establishment was in accordance with the Annex B, of the SOG for the Reception Center and Congregate Care Facility Operations in Support of HNP, dated January 2011 and the EOPA. The facility was well equipped with an abundance of signage and clearly marked paths. Six simulated evacuees were processed through the monitoring point. It took approximately 45 seconds per evacue to process them through the portal monitor. The estimated population assigned to this location is 3,948, 20% of the population is approximately 790; the plan states that four portal monitors will be used. Processing at the rate demonstrated the expected population of evacuees would be processed well within the 12 hour requirement.

Through the exercise, the emergency workers were questioned about proper wear of dosimetry, frequency requirements for reading and recording personal dosimetry readings, actions to take if a reading of 1R, 5R and 25R, were read, and the principles of As Low As Reasonably Achievable (ALARA); all questions were answered correctly. It was obvious the members of the team were well trained and ready for an actual event.

The shelter registration process was clearly designed to place priority on the health and safety of the general public needing congregate care. Personnel staffing the medical, mental health, and client services support rooms were professional and well versed in their responsibilities. All were prepared to use available county resources and rapidly reach back to parent organizations for supplemental assistance. The DSS Shelter manager was very proficient and prepared to assume her responsibilities, as were all the other key staff members.

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, 2.d.1, 2.e.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 3.e.1, 3.e.2, 3.f.1, 5.a.1, 5.a.3, 5.b.1, 6.a.1, 6.b.1, 6.c.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None

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 $(x_{1}, y_{2}, y_{1}) = (x_{1}, y_{2}, y_{2}) + (x_{1}, y_{2}) + (x_{2}, y_{2}) + (x_{2},$

e. NOT DEMONSTRATED: None

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- f. PRIOR ISSUES - RESOLVED: None
- PRIOR ISSUES UNRESOLVED: None g.

3.3.1.5 Lee County (NC)

a sector a

and the particular sector of the sector of t Operational Coordination:

The Lee County Emergency Management Agency successfully demonstrated their ability to maintain a unified and coordinated operational structure and process while appropriately integrating all critical stakeholders. Key staff were alerted and mobilized in response to an incident at HNP in accordance with county plans and the extent of play agreement.

The Lee County Sheriff's Office Warning Point received the initial notification of Alert and successfully authenticated the message with HNP after which the Lee County Director of Emergency Services (LCDES) activated the county EOC and staff. The EOC has multiple direct lines, cell phones, and internet service. The direct lines were the Selective Signaling System (SSS) and HNP direct lines; primary and alternate respectively. All communications equipment was operational and fully functional; no communication failures were observed. This is a new EOC facility with back up power and with a spacious laid out and sufficient equipment, supplies, and communications to support emergency response operations.

The LCDES successfully accomplished direction and control and made timely decisions. An initial EOC staff briefing was conducted prior to EOC activation and upon receipt of each ENF message thereafter. Response activities were coordinated between agencies and authorized by the LCDES in a timely manner with a public safety focus. Throughout the exercise, the LCDES confidently discussed and provided concurrence for all PADs and EAS messages. The LCDES consistently tracked coordination of KI to EW's and the General Public with the Lee County Health Department; each ensuring distribution and ingestion PADs were timely. Subsequent

PADs were based on available HNP and State radiological data and implemented in a judicious fashion. The LCDES and assistant are sound leaders with a very capable EOC staff; leadership qualities and subject matter expertise were abundant and. exhibited throughout the exercise.

Public Information and Warning:

Lee County successfully demonstrated their ability to provide accurate and timely public information and warning to its citizens. The initial siren and EAS activation for Lee County was initiated in Wake County through a mutual agreement with the risk counties. The initial instructional message contained all the necessary elements in accordance with FEMA guidance.

The LCDES and Sanford Fire Department Chief coordinated the demonstration of initial backup route alerting following a siren failure during the initial siren and EAS activation. Backup route alerting was accomplished well within 45 minutes by members of the Deep River Volunteer Fire Department. An additional backup route alerting was conducted at the GE ECL in accordance with Lee County plans and procedures. Sanford Fire representatives sufficiently demonstrated that the siren failure area could be identified and alerted within the required time.

The Lee County PIO successfully demonstrated the capability to receive and disseminate accurate press release to the media and the public in a timely manner by modifying, gaining approval and releasing pre-scripted messages. All thirteen press releases were generated and reviewed for accuracy by the LCDES, and were followed by a Spanish press release prepared by the EOC translator. The rumor control representative successfully demonstrated the capability to track and clarify rumors from the public, none of which was trending. Rumor control was able to quell all incoming rumors and answer questions from the general public utilizing information from the EOC staff.

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

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

f. PRIOR ISSUES - RESOLVED: Noneg. PRIOR ISSUES - UNRESOLVED: None

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SECTION 4: CONCLUSION

Officials and representatives from the State of North Carolina; the risk counties of Wake, Chatham, Harnett and Lee Counties, who participated in this exercise 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). A previous ARCA (08-10-4.c.1-A-03) identified during the 2010 Brunswick Nuclear Plant REP exercise which concerned the operational status of the High Purity Germanium (HPGe) Gamma Spectrometer was successfully cleared by the Radiation Protection Section (RPS) Mobile Radiological Laboratory's demonstration during this exercise.

The participation of both NRC and FEMA representatives at the State Emergency Operations Center added realism to the exercise and demonstrated a commitment to keep the residents of North Carolina informed during an emergency. There was continued strong leadership in direction and control even with a recent change-over in the State Director position. The State and risk counties demonstrated strong knowledge of their emergency response plans and procedures and successfully implemented them. The strength of the working relationships between the various Federal, State and local response agencies in their mission planning and execution abilities throughout all phases of the exercise was obvious, and confirmed the success of the Harris Task Force organizational structure. The Harris Task Force, co-chaired by representatives from both North Carolina Emergency Management and Duke Energy, has proven to be an excellent example of public and private agency cooperation.

During the Ingestion Pathway table top exercise the involved agencies along with the State of North Carolina and the risk counties provided an excellent opportunity for the IPZ counties to become better prepared for a radiological event. All demonstrated good coordination and implementation on protective action decisions which provided for the safety of the general public and emergency workers. The SERT and risk counties also successfully demonstrated their relocation procedures and the return of evacuated individuals and families.

The State of North Carolina, the risk and ingestion pathway counties have dedicated emergency response staffs as well as numerous volunteers that participated in this exercise who are serious and professional in executing their duties. FEMA wishes to acknowledge those efforts as well as those of the many other individual who participated and made this exercise a success.

APPENDIX A: EXERCISE TIMELINE

	Table	1 - Exerci	se Timelir	ne		, .
DATE: 2013	-04-30, SI ⁻	ΓE: Shear	on Harris	Nuclear P	lant, NC	· ·
Emergency Classification Level or Event	Time Utility Declared	NC	Wake County	Chatham County	Harnett County	Lee County (NC)
Unusual Event	N/A	N/A	N/A	N/A	N/A	N/A
Alert	0923	0936	0940	0935	0943	0933
Site Area Emergency	1143	1148	1152	1149	1149	1150
General Emergency	1249	: 1257		· 1257	1303	1259
Simulated Rad. Release Started.	1330	1346	.1345	1349	1406	1347 .
Simulated Rad. Release Terminated	Ongoing	Ongoing	Ongoing	Ongoing	Ongoing	Ongoing
Facility Declared Operational		0953	0944	0945	1019	0943
Exercise Terminated		1518	1429	1511	' N/A	1501
Declaration of Emergency: State	and the second	1205	1205 -	1205	1235	N/A
Declaration of Emergency: Local		N/A	. 1204	1245	1214	1300
Early Precautionary Actions: Early	Release	N/A	1212	1130	1238	1235
Early Precautionary Actions: Special Populations		N/A	1154	1138	1240	N/A
Early Precautionary Actions: Clear and Jordon	Lakes Harris [.]	1045	1045	1045	1029.	·N/A
1st Protective Action Decision: Put	olic Warning	1200	1200	1200	1200	1200
1st Siren Activation		1215	1215	1215	1215	1215
1st EAS Message (Stay Tuned): 'M	lessage A'	1220	1220	1220	1220	1220
1st NWS Message (Stay Tuned)	· ·	1225	1225	1225	1225	1225
2nd Protective Action Decision: Evacuate Zones - A, B, C, D, G, H, I, J, K, L; Shelter in Place Zones: E, F, M, N		1325	1328	1328	1328	1328
2nd Siren Activation		1335	1335	1335	1335	1335 .
2nd EAS Message: 'Message C'		1340	1340	1340	1340	1340
2nd NWS Message		1345	1345	1345	1345	1345
3rd Protective Action Decision: KI Public	for General	1416	• N/A ·	N/A	N/A	1416
3rd Siren Activation		1425	1425	1425	1425	1425
3rd EAS Message: 'Message E'		• 1430 _	. 1430	1430	1430	1430
3rd NWS Message		1435	1435	1435	1435	1435
KI Administration Decision: Emer Workers	1328	1328	1328	1328	1328	
KI Administration Decision: Gener	1416	1416	1416	1416	1416	

Table 1 - Exercise Timeline

APPENDIX B: EXERCISE EVALUATORS AND TEAM LEADERS

DATE: 2013-04-30, SITE: Shearon Harris Nuclear Plant, NC

LOCATION		EVALUATOR	AGENCY
State of North Carolina		JT Ackermann *Michael Dolder Keith Earnshaw John Fill Michael Henry Jill Leatherman Bart Ray Lisa Rink Alex Sera Odis Spencer Bruce Swiren	FEMA FEMA-NP- TH-REP ICFI FEMA ICFI ICFI FEMA R4 FEMA FEMA ICFI
Wake County		Walt Cushman John Fill Gerald Mclemore Robert Nash *Lisa Rink Alex Sera Odis Spencer	FEMA-NP- TH-REP FEMA FEMA FEMA FEMA R4 FEMA FEMA
Chatham County		John Fill *Joe Harworth Gerald Mclemore Robert Nash Lisa Rink Alex Sera Ronald Shaw Robert Spence	FEMA FEMA FEMA FEMA R4 FEMA FEMA FEMA-NP- TH-REP
Harnett County		*Matthew Bradley Walt Cushman Michael Dolder John Fill Gerald Mclemore Lisa Rink Alex Sera Robert Spence Odis Spencer	FEMA FEMA-NP- TH-REP FEMA-NP- TH-REP FEMA FEMA R4 FEMA R4 FEMA-NP- TH-REP FEMA
Lee County (NC)		John Fill Quintin Ivy *Gerald Mclemore Lisa Rink Alex Sera	FEMA FEMA RIV FEMA FEMA R4 FEMA
	* Team Leader		

After Action Report/Improvement Plan

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 Emergency Services
CFR	Code of Federal Regulations
CMC +	Corporate Media Center
DENR	Department of Environmental Natural Resources
DHS	Department of Homeland Security
DOC	Department of Commerce
DOE	Department of Energy
DOI	Department of the Interior
DOT	Department of Transportation
DPH	Department of Public Health
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
EMNET	Emergency Management Information Tracking System
EMS	Emergency Medical Services
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EOPA	Extent of Play Agreement
<u>E</u> PA	Environmental Protection Agency
EPIP	Emergency Plan Implementing Procedure
EPZ	Emergency Planning Zone
ER	Emergency Room
ERC	Emergency Response Coordinator
ERDS	Emergency Response Data System
ERP	Emergency Response Plan

Shearon Harris Nuclear Plant

ESF	Emergency Support Function
EW	Emergency Worker
EWD	Emergency Worker Decontamination
EXPLAN	Exercise Plan
FEMA	Federal Emergency Management Agency
FEOC	Forward Emergency Operations Center
FMT	Field Monitoring Team
FOUO	For Official Use Only
FRMAC	Federal Radiological Monitoring and Assessment Center
GE	General Emergency
GIS	Geographic Information System
GM	Geiger-Muller (detector)
GPS	Geographic Positioning System
HAZMAT	Hazardous Materials
HNP	Harris Nuclear Plant
НО	Health Order
HQ	Headquarters
HSEEP	Homeland Security Exercise and Evaluation Program
IC	Incident Commander
ICS	Incident Command System
IMT	Incident Management Team
IP	Improvement Plan
IPZ	Ingestion Pathway Zone
IRG	Information Response Group
IRIS	Internet Routed Information System
ЛС	Joint Information Center
KI	Detersium Indida
TD 1	Potassium fodide
LP-1	Local Primary -1
MOC	Local Primary -1 Mobile Operations Center
MOC MOU	Local Primary -1 Mobile Operations Center Memorandum of Understanding
MOC MOU mR	Potassium founde Local Primary -1 Mobile Operations Center Memorandum of Understanding milliroentgen
MOC MOU mR mR/h	Potassium founde Local Primary -1 Mobile Operations Center Memorandum of Understanding milliroentgen milliroentgen per hour
MOC MOU mR mR/h NC	Potassium founde Local Primary -1 Mobile Operations Center Memorandum of Understanding milliroentgen milliroentgen per hour North Carolina
MOC MOU mR mR/h NC NCEM	Potassium founde Local Primary -1 Mobile Operations Center Memorandum of Understanding milliroentgen milliroentgen per hour North Carolina North Carolina Emergency Management
MOC MOU mR mR/h NC NCEM NCWRC	Potassium founde Local Primary -1 Mobile Operations Center Memorandum of Understanding milliroentgen milliroentgen per hour North Carolina North Carolina Emergency Management North Carolina Wildlife Resources Commission
MOC MOU mR mR/h NC NCEM NCWRC NGO	Potassium founde Local Primary -1 Mobile Operations Center Memorandum of Understanding milliroentgen milliroentgen per hour North Carolina North Carolina Emergency Management North Carolina Wildlife Resources Commission Non-Governmental Organization
MOC MOU mR mR/h NC NCEM NCWRC NGO NIMS	Potassium founde Local Primary -1 Mobile Operations Center Memorandum of Understanding milliroentgen milliroentgen per hour North Carolina North Carolina Emergency Management North Carolina Wildlife Resources Commission Non-Governmental Organization National Incident Management System
MOC MOU mR mR/h NC NCEM NCWRC NGO NIMS NOUE	Potassium founde Local Primary -1 Mobile Operations Center Memorandum of Understanding milliroentgen milliroentgen per hour North Carolina North Carolina Emergency Management North Carolina Wildlife Resources Commission Non-Governmental Organization National Incident Management System Notification of Unusual Event
MOC MOU mR mR/h NC NCEM NCWRC NGO NIMS NOUE NPP	Potassium founde Local Primary -1 Mobile Operations Center Memorandum of Understanding milliroentgen milliroentgen per hour North Carolina North Carolina Emergency Management North Carolina Wildlife Resources Commission Non-Governmental Organization National Incident Management System Notification of Unusual Event Nuclear Power Plant

NUREG- 0654	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
NWS	National Weather Service
OOS	Out-of-Sequence
ORO	Offsite Response Organization
PA	Public Announcement
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
REMO	Radiation Emergency Management Organization
REP	Radiological Emergency Preparedness
REPP	Radiological Emergency Preparedness Program
RERP	Radiological Emergency Response Plan
RO	Radiological Officer
RPS	Radiation Protection Section
SAE	Site Area Emergency
SEOC	State Emergency Operations Center
SHP	State Highway Patrol
SIMCELL	Simulation Cell
SIP	Shelter-in-Place
SMRAP	Southern Mutual Radiological Assistance Plan
SOG	Standard Operating Guide
SOP	Standard Operating Procedure
SRD	Self-Reading Dosimeter
SSS	Selective Signaling System
TCL	Target Capabilities List
ТСР	Traffic Control Point
THD	Technological Hazard Division
TLD	Thermoluminescent dosimeter
USDA	U.S. Department of Agriculture
VFD	Volunteer Fire Department

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Shearon Harris Nuclear Plant

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APPENDIX D: EXTENT OF PLAY AGREEMENT

NORTH CAROLINA EXTENT OF PLAY AGREEMENT Harris Nuclear Plant

INGESTION PLUME PHASE FULL PARTICIPATION

RADIOLOGICAL EMERGENCY PREPAREDNESS EXERCISE

April 30-May 1, 2013

All activities will be demonstrated fully in accordance with respective plans and procedures as they would be in an actual emergency (FEMA must receive these plans, guides and procedures NLT 60 days before the exercise). This Extent of Play agreement is written by exception. If it is not listed as an exception it will be demonstrated as described in the plans, standard operating guides (SOGs) and/or procedures (SOPs). Any issue or discrepancy arising during exercise play may be re-demonstrated <u>if allowed</u> by the Regional Assistance Committee (RAC) Chairman (FEMA Region IV) or as listed herein. This allowance may be granted if it is not disruptive to exercise play and is mutually agreed to by the Offsite Response Organization (ORO) Controller and FEMA Evaluator.

CORE CAPABILITY: Operational Coordination

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

CAPABILITY TARGET: Emergency Operations Management

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

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

All participating state and local government personnel will be pre-positioned in the area and will respond as the scenario dictates. Alert rosters will be provided to FEMA evaluators.

Critical Task: 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/FEMA REP-1, F.1, 2; Criterion 1.d.1).

1. S. S. S. J. M.

State and county decision makers will use a conference bridge line to conduct protective action discussions/decision making.

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

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

Quantities of equipment, their calibration/testing will be verified during SAVs. SAVs will be conducted in: $t \in [0, \infty]^{-1}$ entra Staff Assistance Visits at a the second state of the second state of the second state of the second state and a standard the second s ten **Chatham County** were easily as the second second and the model of the second second second second second second and the first of the stand of the second states and the second states and the second states and the second state Date and Time: Monday, April 22, 2013 at 1:00 p.m. Location: 297 West Street, Pittsboro, NC 27312 Harnett County Constant Brand & Constant of the State of the State

Date and Time: Thursday, March 28, 2013 following the Task Force meeting. Location: 1005 Edwards Brothers Drive, Lillington, NC 27546

Lee County

an name with a second complexity of the angle of the second second second second second second second second se Date and Time: Tuesday, April 23, 2013 at 1:00 p.m. Location: Elm Street, Sanford, NC 27330

Wake County

Date and Time: Tuesday, April 23, 2013 at 9:00 a.m. · . Location: Wake County Public Safety Center, 331 South McDowell Street, Raleigh, NC 27601 المراجعين المراجع المر

CAPABILITY TARGET: Protective Action Decision Making (PAD)

Performance Measure: Key personnel with leadership roles will provide direction and control; protective action decision making will be demonstrated by the OROs. Following activation of the ICP, staff and organize the ICP in accordance with the comprehensive emergency management plan (CEMP) and the requisite policies, procedures, and directives.

Critical Task: Key personnel with leadership roles for the ORO provide direction and control to that part of the overall response effort for which they are responsible (NUREG-0654 A.1.d; A.2.a, b; A.3; C.4, 6; Criterion 1.c.1). 47

Wake County will be the lead-coordinating county for the Harris Counties until Site Area Emergency. Following the "Silent Test" sounding of sirens and issuance of the first PAD recommendations to the public, Wake County will request the State assume direction and control. and the second second

Critical Task: OROs use a decision-making process, considering relevant factors and appropriate coordination, to ensure that an exposure control system, including the use of KI, is in place for EWs including provisions to authorize radiation exposure in excess of administrative limits or Protective Action Guidelines (PAGs), (NUREG-0654/FEMA REP-1, C.6; J.10.e, f, K.4; Criterion 2.a1.), particular and a second of the second se

Radiation Protection and Public Health will analyze technical data and make recommendations to SERT Leader who in turn will make recommendations to the County The second second EM Coordinators and Public Health Directors.

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

Demonstration of KI distribution for the General Public will be accomplished during Off-Scenario activity by local Public Health officials through discussion and with presentation of distribution documentation to the Federal Evaluator. (Demonstration will be during the Staff Assistance Visits.) Distribution of KI to institutionalized individuals, who cannot be evacuated, will be discussed with the Federal Evaluator.

No actual distribution of KI will be accomplished in this exercise.

. . . .

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

In accordance with plans and procedures

Critical Task: Protective action decisions are made, as appropriate, for groups of persons with disabilities and access/functional needs (NUREG-0654 D.4; J.9; J.10.d, e; Criterion 2c1).

Critical Task: Radiological consequences for the ingestion pathway are assessed and appropriate PADs are made based on the ORO planning criteria (NUREG-0654 A.3; C.1, 4; D.4; J.9, 11; Criterion 2d1).

Critical Task: Timely post-plume phase relocation, reentry, and return decisions are made and coordinated as appropriate, based on assessments of radiological conditions and criteria in the ORO's plan and/or procedures (NUREG-0654 46; J.9; K.3.a; M.1; Criterion 2e1).

After Action Report/Improvement Plan

CAPABILITY TARGET: Protective Action Implementation

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

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

(a) A start diff (b) has not a section of both of her for a constant of the section of the se

This task will be evaluated based on ORO plans and procedures based on exercise scenario progression.

Critical Task: KI and appropriate instructions are available if a decision to recommend use of KI is made. Appropriate record-keeping of the administration of KI for institutionalized individuals (not general public) is maintained (NUREG-0654/FEMA REP-1, J.10.e, f; Criterion 3.b.1).

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

Critical Task: Protective action decisions are implemented for persons with disabilities and access/functional needs other than schools within areas subject to protective actions (NUREG-0654 J.10.c, d, e, g; Criterion 3.c.1).

Chatham, Harnett, Lee and Wake Counties will discuss their plans and procedures to satisfy this criterion. A list of potential special population citizens will be provided for the FEMA evaluator to review.

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

A school representative or appropriate county official will be prepared to discuss their plans and procedures to satisfy this criterion based on exercise scenario progression

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

Traffic Control Points (TCP) are predetermined.

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

After Action Report/Improvement Plan

Shearon Harris Nuclear Plant

Actions to identify and remove impediments to evacuation will be by discussion with the . . . responsible law enforcement agency at each county EOC, as scenario dictates. that he are not track in the providence of the second advectation. **Critical Task:** The ORO demonstrates the availability and appropriate use of adequate information regarding water, food supplies, milk, and agricultural production within the ingestion exposure pathway emergency planning zone for implementation of protective actions (NUREG-0654 A.3; C.1, 4; J.11; Criterion 3e1). م الإيران (Construction and South Construction and South Construction and South Construction and South Constru

• In accordance with plans and procedures a set of a set of set of the set of and the second standard and the second standards in the second standards and the second standards and Critical Task: Appropriate measures, strategies, and pre-printed instructional material are developed for implementing PADs for contaminated water, food products, milk, and agricultural production (NUREG-0654 G.1, J.9, 11; Criterion 3e2).

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Critical Task: Decisions regarding controlled reentry of emergency workers and relocation and return of the public during the post-emergency phase are coordinated with appropriate organizations and implemented (NUREG-0654 E.7; J.10.j; J.12; K.5.b; M.1, 3; Criterion 3f1). and the state of the second state of the state of the second state of the second state of the second state of the

In accordance with plans and procedures

and the second secon CORE CAPABILITY: Public Information and Warning

Definition: Deliver coordinated, prompt, reliable, and actionable information to the whole community through the use of clear, consistent, accessible, and culturally and linguistically appropriate methods to effectively relay information regarding any threat or hazard and, as appropriate, the actions being taken and the assistance being made available.

CAPABILITY TARGET: Emergency Notification and Public Information

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

In accordance with plans and procedures

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

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

eteranda el marca por provincia de la presencia de la forma de la compañía de la compañía de la compañía de la • Following the sounding of the sirens (using the "silent test") and the first PAD

recommendations to the public, Wake County will request the state to take over and the second direction and control.

• Wake County will be the "Lead County" and will coordinate the simulated siren activation. An actual silent test will be conducted to simulate the sounding of sirens. In the event of a siren failure, procedures to address siren failures will be discussed

- 12.00 and with federal evaluators. The hand substant apprendiction of the substant protection Part has been a second of the second second
 - EAS messages will be in accordance with Part 11 of FCC Rules and Regulations, previously approved for North Carolina by FEMA.

that the PAD messages and news releases will be coordinated by the state and counties and approximate the second strategic and a prime of the app ••• An actual silent test will be conducted. A feedback sheet will show if a siren has

- failed and if backup route alerting around the failed siren would be necessary. and the second second
- If a siren is deemed to have failed, back-up alerting will be discussed with the federal evaluator for a pre-determined zone (siren failure simulated).

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Date and Time: Monday, April 22, 2013 at 7:00 p.m. Location: 1318 Old Hwy 1, Moncure, NC 27559 Agencies: Moncure Fire Department, Station #8 and the second second

Harnett County

Date and Time: Monday, April 22, 2013 at 6:00 p.m. Location: 6056 Christian Light Road, Fuquay Varina, NC 27526 (A Agencies: Northwest Harnett Fire Dept. and Summerville Fire Department Discussion on Back-up Waterway Warning will take place prior to demonstration of Back-up Route Alerting 1.11

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Lee County

Date and Time: Tuesday, April 23, 2013 at 5:30 p.m. (Demonstration 6:45 p.m.) . Location: 5107 Deep River Road, Sanford, NC 27330 Agencies: Deep River Fire Department

Wake County

Shearon Harris Nuclear Plant

Date and Time: On-scenario
Location: Apex Command, Cary Fire Station 5, 2101 High House Road, Cary, NC 27513
Agencies: Apex Fire Dept., Apex Police Dept., Town of Apex Staff, Wake County Fire/Emergency Management.

Critical Task: Waterway warning is completed within 45 minutes following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation (NUREG-0654 /FEMA REP-1, E.6; Appendix 3.B.2.c; Criterion 5.a.4).

Waterway Warning will be demonstrated during this exercise.
 Chatham County
 Date and Time: Thursday, April 25, 2013 at 1:00 p.m.
 Date and Time: Thursday, State Park Road, Apex, NC 27523Agencies: NC Wildlife, Army Corps of Engineers, Chatham EM, State Parks, SHP Aviation.
 Aviation assets will be evaluated:

Wake County

 Date and Time:
 Thursday, April 25, 2013 at12:30 p.m.; demonstration at 1:00 p.m.

 Location:
 Harris Lake, Harris Plant Boat Storage Shelter, Training Avenue, New 2014

 Hill, NC 27562
 Harris Plant Boat Storage Shelter, Training Avenue, New 2014

 Agencies:
 Wake County Sheriff's Office Boat Team

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

The State, Chatham, Harnett, Lee, and Wake Counties will demonstrate the ability to disseminate accurate information and instructions to the public and news media through the Joint Information Center (JIC).

Public inquiry for the state will be demonstrated at the Duke/Progress Energy Joint Information Center (JIC) located at 160 Rush Street Raleigh, NC 27603-3594. County public inquiries will demonstrated at the respective county EOCs. Public inquiry personnel will provide the FEMA evaluator with a call log.

CORE CAPABILITY: Environmental Response/Health and Safety

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

CAPABILITY TARGET: Protective Action Decision Making

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

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

DHEC personnel only

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

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

In accordance with plans and procedures

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Critical Task: Radiological consequences for the ingestion pathway are assessed and appropriate PADs are made based on the ORO planning criteria (NUREG-0654A.3; C.1, 4; D.4; J.9, 11; Criterion 2d1).

In accordance with plans and procedures

Critical Task: Timely post-plume phase relocation, reentry, and return decisions are made and coordinated as appropriate, based on assessments of radiological conditions and criteria in the ORO's plan and/or procedures (NUREG-0654 **58**0; J.9; K.3.a; M.1; Criterion 2e1).

Unclassified Radiological Emergency Preparedness Program (REP)

Shearon Harris Nuclear Plant

CAPABILITY TARGET: Protective Action Implementation

CATABILITY TARGET: FIOLECUVE ACTION Implementation

Performance Measure: OROs must demonstrate the capability to provide emergency workers (including supplemental resources) with the appropriate direct-reading and permanent record dosimetry, dosimeter chargers, KI, and instructions on the use of these items. **Critical Task:** OROs issue appropriate dosimetry, KI, and procedures; and manage radiological exposure to EWs in accordance with the plans/procedures. EWs periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. OROs maintain appropriate record-keeping of the administration of KI to EWs (NUREG-0654/FEMA REP-1, J.10.e, K.3.a, b, K.4; Criterion 3.a.1).

This task will be discussed with dose assessment personnel as the scenario dictates. **Critical Task:** KI and appropriate instructions are available if a decision to recommend use of the KI is made. Appropriate record-keeping of the administration of KI for institutionalized of the individuals and the general public is maintained (NUREG-0654/ FEMA REP-1, J.10.e, f; Criterion 3.b.1).

This task will be discussed with dose assessment personnel as the scenario dictates. **Critical Task:** The ORO demonstrates the availability and appropriate use of adequate information regarding water, food supplies, milk, and agricultural production within the ingestion exposure pathway emergency planning zone for implementation of protective actions (NUREG-0654 A.3; C.1, 4; J.11; Criterion 3e1).

In accordance with plans and procedures

Critical Task: Appropriate measures, strategies, and pre-printed instructional material are developed for implementing PADs for contaminated water, food products, milk, and agricultural production (NUREG-0654 G.1, J.9, 11; Criterion 3e2).

In accordance with plans and procedures *Critical Task:* Decisions regarding controlled reentry of emergency workers and relocation and return of the public during the post-emergency phase are coordinated with appropriate organizations and implemented (NUREG-0654 E.7; J.10.j; J.12; K.5.b; M.1, 3; Criterion 3f2).

In accordance with plans and procedures

Capability Target: Field Measurement and Analyses

Critical Task: Field teams (two or more) are managed to obtain sufficient information to help characterize the release and to control radiation exposure (NUREG C.1; H.12; I.7, 8, 11; J.10.a; Criterion 4a2). 这些情况,我们还能是这些事实,我们还能是我们的事情。"

Critical Task: Ambient radiation measurements are made and recorded at appropriate locations, and radioiodine and particulate samples are collected. Teams will move to an appropriate lowbackground location to determine whether any significant (as specified in the plan and/or procedures) amount of radioactivity has been collected on the sampling media (NUREG C.1; I.8, 9; H.12; J.10.a; Criterion 4a3) and so a stand of the second and a second second

Critical Task: The field teams (two or more) demonstrate the capability to make appropriate measurements and collect samples (e.g., food crops, milk, water, vegetation, and soil) to support adequate assessments and protective action decision-making (NUREG-0654C.1; I.8; J.11; Criterion 4b1).

化过去式 网络电影 化电热电子 化合物 化物理学 化化物学 化分子 化分子子 法法律法 化分子分子 *Critical Task:* The laboratory is capable of performing required radiological analyses to support PADs (NUREG-0654 C.1; 3; J.11; Criterion 4c1). The address of the state particular sector of the sec Clearing ARCA: 08-10-4.c.1-A-03.a. and so an after a lower strategy and the second second second second second 1. A CONTRACT STREET AND A CONTRACT OF A

North Carolina Department of Health and Human Services, Division of Health Service Regulation, Radiation Protection Section.

The High Purity Germanium (HPGe) Gamma Spectrometer in the Radiation Protection Section (RPS) Mobile Laboratory was not operational. The device could not correctly identify the isotopes in the Counting Standard used to calibrate the system and, therefore, could not be used to count sample media during the exercise. And the second se .

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Capability Target: Support Operations and Facilities

Critical Task: Equipment, maps, displays, monitoring instruments, dosimetry, KI, and other supplies are sufficient to support emergency operations (NUREG-0654 H.7, 10; I.7, 8, 9; J.10, a, b, e; J.11, 12; K.3.a; K.5.b; Criterion 1e1). r and r a

Critical Task: OROs issue appropriate dosimetry, KI, and procedures, and manage radiological exposure to EWs in accordance with the plans/procedures. EWs periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. OROs maintain appropriate record-keeping of the administration of KI to EWs (NUREG-0654 J.10.e, K.3.a, b, K.4; Criterion 3a1).

Critical Task: KI and appropriate instructions are made available in case a decision to recommend use of KI is made. Appropriate record keeping of the administration of KI for institutionalized individuals and the general public is maintained (NUREG-0654 J.10.e, f; Criterion 3b1).

After Action Report/Improvement Plan

Shearon Harris Nuclear Plant

Critical Task: The reception center facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees (NUREG-0654 A.3; C.4; J.10.h; J.12; Criterion 6a1). and the second 101 ... • 1. One portal monitor will be demonstrated at each reception center. The start at the base of and the second • Six evacuees will be monitored; two (1 male and 1 female) will be found to be many a contaminated. The second state of the second state of the second state of the second state of the second • Evacuee decontamination procedures will be via discussion and walk through of facilities (No actual or simulated decontamination of evacuees) Charles And a charles of A Two emergency workers per county will be monitored. and a three we all and when the destriction of the Emergency Worker decontamination procedures will be via discussion and walk through of facilities (No actual decontamination of workers). and the second of the second • One emergency vehicle per county will be decontaminated (simulated only; water will not be used) A MERCE AND ATT A LOSS OF A DESCRIPTION OF SERVICE • One vehicle will be monitored and decontaminated (simulated) at each of the following times and locations. If inclement weather occurs a discussion will be performed by the evaluator and the participants: the second s • Monitoring and decontamination of animals will be by discussion. 化化学 计数据字段 网络小说的小说的 建铁石酸盐 机空气环境 法法公司 *Critical Task:* The facility/ORO has adequate procedures and resources to accomplish monitoring and decontamination of emergency workers and their equipment and vehicles (NUREG-0654 K.5.a, b; Criterion 6b1). An end of the second second second second • Water will not be used during this demonstration. Procedure will be discussed by interview with Federal evaluators • PRD will be simulated using clothespins or other type of item and the second second

Core Capability: On-Scene Security and Protection

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

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Capability Target: Protective Action Implementation

Critical Task: Equipment (to include communications), maps, displays, monitoring instruments, dosimetry, KI, and other supplies are sufficient **56** support emergency operations (NUREG-0654 H.7, 10; I.7, 8, 9; J.10.a, b, e; J.11, 12; K.3.a; K.5.b; Criterion 1e1).

Critical Task: OROs issue appropriate dosimetry, KI, and procedures, and manage radiological exposure to EWs in accordance with the plans/procedures. EWs periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. OROs maintain appropriate record-keeping of the administration of KI to EWs (NUREG-0654 J.10.e, K.3.a, b, K.4; Criterion 3a1).

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Critical Task: Appropriate traffic and access control is established. Accurate instructions are provided to traffic and access control personnel (NUREG-0654 A.3; C.1, 4; J.10.g, j; Criterion 3d1).

Chatham County

Date and Time: Thursday, April 25, 2013 at 12:00 p.m.

Location: Park Training Room, State Park Road, Apex, NC 27523

Critical Task: Impediments to evacuation are identified and resolved (NUREG-0654 J.10.k; Criterion 3d2).

CORE CAPABILITY: Critical Transportation

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

CAPABILITY TARGET: Protective Action Implementation

Performance Measure: Demonstrate the ability to implement PADs for schools.

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

 School evacuation procedures and interviews will be demonstrated via discussion with key school staff members, including school bus drivers, off scenario.

Chatham County:

Moncure Elementary School 600 Moncure School Road Moncure, NC 27559 Data and Times Wednesday, April 24, 2013 at 0.00 a m

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Date and Time: Wednesday, April 24, 2013 at 9:00 a.m.

Wake County:

Apex High School571501 Laura Duncan Road, Media Center

Shearon Harris Nuclear Plant

Apex, NC 27502 the second s Date and Time: Tuesday, April 23, 2013 at 3:45 p.m. Schools: Wake County Public Schools Security, Transportation; Apex High, Middle, and Elementary Schools; Lufkin Road Middle, Baucom and Olive Chapel Elementary Schools; St. Mary Magdalene Catholic School; Thales Academy and the second second second second second second second

Law enforcement agencies will discuss school bus escort procedures during their traffic and access control interviews as described in 3.d. The second second second second

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Core Capability: Mass Care

Definition: Provide life-sustaining services to the affected population with a focus on hydration, feeding and sheltering to those who have the most need as well as support for reunifying entries at families: The second state of the second second second state is the second state of the second second

Capability Target: Support Operations and Facilities 经济税 网络卡马克 法保护的 法法法保护法 Frankling (1. Albander of South

Critical Task: KI and appropriate instructions are made available in case a decision to recommend use of KI is made. Appropriate record keeping of the administration of KI for institutionalized individuals and the general public is maintained (NUREG-0654 J.10.e, f; Criterion 3b1). 化化学学 化基本化学 网络小学校会议 化化学学校 化分析法 化分析法 化分析法

Critical Task: Managers of congregate care facilities demonstrate that the centers have resources to provide services and accommodations consistent with planning guidelines. Managers demonstrate the procedures to assure that evacuees have been monitored for contamination and have been decontaminated as appropriate before entering congregate care facilities (NUREG-0654; J.10.h; J.12; Criterion 6c1). the second of the second second

• The shelter portion of the congregate care facilities may demonstrate setup of the facility by using a "sampler" approach to the repetitive setup requirements. Examples would include such things as cots, bedding, chairs, etc. 2.1

Monitoring and decontamination of animals will be by discussion.

and the state of the Chatham County and the second . . . Date and Time: Thursday, April 25, 2013 at 7:00 p.m. Location: Jordan-Matthews High School, 910 East Cardinal Street, Siler City, NC 27344

Harnett County

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Date and Time: Tuesday, April 23, 2013 at 7:00 p.m. Location: Harnett Central Middle School, 2529 Harnett Central School Road, Angier, NC 27501 58

After Action Report/Improvement Plan

Shearon Harris Nuclear Plant

Agencies: Buries Creek Fire Department, Coats Fire Department, Harnett Dept. of Social Services, Harnett County Health Department. Wake County Constants and the second s and a second Date and Time: Tuesday, April 23, 2013 at 7:00 p.m. Location: Sanderson High School, 5500 Dixon Drive, Raleigh, NC 27609 Agencies: Wake Co. Environmental Services, Wake Co. Human Services, Raleigh Fire Department, Raleigh Police Department **CORE CAPABILITY:** Public Health and Medical Services an Antonia and Charatan ana tao ing salah na ang pagantan ang kasaran na salah na salah na salah na salah tao i **Definition:** Provide lifesaving medical treatment via emergency medical services and related operations and avoid additional disease and injury by providing targeted public health and medical support and products to all people in need within the affected area. Realized and the second s **CAPABILITY TARGET:** Support Operations and Facilities and an a free calls of the second Performance Measure: Demonstrate the capability to transport contaminated injured individuals to medical facilities and provide medical services. Critical Task: Equipment, maps, displays, monitoring instruments, dosimetry, KI, and other supplies are sufficient to support emergency operations (NUREG-0654/ FEMA REP-1, H.7, 10; I.7, 8, 9; J.10.a, b, e; J.11, 12; K.3.a; K.5.b; Criterion 1.e.1). Wake Medical Services Drill will be conducted on August 28, 2013. • Critical Task: OROs issue appropriate dosimetry, KI, and procedures, and manage radiological exposure to EWs in accordance with the plans/procedures. EWs periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. OROs maintain appropriate record-keeping of the administration of KI to EWs (NUREG-0654 J.10.e, K.3.a, b, K.4; Criterion 3.a.1). and the second Critical Task: The facility/ORO has the appropriate space, adequate resources, and trained personnel to provide transport, monitoring, decontamination, and medical services to contaminated injured individuals (NUREG-0654 /FEMA REP-1, F.2; H.10; K.5.a, b; L.1, 4; Criterion 6.d.1).

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