



FEMA

May 5, 2014

Headquarters Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Dear NRC HQ:

Enclosed please find the Final Exercise Report for the Salem Hope Creek Nuclear Generating Station Plume Pathway Exercise which was held on May 22, 2012.

The State of New Jersey and local emergency response organizations successfully demonstrated the capability to implement their off-site radiological emergency response plans and procedures, based on the evaluation of this exercise by the FEMA RII Regional Assistance Committee and a team of Federal evaluators. Three new Areas Requiring Corrective Action (ARCAs) were identified during the exercise, and one planning issue. Two of the ARCAs were corrected during a re-demonstration on August 14, 2012. The remaining outstanding issues will be evaluated to ensure that they have been corrected at the next full-scale exercise in May of 2014.

Therefore, we find that state and local preparedness is adequate to protect the health and safety of the public living in the vicinity of the Salem Hope Creek NGS and will provide reasonable assurance that appropriate measures can be taken offsite in the event of a radiological emergency.

If you have any questions regarding this matter, please contact Rebecca Thomson, Chair of the RII Regional Assistance Committee at (212) 680-8509 or William Cullen, Acting RAC Chair at (212) 680-8505.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Jerome Hatfield".

Jerome Hatfield
Regional Administrator
FEMA Region II

Enclosure

cc: Vanessa Quinn, Chief, Radiological Emergency Preparedness Branch, FEMA HQ



Salem Hope Creek Nuclear Generating Station

After Action Report Improvement Plan

Exercise Date - May 22, 2012
Redemonstration Date - June 2, 2012

Radiological Emergency Preparedness (REP) Program

Published July 25, 2013



FEMA



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FEMA

Unclassified
Radiological Emergency Preparedness Program (REP)

After Action Report/Improvement Plan

Salem Hope Creek Nuclear Generating Station

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Salem Hope Creek Nuclear Generating Station After Action Report/Improvement Plan

Published May 06, 2013

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EXECUTIVE SUMMARY

On May 22, 2012 an exercise was conducted in the plume exposure pathway emergency planning zone (EPZ) around the Hope Creek Nuclear Generating Station (HC NGS). The exercise was evaluated by the Department of Homeland Security, Federal Emergency Management Agency (DHS/FEMA) Region II. The purpose of the exercise was to demonstrate and assess the level of State and local preparedness in responding to a radiological emergency. This exercise was held in accordance with FEMA's policies and guidance concerning the exercise of State and local radiological emergency response plans and procedures.

The most recent previous federally - evaluated exercise at this site was conducted on May 18, 2010. The qualifying emergency preparedness exercise for Salem Hope Creek Nuclear Generating Station was conducted on April 8, 1981.

FEMA wishes to acknowledge the efforts of the many individuals in the State of New Jersey, Salem County, Cumberland County, Salem City, and the Townships of Elsinboro, Lower Alloways Creek, Mannington, Pennsville, Quinton, Greenwich, and Stow Creek who participated in this exercise.

Protecting the public health and safety is the full-time job of some of the exercise participants and an additional assigned responsibility for others. Still others have willingly sought this responsibility by volunteering to provide vital emergency services to their communities. Cooperation and teamwork by all the participants were evident during this exercise.

This report contains the final evaluation of the biennial exercise and the evaluation of the following out-of-sequence activities:

The State and local organizations, except where noted in this report, demonstrated knowledge of their emergency response plans and procedures and adequately implemented them. There were no deficiencies identified as a result of this exercise. Five ARCAs from the May 22, 2012 exercise were closed during the August 14, 2012 redemonstration. Three new ARCA's and one planning issue were identified during the May 22, 2012 exercise, two of these ARCA's have been resolved. Two prior ARCA's and two prior planning issues remain open.

SECTION 1: EXERCISE OVERVIEW

1.1 Exercise Details

Exercise Name

Salem Hope Creek Nuclear Generating Station

Type of Exercise

Plume

Exercise Date

May 22, 2012

Program

Department of Homeland Security/FEMA Radiological Emergency Preparedness Program

Scenario Type

Radiological Emergency

1.2 Exercise Planning Team Leadership

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1.3 Participating Organizations

Agencies and organizations of the following jurisdictions participated in the Salem Hope Creek Nuclear Generating Station exercise:

State Jurisdictions

- New Jersey State Police
- New Jersey State Police, Office of Emergency Management
- NJ Department of Environmental Protection (DEP)
- New Jersey DEP Bureau of Nuclear Engineering
- NJ Department of Agriculture
- NJ Department of Corrections
- NJ Department of Transportation
- New Jersey State Police Marine Unit

Risk Jurisdictions

- Cumberland County Dept. of Public Safety
- Cumberland County OEM
- Cumberland County 911 Dispatch
- Cumberland County Dept. of Health
- Cumberland County Dept. of Human Services
- Cumberland County Dept. of Mental Health
- Cumberland County RACES Chapter
- Cumberland County Sheriff's Department
- Cumberland County Superintendent of Schools
- Greenwich Township Office of Emergency Management
- Stow Creek Office of Emergency Management
- Stow Creek Fire Department
- Salem County Emergency Services
- Salem County CERT
- Salem County Fire Marshal
- Salem County Health Department
- Salem County Public Information Officer
- Salem County Red Cross
- Salem County Road Department
- Salem County Schools Coordinator

Quinton Fire Department
Quinton Office of Emergency Management
Lower Alloways Creek Township Mayor and Assistant
Lower Alloways Creek Township Emergency Management
Lower Alloways Creek Township Fire Department
Lower Alloways Creek Township Emergency Medical Services
Lower Alloways Creek Township Police Department
Lower Alloways Creek Township Public Works
Pennsville Emergency Management
Pennsville Fire Department
Pennsville Police Department
Pennsville Sewer Department
Mannington Township Emergency Management
Mannington Township Mayor
Elsinboro Emergency Management Staff
Elsinboro School District
Elsinboro EMS
Salem City Mayor
Salem City Office of Emergency Management
Salem City Fire Department
Salem City Police Department

Private Organizations

American Red Cross
Penn State Health Physicist
WENJ FM 97.3 Staff
PSEG
RACES

Federal Jurisdictions

US Nuclear Regulatory Commission
US Department of Environmental Protection Agency

SECTION 2: EXERCISE DESIGN SUMMARY

2.1 Exercise Purpose and Design

The DHS/FEMA Region II Office evaluated the plume portion of the exercise on May 22, 2012. This provided the ability to assess the capabilities of the local emergency preparedness organizations in implementing their Radiological Emergency Response Plans and Procedures. These plans and procedures are designed to protect the public health and safety during a radiological emergency involving the Hope Creek Nuclear Power Plant. The purpose of this report is to represent the results of the findings of performance for the offsite response organizations during a simulated radiological emergency.

2.2 Exercise Objectives, Capabilities and Activities

Capabilities-based planning allows for exercise planning teams to develop exercise objectives and observe exercise outcomes through a framework of specific action items that were derived from the Target Capabilities List (TCL). Exercise Objectives and Capabilities / REP Criteria selected to be evaluated are discussed in the Homeland Security Exercise and Evacuation Program (HSEEP) document, Hope Creek Exercise Plan dated May 7 2012, Extent-of Play Agreement (EOP) Rev 6 Appendix E.

- **Emergency Operations Center Management:** Is the capability to provide multi-agency coordination (MAC) for incident management by activating and operating an EOC for a preplanned or no-notice event. EOC management includes EOC activation, notification, staffing, and deactivation; management, direction, control, and coordination of response and recovery activities; coordination of efforts among neighboring governments at each level and among local, regional, state, and federal EOCs; coordination of public information and warning; and maintenance of the information and communication necessary for coordinating response and recovery activities.
- **Emergency Public Information and Warning:** Is the capability that includes public information, alert/warning and notification. It involves developing, coordinating, and disseminating information to the public, coordinating officials, and incident management and responders across all jurisdictions and disciplines effectively under all hazard conditions.

-
- **Citizen Evacuation and Shelter in Place:** Is the capability to prepare for, ensure communication of, and immediately execute the safe and effective sheltering-in-place of an at-risk population (and companion animals), and/or the organized and managed evacuation of the at-risk population (and companion animals) to areas of safe refuge in response to a potentially or actually dangerous environment. In addition, this capability involves the safe reentry of the population where feasible.

 - **Emergency Public Safety and Security Response:** Is the capability to reduce the impact and consequences of an incident or major event by securing the affected area, including crime/incident scene preservation issues as appropriate, safely diverting the public from hazards, providing security support to other response operations and properties, and sustaining operations from response through recovery. Public Safety and Security Response requires coordination among officials from law enforcement (LE), fire, and EMS.

 - **Hazardous Materials Response and Decontamination:** Is the capability to assess and manage the consequences of a hazardous materials release, either accidental or as part of a terrorist attack. It includes testing and identifying all likely hazardous substances onsite; ensuring that responders have protective clothing and equipment; conducting rescue operations to remove affected victims from the hazardous environment; conducting geographical survey searches of suspected sources of contamination spreads and establishing isolation perimeters; mitigating the effects of hazardous materials, decontaminating on-site victims, responders, and equipment; coordinating off-site decontamination with relevant agencies, and notifying environmental, health, and law enforcement agencies having jurisdiction for the incident to begin implementation of their standard evidence collection and investigation procedures.

 - **Mass Care:** Is the capability to provide immediate shelter, feeding centers, basic first aid, bulk distribution of needed items, and related services to persons affected by a large-scale incident, including special needs populations. Special needs populations include individuals with physical or mental disabilities who require medical attention or personal care beyond basic first aid. Other special-needs populations include non-English speaking populations that may need to have information presented in other languages. The mass care capability also provides for pet care/handling through local government and appropriate animal-related organizations. Mass care is usually performed by nongovernmental organizations (NGO), such as the American Red Cross (ARC), or by local government-sponsored volunteer efforts, such as Citizen Corps. Special needs populations are generally the responsibility of local government, with medical needs

addressed by the medical community and/or its alternate care facilities. State and Federal entities also play a role in public and environmental health by ensuring safe conditions, safe food, potable water, sanitation, clean air, etc.

- **Triage and Pre-Hospital Treatment:** Is the capability to appropriately dispatch EMS resources; to provide feasible, suitable, and medically acceptable pre-hospital triage and treatment of patients; to provide transport as well as medical care en-route to an appropriate receiving facility; and to track patients to a treatment facility.

2.3 Scenario Summary

PSEG NUCLEAR, LLC
Hope Creek

Exercise Scenario Synopsis

The Operations crew will be reporting to the simulator/briefing room at 1430 for pre-drill briefing. The scenario will start in the Hope Creek Simulator at 1530. The on-shift participants, simulator crew and Nuclear Equipment Operators (NEOs) will be prestaged. Other PSEGNuclear Emergency Response Facilities will be notified using page announcements and the callout system after 1530.

SPECIAL NOTE to Controllers:

The Seismic Events that occur in this Exercise are not intended to affect roads, bridges or other means of transportation to and from the site to PSEG Emergency Response Facilities. However, the States (New Jersey and Delaware) will describe in their "extent of play agreement" any other conditions that may occur in their jurisdiction to support their objectives. There will be no equipment or structural problems at the Salem Units.

In addition, all Onsite and Offsite Emergency Response Facilities remain fully functional for the duration of the Exercise. Despite the fact that Salem is in an Alert, full ERO response to Hope Creek is available. The Exercise scenario does not affect Communications systems, lighting or data transmission systems (SPDS, EROS, etc.) associated with PSEG.

Initial Conditions:

Salem 1 is at 100% power at middle of life.

Salem 2 is increasing power (currently at 50%) after a successful 22 day Refueling Outage.

Hope Creek is at 100% power and has been on line for the past 14 months.

All Major Equipment is Operable with the following exception:

- "C" RHR Pump is tagged for motor bearing replacement. Day 3 of 30 day LCO.
Expected time of return is Day 7.
- MIDAS (Dose Assessment Software) is not available in Automatic Mode due to a problem with the automatic data collection system.
- The SPDS must be used to determine process flow dose calculations, the RM11 has failed.

AT 1530 Exercise Begins.

At 1535, a Seismic Event occurs and the Hope Creek Control Room receives Annunciator C6-C4 (SEISMIC MON PNL C673). Control Room operators recognize that an earthquake has occurred. The magnitude of the earthquake is 0.15g (approximately 6 on the Richter Scale). (Note: Assume epicenter to be near Pennsville, New Jersey.) Following damage has occurred: Two Security Center Entry/Exit Turnstiles Catcher's Mitt) OOS, Various windows are broken NOSF, 5.1.0.

Hope Creek Administration Section of Turbine Building damaged, portable crane toppled outside of Hope Creek EDG Building.

At 1540, the Seismic Switch at Panel 10C673 has been verified to actuate indicating an Earthquake exceeded the OBE (Operating Basis Earthquake) level.

By 1550 or sooner, the Shift Manager (SM) who is now also the Emergency Coordinator (EC) should declare an ALERT based on: ALERT EAL HA1.1

Actuation of the OBE Seismic Switch ($> 0\sim 1g$) as indicated by EITHER:

- Annunciator C6-C4 (SEISMIC MON PNL C673) activated Amber light on the Seismic. Switch Power Supply Drawer Panel 10C673.

Earthquake confirmed by ANY of the following:

- Earthquake felt in plant by Control Room Operators
- National Earthquake Information Center (NEIC)

-
- Control Room indication of DEGRADED PERFORMANCE of a Safety System with a Plant Structure containing Safe Shutdown Systems or Components.

NOTE: An Alert would have been declared at Salem due to the same event. For the purpose of this Exercise, assume the Salem SM did declare an Alert and the Salem ERO is staffing their ERFs. In addition, assume all expected actions are being taken by Salem.

The EC will implement ECG Attachment 2 for the Alert Declaration. The emergency response organization (ERO) callout system will be activated resulting in staffing of all emergency response facilities (ERFs).

NOTE: Emergency Coordinator may implement Accountability of the protected area and Evacuation of the owner controlled area at this time. (Accountability will be limited to exercise participants and evacuations will be simulated.)

5.1.1

By approximately 1620, the Operational Support Center (OSC) should be staffed and activated. Control Room Operations will commence a Unit Shutdown in accordance with applicable procedures. At 1700, the 10K 107 Service Air Compressor will trip due to a broken oil line. This event is recoverable. By 1720 or sooner, the Technical Support Center (TSC) should be activated and the Emergency Coordinator function transferred to the Emergency Duty Officer (EDO). At 1720, while performing a Unit Shutdown, complete loss of Stator Water Coolant occurs. Upon inserting a manual Scram as directed by procedure, the operator observed only half of the rods inserted. Alternate Rod Insertion fails to insert the remaining control rods. Reactor power remains > 4% power. In addition, upon SLC initiation, "B" SLC pump trips when started. Also the Mode Switch fails in the RUN Mode. SLC and Mode Switch problems are recoverable. By 1735 or sooner, a SITE AREA EMERGENCY should be declared by the Emergency Coordinator(SM/EDO/ERM based on: SITE AREA EMERGENCY EAL 553.1.

An automatic scram failed to shutdown the reactor as indicated by reactor power > 4% AND Manual scram actions taken at the reactor control console (mode switch, manual scram push buttons, manual ARI actuation). DO NOT shutdown the reactor as indicated by reactor power > 4%. The EC will implement ECG Attachment 3 for the Site Area Emergency Declaration. If not done previously, the EC should implement Accountability of the protected area and Evacuation of the owner controlled area. (Accountability will be limited to Exercise participants and

evacuations will be simulated.)

At - 1745, all Control Rods are verified full-in after implementation of A TVVS EOPs. Reactor is shutdown with indicated power < 4%.

At 1800, an oil leak from the Main Seal Oil Pump results in a fire at the H2 Seal Oil Skid in the Turbine Building. Fire Department responses accordingly and extinguishes the fire. By - 1815, if not already done, the Emergency Operations Facility (EOF) will be activated and the Emergency Response Manager (ERM) will assume the role of the EC. At 1900, an Earthquake aftershock occurs (0.1 g or - 5.5 on the Richter scale) which causes a large break LOCA. "A" LPCI pump trips upon start. "0" LPCI Injection Valve, BC-HV-F017D Breaker trips upon valve opening and Core Spray Injection Valve, BE-HV-F005A fails to open. In addition, all PCPs trip on low Hotwell level due to suction line break to PCPs. RPV Level drops to below Top of Active Fuel (TAF) and is being maintained above bottom of active fuel with remaining ECCS pumps.

5.1.2

By 1915, a 12-Point GENERAL EMERGENCY should be declared by the EC (ERM) based on the loss of the Fuel Clad Barrier and loss of the RCS Barrier and potential loss of the Containment Barrier.

GENERAL EMERGENCY

EAL FB1.L, Primary Containment Flooding is required as indicated by RPV level CANNOT be restored and maintained above 185 in.

AND

EAL RB1.L, RPV level CANNOT be restored and maintained above 161 in.

OR

EAL RB2.L, Drywell pressure > 1.68 psig due to RCS leakage

AND

EAL CB1.P, Primary Containment Flooding is required as indicated by RPV level CANNOT be restored and maintained above 185 in. (Loss of Fuel Clad and RCS Barriers and Potential Loss of Containment Barrier = 12 pts.) The EC will implement ECG Attachment 4 for the General Emergency Declaration. A Default PAR must also be made. At - 1930, operators are able to inject with additional ECCS and RPV Level is capable of being maintained between Level 3 (+12.5") and Level 8 (+54"). As a result of the core being uncovered and due to earthquake

damage, cladding failure results in DAPA reading increases to > 4000 Rem/hr.

At 2000, a 2nd Earthquake aftershock occurs (0.02g or - 4.5 on the Richter Scale) resulting in Torus water level decreasing. The "C" Core Spray suction line between the suction valve and pump will shear. As a result, the "A" Core Spray Loop will be breached, allowing Reactor Coolant to discharge directly into the "C" Core Spray Room. Attempts to close the "C" Core Spray suction valve (BE-HVF001 C) will be unsuccessful. The break location results in a radiological release pathway from the Drywell, to the Reactor Building, and out the Filtration Recirculation Ventilation System (FRVS). A filtered, monitored release above the Hope Creek Offsite Dose Calculation Manual (HCODCM)/Federal Limits is now in progress.

Monitored Release Path: RPV » Core Spray "C" suction line breach » Reactor Building » FRVS Vent Fan » Outside Atmosphere By 2015, the EOF Staff will perform a PAR Upgrade - a 10-mile keyhole evacuation type PAR - based on a 13-Point GENERAL EMERGENCY with a loss of all 3 Fission Product Barriers or radiological based PAR due to exceeding PAGs at > 5 miles per NC.EP-EP.ZZ-0404, PAR Upgrades.

5.1.3

PAR UPGRADE FOR GENERAL EMERGENCY DUE TO EITHER:

Loss of Containment Barrier per CB3.L, UNISOLABLE leakage outside primary containment (after isolation from the Control Room has or should have been attempted) AND Direct downstream pathway to the environment exists, OR, per CB6.L, EC Judgment OR Radiological PAR due to exceeding PAGs at > 5 miles The EC will implement ECG Attachment 4 for the PAR Upgrade Declaration. PAR will be upgraded due to Barrier based and/or Dose Assessment based consideration Approximately 2100, when an OSC team is sent to investigate source of leakage, one of the OSC team member complains of chest pains and when trying to regain his balance, bangs his forearm against a stanchion, breaking his arm. OSC team members were able to help the injured person get back to the Control Point where EMTs respond accordingly.

At 2130, a wind shift occurs that will cause the EOF Staff to perform a PAR upgrade.

At 2145, a Grassing event occurs at Service Water degrading the "A" Loop of Service Water. OSC personnel are dispatched to investigate. By no later than 2245, the radiological release into the Reactor Building will be terminated by the closing of "C" Core Spray Suction Valve (1

BEHV-F001 C).

The suction valve will go closed for scenario control purposes at 2245, if it has not already been closed by the OSC repair team. The radiological release from the Reactor Building into the environment will gradually decrease throughout the remaining of the exercise, but will continue above the HCODCM/Federal Limits until the termination of the exercise. This is because the radiological release products that are still bottled-up in the Reactor Building being vented at a rate of 9000 cfm.

Starting at 2300, the exercise may be terminated. The time for the actual termination of the exercise will be dependent on when all of the ERF and Offsite Stakeholder exercise objectives have been met.

SECTION 3: ANALYSIS OF CAPABILITIES

3.1 Exercise Evaluation and Results

Contained in this section are the evaluation results and findings of the plume portion for all jurisdictions and functional entities that participated in the May 22, 2012 exercise to test the offsite emergency response capabilities of State and local governments in the EPZ surrounding the Hope Creek Nuclear Generating Station. Each jurisdiction and functional entity was evaluated on the basis of its demonstration of criteria contained in the September 12, 2001 Federal Register Notice (revised April 25, 2002) and in the REP Program Manual (April 2012).

3.2 Summary Results of Exercise Evaluation

The matrix presented in Table 3.1, on the following page, presents the status of all exercise criteria that were scheduled for demonstration during this exercise by all participating jurisdictions and functional entities. Exercise criteria are listed by number and the demonstration status of those objectives is indicated by the use of the following letters:

M - Met (No Deficiency or ARCA(s) assessed and no unresolved ARCA(s) from prior exercises)

D - Deficiency assessed

A - Area Requiring Corrective Action (ARCA)- assessed or unresolved ARCA(s) from prior exercises

N - Not Demonstrated

P - Planning Issue

Table 3.1 - Summary of Exercise Evaluation (4 pages)

DATE: 2012-05-22 SITE: Salem Hope Creek Nuclear Generating Station, NJ M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated		NJ SEOC	NJ SHC BNE EOF	NJ FMT A	NJ FMT B	NJ TCP FMP	NJ ACP	NJ SHC ENC	NJ SHC EAS	SC SCEOC	SC SIETS	SC SIJES
Emergency Operations Management												
Mobilization	1a1	M	M					M		M		
Facilities	1b1											
Direction and Control	1c1	M	M					M		M		
Communications Equipment	1d1	M	M	M	M			M	M	M		
Equipment and Supplies to Support Operations	1e1	M	M	M	M			M		M		
Protective Action Decision Making												
Emergency Worker Exposure Control	2a1	P	M							M		
Dose Assessment & PARs & PADs for the Emergency Event	2b1	M	M									
Dose Assessment & PARs & PADs for the Emergency Event	2b2	M										
PADs for the Protection of persons with disabilities and access/functional needs	2c1	M										
Radiological Assessment and Decision-making for the Ingestion Exposure Pathway	2d1											
Radiological Assessment & Decision-making Concerning Post-Plume Phase Relocation, Reentry, and Return	2e1											
Protective Action Implementation												
Implementation of Emergency Worker Exposure Control	3a1			M	M	M	M			M		
Implementation of KI Decision for Institutionalized Individuals	3b1									M		
Implementation of Protective Actions for persons with disabilities and access/functional needs	3c1									M		
Implementation of Protective Actions for persons with disabilities and access/functional needs	3c2									M	M	M
Implementation of Traffic and Access Control	3d1					M	M			M		
Implementation of Traffic and Access Control	3d2	M								M		
Implementation of Ingestion Pathway Decisions	3e1											
Implementation of Ingestion Pathway Decisions	3e2											
Implementation of Post-Plume Phase Relocation, Reentry, and Return Decisions	3f1											
Field Measurement and Analysis												
RESERVED	4a1											
Plume Phase Field Measurement and Analyses	4a2		M									
Plume Phase Field Measurement and Analyses	4a3			P	M							
Post Plume Phase Field Measurements and Sampling	4b1											
Laboratory Operations	4c1											
Emergency Notification and Public Info												
Activation of the Prompt Alert and Notification System	5a1	M							M	M		
RESERVED	5a2											
Activation of the Prompt Alert and Notification System	5a3											
Activation of the Prompt Alert and Notification System	5a4											
Emergency Information and Instructions for the Public and the Media	5b1	A						A				
Support Operations/Facilities												
Monitoring, Decontamination, and Registration of Evacuees	6a1											
Monitoring and Decontamination of Emergency Workers and their Equipment and Vehicles	6b1											

Table 3.1 - Summary of Exercise Evaluation (Continued. page 2/4)

DATE: 2012-05-22 SITE: Salem Hope Creek Nuclear Generating Station, NJ M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated		SC SI LACES	SC SI QES	SC SBC BRW	SC GPBC QTRT2	SC GPBC BRW	SC MSH SMH	SC MST PT EMS	SC ET EOC	SC LAC EOC	SC MT EOC	SC PT EOC
Emergency Operations Management												
Mobilization	1a1								M	M	M	M
Facilities	1b1											
Direction and Control	1c1								M	M	M	M
Communications Equipment	1d1								M	M	P	M
Equipment and Supplies to Support Operations	1e1								M	M	M	M
Protective Action Decision Making												
Emergency Worker Exposure Control	2a1											
Dose Assessment & PARs & PADs for the Emergency Event	2b1											
Dose Assessment & PARs & PADs for the Emergency Event	2b2											
PADs for the Protection of persons with disabilities and access/functional needs	2c1											
Radiological Assessment and Decision-making for the Ingestion Exposure Pathway	2d1											
Radiological Assessment & Decision-making Concerning Post-Plume Phase Relocation, Reentry, and Return	2e1											
Protective Action Implementation												
Implementation of Emergency Worker Exposure Control	3a1			M	M	M	M	M	M	M	M	M
Implementation of KI Decision for Institutionalized Individuals	3b1			M					M	M	M	M
Implementation of Protective Actions for persons with disabilities and access/functional needs	3c1				M	M			M	M	M	M
Implementation of Protective Actions for persons with disabilities and access/functional needs	3c2	M	M	M					M	M	M	M
Implementation of Traffic and Access Control	3d1								M	M	M	M
Implementation of Traffic and Access Control	3d2								M	M	M	M
Implementation of Ingestion Pathway Decisions	3e1											
Implementation of Ingestion Pathway Decisions	3e2											
Implementation of Post-Plume Phase Relocation, Reentry, and Return Decisions	3f1											
Field Measurement and Analysis												
RESERVED	4a1											
Plume Phase Field Measurement and Analyses	4a2											
Plume Phase Field Measurement and Analyses	4a3											
Post Plume Phase Field Measurements and Sampling	4b1											
Laboratory Operations	4c1											
Emergency Notification and Public Info												
Activation of the Prompt Alert and Notification System	5a1											
RESERVED	5a2											
Activation of the Prompt Alert and Notification System	5a3											
Activation of the Prompt Alert and Notification System	5a4											
Emergency Information and Instructions for the Public and the Media	5b1											
Support Operations/Facilities												
Monitoring, Decontamination, and Registration of Evacuees	6a1											
Monitoring and Decontamination of Emergency Workers and their Equipment and Vehicles	6b1											

Unclassified
Radiological Emergency Preparedness Program (REP)

After Action Report/Improvement Plan

Salem Hope Creek Nuclear Generating Station

Temporary Care of Evacuees	6c1																			
Transportation and Treatment of Contaminated Injured Individuals	6d1									M	M									

Table 3.1 - Summary of Exercise Evaluation (Continued, page 3/4)

DATE: 2012-05-22 SITE: Salem Hope Creek Nuclear Generating Station, NJ M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated		SC PT BRA	SC QT EOC	SC SC EOC	SC SC BRA	SC SC TCP	CC CCEOC	CC TCP ACP	CC SI MGPS	CC SI SCTS	CC SI WCDS
Emergency Operations Management											
Mobilization	1a1		M	M			M				
Facilities	1b1										
Direction and Control	1c1		M	M			M				
Communications Equipment	1d1		M	M			M				
Equipment and Supplies to Support Operations	1e1		M	M			M				
Protective Action Decision Making											
Emergency Worker Exposure Control	2a1						M				
Dose Assessment & PARs & PADs for the Emergency Event	2b1										
Dose Assessment & PARs & PADs for the Emergency Event	2b2										
PADs for the Protection of persons with disabilities and access/functional needs	2c1										
Radiological Assessment and Decision-making for the Ingestion Exposure Pathway	2d1										
Radiological Assessment & Decision-making Concerning Post-Plume Phase Relocation, Reentry, and Return	2e1										
Protective Action Implementation											
Implementation of Emergency Worker Exposure Control	3a1	M	A	M	M	M	M	M			
Implementation of KI Decision for Institutionalized Individuals	3b1		M	M			M				
Implementation of Protective Actions for persons with disabilities and access/functional needs	3c1		M	P			M				
Implementation of Protective Actions for persons with disabilities and access/functional needs	3c2		M	M			M		M	M	M
Implementation of Traffic and Access Control	3d1		M	M		M	M	M			
Implementation of Traffic and Access Control	3d2		M	M			M				
Implementation of Ingestion Pathway Decisions	3e1										
Implementation of Ingestion Pathway Decisions	3e2										
Implementation of Post-Plume Phase Relocation, Reentry, and Return Decisions	3f1										
Field Measurement and Analysis											
RESERVED	4a1										
Plume Phase Field Measurement and Analyses	4a2										
Plume Phase Field Measurement and Analyses	4a3										
Post Plume Phase Field Measurements and Sampling	4b1										
Laboratory Operations	4c1										
Emergency Notification and Public Info											
Activation of the Prompt Alert and Notification System	5a1						M				
RESERVED	5a2										
Activation of the Prompt Alert and Notification System	5a3	M		M	M						
Activation of the Prompt Alert and Notification System	5a4										
Emergency Information and Instructions for the Public and the Media	5b1										
Support Operations/Facilities											
Monitoring, Decontamination, and Registration of Evacuees	6a1										
Monitoring and Decontamination of Emergency Workers and their Equipment and Vehicles	6b1										
Temporary Care of Evacuees	6c1										
Transportation and Treatment of Contaminated Injured Individuals	6d1										

Table 3.1 - Summary of Exercise Evaluation (Continued. page 4/4)

DATE: 2012-05-22 SITE: Salem Hope Creek Nuclear Generating Station, NJ M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated		CCGPRC	BHS	CC GPBC	SBS	CC EWDC	BFD	CC GT	EOC	CC GT	DAFN	CC GT	BRA	CC SCT	EOC	CC SCT	BRA	CC SCT	DAFN	NJ BNE	FCP	SC
Emergency Operations Management																						
Mobilization	1a1								M						M							
Facilities	1b1																					
Direction and Control	1c1								M						M							M
Communications Equipment	1d1								M						M							M
Equipment and Supplies to Support Operations	1e1								M						M							M
Protective Action Decision Making																						
Emergency Worker Exposure Control	2a1																					
Dose Assessment & PARs & PADs for the Emergency Event	2b1																					
Dose Assessment & PARs & PADs for the Emergency Event	2b2																					
PADs for the Protection of persons with disabilities and access/functional needs	2c1																					
Radiological Assessment and Decision-making for the Ingestion Exposure Pathway	2d1																					
Radiological Assessment & Decision-making Concerning Post-Plume Phase Relocation, Reentry, and Return	2e1																					
Protective Action Implementation																						
Implementation of Emergency Worker Exposure Control	3a1	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
Implementation of KI Decision for Institutionalized Individuals	3b1	M							M						M							M
Implementation of Protective Actions for persons with disabilities and access/functional needs	3c1			M						M										M		
Implementation of Protective Actions for persons with disabilities and access/functional needs	3c2								M						M							
Implementation of Traffic and Access Control	3d1								M						M							
Implementation of Traffic and Access Control	3d2								M						M							
Implementation of Ingestion Pathway Decisions	3e1																					
Implementation of Ingestion Pathway Decisions	3e2																					
Implementation of Post-Plume Phase Relocation, Reentry, and Return Decisions	3f1																					
Field Measurement and Analysis																						
RESERVED	4a1																					
Plume Phase Field Measurement and Analyses	4a2																					M
Plume Phase Field Measurement and Analyses	4a3																					
Post Plume Phase Field Measurements and Sampling	4b1																					
Laboratory Operations	4c1																					
Emergency Notification and Public Info																						
Activation of the Prompt Alert and Notification System	5a1																					
RESERVED	5a2																					
Activation of the Prompt Alert and Notification System	5a3														M				M			
Activation of the Prompt Alert and Notification System	5a4																					
Emergency Information and Instructions for the Public and the Media	5b1																					
Support Operations/Facilities																						
Monitoring, Decontamination, and Registration of Evacuees	6a1	M																				
Monitoring and Decontamination of Emergency Workers and their Equipment and Vehicles	6b1					M																
Temporary Care of Evacuees	6c1																					
Transportation and Treatment of Contaminated Injured Individuals	6d1																					

3.3 Criteria Evaluation Summaries

3.3.1 New Jersey Jurisdictions

3.3.1.1 State Emergency Operation Center

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.b.1, 2.b.2, 2.c.1, 3.d.2, 5.a.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: 5.b.1.

ISSUE NO.: 02-12-5b1-A-02

CRITERION: OROs provide accurate emergency information and instructions to the public and news media in a timely manner.

CONDITION: The New Jersey Regional Operations and Intelligence Center (ROIC) received information from Salem County EOC about two traffic impediments impacting evacuation routes. Staff at the ROIC entered the information into E-Team but neglected to inform the Emergency News Center about traffic diversion routes affecting two evacuation routes.

After no further action was taken, a Mission Coordination representative was asked by the evaluator if the new diverted route would be communicated to the Emergency News Center to disseminate the new route to the public. The response was "no", and the evacuating public would be informed by the posted signs and the law enforcement at the Traffic Control Points.

The REP PROGRAM MANUAL(Rev. 2012, p. III-46) states that "OROs must demonstrate the capability, as required by the scenario, to identify and take appropriate actions concerning impediments to evacuation. The impediment must occur during the evacuation and be on an evacuation route such that re-routing of traffic is required, triggering decision-making and coordination with the JIC to communicate the alternate route to evacuees leaving the area."

POSSIBLE CAUSE: SOP-906 doesn't specify that the Emergency News Center and

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ORIGINAL

INACTIVE DUTY TRAINING ORDERS

TERMINATION/CANCELLATION/MODIFICATION

From: COMNAVRESFORCOM, Norfolk, Va

Date: 23 April 2014

TO:LS1 BRIAN HASEMANN

USN, ***_**_**** / LS1
Ser BH343096-9
In lieu of CNAVRES
1326/1321

References: (a) Current Orders (NAVRES 1326/5) w/Modification(s)
(c) RESPERSMAN M1001.5 series
(d) OPNAVINST 6110.1 series

(b) BUPERSINST 1001.39 series

Reference (a), which authorized your assignment to: NR MSC EXP PORT 102 (TRUIC 89259), is hereby modified in accordance with references (b) and (c), as directed by reference (d) effective 23 April 2014 as indicated below: You are assigned to NR OPS SUPPORT 0628 (82650) , NOSC AMITYVLE NY for inactive duty in a pay status, cross assigned to UIC 83653 NR CART TM I / RBSC 7042 /AUIC 82171 BIN 3018261

Your tenure in this billet will expire 30 November 2016 unless terminated sooner by proper authority or otherwise modified.

Your assigned drill site is
NOSC AMITYVLE NY
600 ALBANY AVE
AMITYVILLE NY 11071

For informational purposes only. Your billet is located at NOSC EARLE COLTS NECK NJ
All other provisions of your orders, reference(a), remain the same. Failure to comply with these orders may result in transfer to Non Pay.

Amplifying Remarks: Orders written to reflect TRUIC change requested by NC1 Cisse Mory.

(Signed)
J.P. WAITE
By Direction

Copy to:

NPC 313C

NOSC BRONX NY

NR CART TM I

NR MSC EXP PORT 102

NRRC MIDLANT DC

NOSC AMITYVLE NY

bhaseman

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J.P. WAITE
By Direction

Copy to:

NPC 313C

NOSC BRONX NY

NR CART TM I

NR MSC EXP PORT 102

NRRC MIDLANT DC

NOSC AMITYVLE NY

the EAS radio station should be notified about evacuation route diversions.

REFERENCE: NUREG-0654, J.10.k; REP Program Manual (Rev. April 2012); New Jersey State REPR, SOP 906

EFFECT: Information regarding the traffic impediments and the updated evacuation routes were not delivered to the ENC and radio station (simulated). It wouldn't be until the evacuating public reached the traffic control point that they would know about the detour, which could cause unnecessary delays and confusion.

RECOMMENDATION: Update SOP-906 to include procedures to inform the Emergency News Center and the EAS radio station of any alternate routes that are established.

- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES - RESOLVED: None
- g. PRIOR ISSUES - UNRESOLVED: 2.a.1.

ISSUE NO.: 02-10-2a1-P-06

ISSUE: The State SOP-305, Rev 20., June 2007, states, "...the exposure of emergency workers performing missions critical to reducing the collective dose to the general public will be controlled on the basis of Self Reading Dosimeter [SRD] readings. Adjustments for CEDE [Committed Effective Dose Equivalent] which estimates internal dose] will be made to exposure records post-accident on the basis of exposure assessments." However, within the State SOPs, the units for the New Jersey State administrative dose limits are not consistent and are incorrectly applied to SRD readings. The SRDs read out in units of roentgen (R) and represent an estimate of external exposure only. The SRDs have no capability to estimate internal dose.

Within the State SOPs, the New Jersey State administrative dose limit is expressed as 1.25 rem Total Effective Dose Equivalent which is external dose plus internal dose.

Other places in the SOPs, it is expressed in roentgen. For example, Attachment 305-2, Rev. 20, June 2007, GUIDANCE ON DOSE LIMITS FOR WORKERS PERFORMING EMERGENCY SERVICES, states that the New Jersey administrative dose limit is 1.25 R, but the notes state, "The dose limit is the sum of the external effective dose equivalent and the committed effective dose equivalent [internal]." The external effective dose equivalent and the committed effective dose equivalent should be expressed in units of rem not R. Attachment 901-3, Rev. 5, October 2007, is also entitled GUIDANCE ON DOSE LIMITS FOR WORKERS PERFORMING EMERGENCY SERVICES and lists the New Jersey State administrative dose limit as 1.25 rem which includes internal plus external doses. However, an SRD cannot estimate the internal contribution to dose.

REASON UNRESOLVED: The inconsistency in the use of units of radiation dose within the State of New Jersey SOPs continues. The State SOP-305, Rev 23., June 2012, page 2, states, "...the exposure of emergency workers performing missions critical to reducing the collective dose to the general public will be controlled on the basis of Electronic or Self Reading Dosimeter [ESRD/SRD] readings. Adjustments for CEDE [Committed Effective Dose Equivalent] which estimates internal dose] will be made to exposure records post-accident on the basis of exposure assessments." However, within the State SOPs, the units for the New Jersey State administrative dose limits are not consistent and are incorrectly applied to ESRD/SRD readings. Both the ESRD and the SRD used by the State read out in units of roentgen (R) and represent an estimate of external exposure only. The ESRD/SRDs have no capability to estimate internal dose. Inconsistent SOP examples are:

1. SOP-901, Attachment 901-3, Rev 7, April 2011, page 16, lists correctly the guidance on dose limits for workers performing emergency services in units of rem. The note associated with the dose limits states, "The dose limit is the sum of the external effective dose equivalent and the committed effective dose equivalent [internal] ...from exposure and intake during an emergency situation." This is consistent with their reference, MANUAL OF PROTECTIVE ACTION GUIDES AND PROTECTIVE ACTIONS FOR NUCLEAR INCIDENTS, EPA 400-R-92-001, 1992 (EPA-400).
2. SOP-305, Attachment 305-2, Rev 23, April 2012, page 1, is identical to Attachment 901-3 except for the dose units listed in Attachment 305-2 are in units of R. Units of

R are correctly applied to external exposure only, but dose limits refer to the sum of internal and internal dose.

3. SOP-405, Attachment-1, Rev 13, January 2012 is identical to SOP-407, Table-407.1, Rev 9, June 2009, page 9. Both identify the emergency worker exposure limit column heading as "Dose limit (rem)." The dose limits listed represent external dose plus internal dose and they are consistent with the sited reference, EPA-400.

However, both tables list the individual dose limits in units of R, which does not include internal dose and the units of R is inconsistent with EPA-400.

4. New Jersey State Radiological Emergency Plan, Section IV, Rev 15, December 2010, page IV-30 states, "Emergency workers must notify a Department of Health representative of any exposures in excess of 1.25 Rem." The emergency workers cannot determine their internal plus external dose of 1.25 rem. They can only report their external exposure in units of R as read on their ESRD/SRD.

3.3.1.2 Bureau of Nuclear Engineering - Emergency Operations Facility

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

ISSUE NO.: 02-08-2b1-P-03

ISSUE: The available Field Monitoring Team (FMT) data was not used to verify the validity of the assumed noble gas to iodine ratio that is inherent in the dose projection methodology. The licensee data was not used and the second (Team A) air sample result was not received in the EOF. Also, there was no attempt to identify the nuclides present on the particulate filter from the licensee air sample at E1. This could be significant given the high count rate reported.

CORRECTIVE ACTION DEMONSTRATED: The dose assessment staff used the field sampling results to confirm which of the three dose projections available was

the most appropriate projection. The BNE staff followed revised procedures to make their calculations.

- g. PRIOR ISSUES - UNRESOLVED: None

3.3.1.3 State Radiological Field Team A

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

- a. MET: 1.d.1, 1.e.1, 3.a.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: 4.a.3.

ISSUE NO.: 02-10-4a3-P-08

ISSUE: During both air sampling and counting activities, Field Monitoring Team Vanguard A conducted an initial radiation survey and took open and closed window readings at both waist level and ground level. However, they did not conduct surveys during and after sampling. Although a Ludlum Model 3 with 44-6 open/closed window probe, Attachment 302-10 Rev 28, February 2010, does not require any additional readings to be taken.

REASON UNRESOLVED: The revised SOP-302, Att 310 (4/12) still does not require measurements during and after an air sample. Closed window readings were taken at waist level during the air sampling, but this was not reflected in the revised procedure.

3.3.1.4 State Radiological Field Team B

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

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

3.3.1.5 State-Traffic Control Points-Five Mile Posts

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

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

3.3.1.6 NJ State Access Control Point

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

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

3.3.1.7 Salem Hope Creek Emergency News Center

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.
- 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: 5.b.1.

ISSUE NO.: 02-10-5b1-A-03

ISSUE: Display used in the Media Briefing Room included an incorrect EAS Station. A slide showing EAS Stations for the State of New Jersey had not been updated to reflect the change from WXKW to WENJ.

REASON UNRESOLVED: Corrected display information in the Media Briefing Room describing the correct EAS Station will be demonstrated at the next federally graded exercise.

3.3.1.8 Salem Hope Creek EAS Station

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

- a. MET: 1.d.1, 5.a.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

3.3.1.9 New Jersey Bureau of Nuclear Engineering-Forward Command Post

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

- a. MET: 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 4.a.2.
- b. AREAS REQUIRING CORRECTIVE ACTION: 3.b.1.

ISSUE NO.: 02-12-3b1-A-10

CRITERION: 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.

CONDITION: During the Sep. 27, 2011 Oyster Creek exercise, the FCP Radio Operator announced at 1140 over the radio that all field monitoring team members could ingest KI. However, based on discussions with the field monitoring team evaluators, State Field Monitoring Team B was the only team that heard the transmission. The Radio Operator did not ask for acknowledgement of the transmission and therefore, the message was not repeated and State Field Monitoring Team A and the Ocean County Field Monitoring Team did not have the opportunity to consider ingesting KI.

POSSIBLE CAUSE: Failure of the Radio Operator to request acknowledgement of the radio transmission that all field teams could ingest KI.

REFERENCE: NUREG 0654: J.10.c. SOP-206 (Forward Command Post)

EFFECT: The field teams working in the EPZ could have been exposed to a plume containing radioactive iodine, and without ingesting KI, the field team members have the potential to exceed their dose limits.

CORRECTIVE ACTION DEMONSTRATED: During the May 22, 2012 Salem Hope Creek exercise the FCP received notification by facsimile and commercial telephone at 1913 from the Emergency Operations Facility (EOF) that a General Emergency (GE) had been declared at 1912 and that emergency workers were authorized to ingest KI. The Radio Operator informed the FMT's at 1917 by radio

that a GE had been declared and that FMT's were authorizrd to take KI in accordance with their procedures. The Radio Operator received confirmation by radio that each FMT had received the GE message and that each member of each FMT had taken KI.

ARCA 43-11-3.b.1-A-02 was a prior issue assigned during the 2011 Oyster Creek federally graded excercise and successfully redemonstrated during the 2012 Salem Hope Creek exercise as ARCA 02-12-3.b.1-A-10. Therefore prior Oyster Creek ARCA 43-11-3.b.1-A-02 has been resolved.

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

3.3.2 Risk Jurisdictions

3.3.2.1 Salem County Emergency Operations Center

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, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.a.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: 1.c.1, 1.e.1.

ISSUE NO.: 02-12-1c1-A-01

CRITERION: 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.

CONDITION: The Salem County Emergency Operations Center (EOC) used the "Collabit" web-based information system as a means of sharing information with the risk municipalities within the 10 mile Emergency Planning Zone (EPZ). Collabit allows users to open and view documents directly. However, at 1645 the system became inoperable and attempts to reconfigure and restart it had limited success. The system failed again at 1718 and use of the system was terminated. Salem County subsequently relied on faxing information to the municipalities as the primary means of notification, with a follow up phone call to each location. However, the

overloaded system caused delays in receipt of the faxes in the municipalities.

POSSIBLE CAUSE: Failure of the web-based messaging system and use of a second tier backup fax machine system.

Follow up phone calls were made to the six municipalities but not logged according to recipient.

REFERENCE: NUREG 0654 - A.2.a

EFFECT: Lack of critical protective action information to the municipalities could delay implementation and thus affect public health and safety.

CORRECTIVE ACTION DEMONSTRATED: The Salem County Emergency Operations Center (EOC) successfully re-demonstrated the ability to communicate timely and accurate information between itself the State of New Jersey and the risk municipalities of Pennsville, Quinton, Salem City, Elsinboro, Mannington, and Lower Alloways Creek on Aug. 14, 2012. Salem County Office of Emergency Management wrote a new Message and Communications Plan describing a series of procedures and forms that standardize the methods used to document communications between Salem County, State of New Jersey and the six risk municipalities using email as the primary means of communications followed by a confirmation phone call. Thus ARCA 02-12-1.c.1-A01 is resolved.

This corrects ARCA number 02-12-1c1-A-01 for direction and control for Salem County EOC issued during the May 22, 2012, Hope Creek Full Scale Plume Phase Exercise.

ISSUE NO.: 02-12-1e1-A-07

CRITERION: Equipment, maps, displays, dosimetry, KI, and other supplies are sufficient to support emergency operations.

CONDITION: There appears to be insufficient dosimetry for the municipalities' Emergency Workers in Salem County. According to the plan, dosimetry kits will be distributed from the Salem County EOC to the municipalities at some time after an

Alert. There was some dosimetry pre-positioned for the exercise. According to the inventory list this was 10 electronic dosimeters, and 4KI tablets. Salem City has a police force of 24, the Fire Department has 40 volunteers, the Fenwick Ambulance Service has 25 members, and additional dosimetry is needed for the Department of Public Works workers. The Salem City EOC staff could be covered with one area dosimeter. Thus, there could be somewhat in excess of 90 dosimeters needed for Salem City. According to the Salem County inventory list the County has 93 electronic dosimeters and 100 0-200mR and 0-20R direct read dosimeters (DRDs). However, the inventory indicates the DRDs are for County emergency workers. This leaves 93 electronic dosimeters for the 6 Salem County municipalities in the EPZ. As Salem City could need more than 93 by itself, there do not appear to be enough dosimeters available.

POSSIBLE CAUSE: Because the dosimetry is kept at the county and not distributed there seems to be insufficient dosimetry available. It appears there was not a proper determination of actual municipality needs.

REFERENCE: NUREG 0654 J.10a,b,e; Procedure 405 New Jersey State RERP

EFFECT: Not having sufficient dosimetry could result either in sending out emergency workers who could not determine whether they had exceeded their dose limit, putting them at risk, or in delaying an activity until someone with a dosimeter was available. All of these possibilities could put the public at risk.

CORRECTIVE ACTION DEMONSTRATED: The basis for allocation of dosimeters in New Jersey is founded upon mission assignments to a particular municipality, not on the number of emergency workers located in a municipality. It is reasonable to conclude that in the interest of keeping exposures to a minimum that only those emergency workers required to implement the plan will be present during any operational period. Additional emergency workers would be called up as necessary to meet unforeseen contingencies and additional dosimeters can be obtained by the municipalities from the County, or if need be, the State.

The State Office of Emergency Management began issuing electronic dosimeters in 2008. The Salem County Office of Emergency Management in 2008 assessed their

missions in the County and municipalities supporting the Plan and requested 83 electronic dosimeters. This number was increased at a request from the County in 2010 to 103 electronic dosimeters. It must be noted that Salem County retains 200 dosimeter pairs for use at the Reception Centers and the Emergency Worker Decontamination Center. Therefore Salem County has a combined total of 303 electronic and direct reading dosimeter. This should be adequate to supply the missions in the Plan. Additional dosimeters are available from the State OEM.

The methodology for determining the number of dosimeters based upon missions is as follows. The County must supply 10 dosimeters each for two (2) reception centers (the second reception center doubles as an emergency worker decontamination center). The County supports bus transportation for school evacuation and transit dependent populations which requires 51 dosimeters. The number of dosimeters allocated to each municipality was determined thusly. A single dosimeter was assigned to the EOC (if within the 10-mile EPZ), one (1) dosimeter for each dismantled traffic control post, one (1) dosimeter for each vehicle that may be required for MS-1, and one dosimeter for each siren located in a particular municipality.

- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES - RESOLVED: 3.d.2.

ISSUE NO.: 02-10-3d2-A-01

ISSUE: No impediments to evacuation were identified and resolved, as was required in the extent of play. There were no injects for the Salem County EOC and thus no simulated actions to remove impediments in a timely manner.

CORRECTIVE ACTION DEMONSTRATED: Two impediments to evacuation were identified and resolved, as was required in the extent of play. Actions were simulated by the Salem County EOC to remove impediments in a timely manner and demonstrate that responders had the ability to identify, respond and resolve an impediment to evacuation as they would in an actual emergency.

Impediment #1: At 1932 the EOC was notified by the City of Salem that there was a roadway obstruction due to the collapse of an overhead structure on Griffith Street at the Anchor Glass Company, and that traffic was being diverted to Fifth and Griffith Streets by the Salem City Police Department and the Sheriff's Department. At 2012 the Prosecutor's Office Representative reported that law enforcement personnel from the Prosecutor's Office were going to relieve the Salem City police officers at the Griffith Street traffic diversion so that they could return to their patrol duties. At 2121 the EOC was notified by Salem City that the Griffith Street obstruction could not be cleared and that the traffic diversion would remain in place.

Impediment #2: At 2033 the EOC was notified by the Pennsville EMC that the Salem Lighthouse had collapsed onto Lighthouse Road and that the Pennsville Highway Department had been dispatched to clear debris. At 2053 the EOC was notified by the Pennsville EMC that a traffic diversion had been established around the lighthouse collapse. The diversion route was as follows: Fort Mott Road to Route 49 eastbound to Route 45 (in Salem City) northbound to the reception center. He also advised that detour traffic was being controlled by the Pennsville Police Department and the Pennsville Public Works Department. At 2143 the Pennsville EMC notified the EOC that the Lighthouse Road obstruction had been cleared at 2104.

- g. PRIOR ISSUES - UNRESOLVED: None

3.3.2.2 Salem County - School Interview - Elsinboro Township School

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

- a. MET: 3.c.2.
- 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

3.3.2.3 Salem County - School Interview - John Fenwick Elementary School

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

- a. MET: 3.c.2.
- 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

3.3.2.4 Salem County - School Interview - Lower Alloways Creek Elementary School

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

- a. MET: 3.c.2.
- 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

3.3.2.5 Salem County - School Interview - Quinton Elementary School

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

- a. MET: 3.c.2.
- 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

3.3.2.6 Salem County - School Bus Company - BR Williams

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

- a. MET: 3.a.1, 3.c.2.
- 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

3.3.2.7 Salem County Transit Dependent Bus Run

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

- a. MET: 3.a.1, 3.b.1, 3.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

3.3.2.8 Salem County - General Population Bus Company - B.R. Williams

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

- a. MET: 3.a.1, 3.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

3.3.2.9 Salem County - Medical Services Hospital - Salem Memorial Hospital

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

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

ISSUE NO.: 02-10-6d1-P-03

ISSUE: During a MS-1 drill on 04/29/10 at Salem Memorial Hospital, after two decontamination attempts, a patient was surveyed and 200 counts per minute (cpm) was detected on her hands using an Eberline E-140N survey meter. The patient was considered clean and no further decontamination was removed. The patient, who was described in the scenario only as an "instructor", was released with 200 cpm on her hands. The hospital procedure, Code Magenta, Rev 18, April 2008, Attachment V, on page 48 provides hospital workers with a guideline to "decon to background levels (<100 cpm), unless medically contraindicated; i.e. skin irritation, reddening"

CORRECTIVE ACTION DEMONSTRATED: This issue was corrected by changing the Code Magenta (Hospital Procedures) to reflect the same decontaminations leaves as required by the State of New Jersey in SOP 404, Radiological Monitoring of Evacuees, Emergency Workers, and Vehicles, Rev 6, June 2010.

- g. PRIOR ISSUES - UNRESOLVED: None

3.3.2.10 Salem County Medical Service Transport - Pennsville EMS

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

- a. MET: 3.a.1, 6.d.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None

-
- e. NOT DEMONSTRATED: None
 - f. PRIOR ISSUES - RESOLVED: None
 - g. PRIOR ISSUES - UNRESOLVED: None

3.3.2.11 Elsinboro Township Emergency Operations Center

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, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2.
- b. AREAS REQUIRING CORRECTIVE ACTION: 1.c.1.

ISSUE NO.: 02-12-1c1-A-08

CRITERION: 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.

CONDITION: The Elsinboro Township Emergency Operations Center Emergency Management Coordinator (EMC) did not adequately monitor incoming facsimile messages.

POSSIBLE CAUSE: According to the State of New Jersey Radiological Emergency Response Plan; Annex A; Appendix 1.1, Elsinboro Township, Table -1.1-2, Emergency Facility Communications Primary/Alternate Contact and Method of Communications, the primary means of communication with Salem County Emergency Operations Center (EOC) are: 1) Dedicated Telephone, 2) Commercial Telephone, 3) Radio. However, during the May 22, 2012, Hope Creek Nuclear Generating Station Exercise, Elsinboro Township EMC was advised by Salem County EOC to utilize the computer system "Collabit" for primary messaging. At 1718 hours, the "Collabit" system malfunctioned and shut down. Salem County EOC advised Elsinboro Township to utilize email and fax for receiving primary communications. Elsinboro Township EOC received messages via fax and email from Salem EOC; however, 8-10 fax messages came into the EOC at once bogging down the Emergency Management Coordinator. The Emergency Management Coordinator did not read each message thoroughly, only scanning them for important information. In doing so, the EMC missed receiving notification of the "heads up" siren, "heads up" EAS Message, the initial siren and EAS message.

REFERENCE: NUREG 0654 FEMA REP-1 E.1, F.1; State of NJ RERP, Annex A, App. 1.1A, Appendix 1.1, Elsinboro Township Table 1.1-2.

EFFECT: As a result of overlooking the notification of the initial sounding of the sirens and the initial EAS message, Elsinboro Township was unaware of the initial siren system activation. During an interview, the EMC stated that if he had heard the sirens sound, he would have made a phone call to the Salem County EOC to confirm the sounding of the sirens and subsequent Emergency Alert System message. Salem County EOC would have then been made aware of the missing or overlooked notification form.

CORRECTIVE ACTION DEMONSTRATED: Elsinboro Emergency Operation Center (EOC) leadership successfully demonstrated the ability to provide direction and control for their part in the response operation of the Hope Creek Re-demonstration exercise held on August 14, 2012.

The Emergency Management Coordinator (EMC) and the Deputy EMC supervised the response operation and provided direction and control to the Elsinboro EOC staff, which included 2 Elsinboro Township Committee members, the Town Mayor serving as the Public Information Officer, and 2 CERT members working as (1) a Telephone/Message Logger, and (2) a Radio Operator.

The EMC and his Deputy gave regular staff briefings as information came into Elsinboro EOC. All telephone calls and/or messages were logged on a "Message Log and/or Telephone Operator's Log." These new forms allowed County and Municipal officials to track receipt of and responses to all messages. The information was then disseminated to the appropriate staff, and displayed on a large screen for EOC staff members viewing. Elsinboro leadership ensured that all action items or requests for them were processed and completed in a timely manner. Elsinboro, Office of Emergency Management, and Emergency Operation Plan Annexes were available for all staff.

All activities were based on the plans and procedures and completed as they would have been in an actual emergency except as noted in the extent of play agreement.

This corrects ARCA number 02-12-1c1-A-02 for direction and control for Elsinboro EOC issued during the May 22, 2012, Hope Creek Full Scale Plume Phase Exercise.

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

3.3.2.12 Lower Alloways Creek Emergency Operations Center

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

ISSUE NO.: 02-10-3b1-P-02

ISSUE: At 1942, the Lower Alloways Creek DEMC announced that the ECL had escalated to a General Emergency and that there was a recommendation for all emergency workers to ingest KI. He did stress that it was indeed voluntary, and that those allergic to shellfish should not ingest it. No one in the EOC announced that they were ingesting (simulated) a KI tablet, nor could anyone record it since Emergency Worker Radiological Exposure Records had not been distributed.

CORRECTIVE ACTION DEMONSTRATED: The Radiological Officer highlighted and emphasized the importance of the individual to understand the reason for taking KI and the need for individuals to sign the control form as outlined in SOP 411, Municipal Radiological Equipment Officer, Revision 3, January, 2012.

- g. PRIOR ISSUES - UNRESOLVED: None

3.3.2.13 Mannington Township Emergency Operations Center

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

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

ISSUE NO.: 02-10-1d1-P-05

ISSUE: The dedicated line from the Mannington Township EOC to Salem County EOC is not shown in Annex A of the New Jersey State Radiological Emergency Response Plan Appendix 1.3, Table1-3.3 for Mannington Township.

REASON UNRESOLVED: Appendix 1.3, Table1-3.3 for Mannington Township of the NJ State RERP will be updated prior to the next federally graded exercise.

3.3.2.14 Pennsville Township Emergency Operations Center

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, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2.
- b. AREAS REQUIRING CORRECTIVE ACTION: 1.c.1.

ISSUE NO.: 02-12-1c1-A-03

CRITERION: 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.

CONDITION: The EMC did not recognize from 1626 until 1659 that the incident at HCNGS was in an Alert ECL. A fax message came in from Salem County EOC at 1626. It was logged, but not adequately reviewed. At 1659, the EOC received Press Release Number: 1, which mentioned the Alert status. The EMC briefed the ECL

update.

POSSIBLE CAUSE: The Pennsville EOC originally began working on the "Collabit" internet-based incident message system with Salem County EOC and other municipalities. This system became unreliable, and Salem County instructed everyone to discontinue use. While issues were arising with Collabit, the EOC received an Initial Contact Message Form fax at 1626. The message was logged and recorded, but not thoroughly reviewed by the EMC. This message informed the EOC that HCNGS was at an Alert ECL. The switch from Collabit to fax machine contributed to some confusion and the missed message. Additionally, the fax machine is noted as backup to the telephone (primary mode of communication) per the plan. However, the fax machine was used as a primary mode of communication throughout the exercise.

REFERENCE: NUREG 0654; E.2;NJRERP, Annex A, Pennsville Twp.

EFFECT: The delayed notification of an Alert or higher ECL to the EOC could contribute to delayed response and implementation of protective actions that affect emergency workers and the general public.

CORRECTIVE ACTION DEMONSTRATED: During the August 14th, 2012 remedial demonstration the Pennsville Emergency Management Coordinator (EMC) had the primary responsibility for direction and control. The EMC was assisted during the exercise by two deputies. The EMC provided information and instructions to staff through regular and timely briefings. Briefings were conducted as plant conditions warranted and generally occurred after each message was received from the Salem County Emergency Operations Center (EOC). All messages were numbered and maintained in a message log. Messages were distributed to appropriate staff in a timely manner. Each of the participating staff members followed their procedures and checklists identified in the plan.

This corrects ARCA number 02-12-1c1-A-03 for direction and control for Pennsville EOC issued during the May 22, 2012, Hope Creek Full Scale Plume Phase Exercise.

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

3.3.2.15 Pennsville Township - Backup Route Alerting

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

- a. MET: 3.a.1, 5.a.3.
- 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

3.3.2.16 Quinton Township Emergency Operations Center

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, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2.
- b. AREAS REQUIRING CORRECTIVE ACTION: 1.c.1, 3.a.1.

ISSUE NO.: 02-12-1c1-A-04

CRITERION: 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.

CONDITION: The Quinton Emergency Operation Center Emergency Management Coordinator did not adequately monitor incoming messages received via the fax machine.

POSSIBLE CAUSE: According to the Quinton Township Radiological Emergency Response Plan the primary means of communication with Salem County Emergency Operation Center (EOC) is the telephone. However, during the May 22, 2012 Hope Creek Nuclear Generating Station Exercise, Quinton Township was advised via the

Salem County EOC to utilize the computer system "Collabit" for primary messages. At 1718hrs, the Collabit system malfunctioned and shut down. Salem County EOC advised Quinton Township to utilize email and fax for receiving primary communications. Quinton Township EOC received messages via fax only (no email) from Salem EOC; however, 8-10 messages came into the EOC all at once. The Emergency Management Coordinator did not read each message thoroughly, only scanning them. In doing so, the EMC missed receiving notification of the "heads up" siren, "heads up" EAS Message, 1st siren, and 1st EAS message.

REFERENCE: NUREG-0654; E.1 and F.1; NJRERP, Annex A, Quinton Township.

EFFECT: As a result of overlooking the notification of siren and EAS messages, Quinton Township was unaware of the siren system activation. During an interview, the EMC stated that had he heard the sirens sound, a phone call would have been made from Quinton Township EOC to Salem County EOC to confirm. They would have then been made aware of the missed notification.

CORRECTIVE ACTION DEMONSTRATED: Quinton Emergency Operations Center (EOC) is located at New Street, Quinton, New Jersey. During a re-demonstration (August 14, 2012), they successfully cleared issue 02-12-1c1-A-04. Quinton Deputy Emergency Manager adequately monitored incoming messages via email, telephones and fax machine, provided staff with a brief synopsis of the messages, and then logged them on the whiteboard ensuring everyone was always up to date on the events. The Deputy Emergency Manager was fully aware of the emergency classification levels and all events that occurred during the exercise. He read through all messages and understood the content. The EOC staff was continuously updated and briefed. They all knew their positions and jobs in the EOC and performed them very well.

This corrects ARCA number 02-12-1c1-A-04 for direction and control for Quinton EOC issued during the May 22, 2012, Hope Creek Full Scale Plume Phase Exercise.

ISSUE NO.: 02-12-3a1-A-05

CRITERION: The OROs issue appropriate dosimetry, KI, and procedures, and manage radiological exposure to emergency workers in accordance with the plans/procedures. Emergency workers periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. Appropriate record-keeping of the administration of KI for emergency workers is maintained.

CONDITION: The Quinton Emergency Operation Center (EOC) did not have adequate supplies of potassium iodide to support emergency response operations at the facility.

POSSIBLE CAUSE: The Quinton Township EOC is responsible for issuing KI to emergency workers in Quinton Township. At 1949 the Salem County EOC notified Quinton Township EOC to “remind all workers KI can now be taken please follow SOP 405 and document ingestion time all workers continue to monitor dosimetry”. The Quinton Township Emergency Management Coordinator (EMC) was confused by this instruction to take KI prior to the General Emergency announcement and any indication of release. The EMC initiated a phone call to Salem County EOC for further clarification. The EMC was told that due to the degrading situation Salem County EOC is issuing this notice as a precautionary action to those emergency workers in the field. At this time the Quinton Township EOC did not have any emergency workers in the field and the EMC decided to continue steady operations without ingesting KI. While the EMC was making this decision the Certified Emergency Response Team (CERT) member responsible for the radiological equipment informed the EMC that the EOC only had 4 KI tablets for the entire township. A phone call was made to Salem County EOC to notify them of the problem; however, no further steps to obtain additional KI were taken.

REFERENCE: NUREG 0654/FEMA-REP-1, Rev. 1 Planning Standard J.10.e; NJ RERP, SOP 405 and Annex A, Quinton Township

EFFECT: The Quinton Township EOC did not have sufficient quantities of KI to support emergency operations. Therefore Quinton Township emergency workers had an undue risk of exposure to radiation.

RECOMMENDATION: The Quinton Township EOC received a message from the Salem County EOC at 1818 requesting all EOCs to ensure they have enough supplies in the worker protection kits to all emergency workers. When this message was received it should have been an indication to check the quantity of supplies to see if it was sufficient to cover all emergency workers in Quinton Township. It is recommended that as soon as the facility is declared operational and fully staffed that the radiological officer in charge of KI take note of how much is needed to ensure they are properly stocked.

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

3.3.2.17 Salem City Emergency Operations Center

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, 3.a.1, 3.b.1, 3.c.2, 3.d.1, 3.d.2, 5.a.3.
- b. AREAS REQUIRING CORRECTIVE ACTION: 1.c.1.

ISSUE NO.: 02-12-1c1-A-06

CRITERION: 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.

CONDITION: An internet based program was used initially to follow events and interact with the Salem County EOC. The program used was "Collabit" and crashed at 1648. The program was never effectively restored during the exercise. The fax was used extensively to receive hard copy, which became overloaded and failed to deliver important messages in a timely manner. Salem County did not precede or follow up important faxes with a telephone call, as specified in the plan, and Salem City did not query the county when they did not receive information promptly. Therefore, response to the incident was delayed.

POSSIBLE CAUSE: Not having a prompt fallback system when the internet system failed, resulted in relying on the fax machine, which is known to have capacity issues.

REFERENCE: NUREG-0654 F1.2;NJ RERP, Annex A, Salem City.

EFFECT: The delays could have led to failure to evacuate all the public in a timely manner.

CORRECTIVE ACTION DEMONSTRATED: The Salem County Emergency Operations Center (EOC) successfully re-demonstrated the ability to communicate timely and accurate information between itself the State of New Jersey and the risk municipalities of Pennsville, Quinton, Salem City, Elsinboro, Mannington, and Lower Alloways Creek on Aug.14, 2012. Salem County Office of Emergency Management wrote a new Message and Communications Plan describing a series of procedures and forms that standardize the methods used to document communications between Salem County, State of New Jersey and the six risk municipalities using email as the primary means of communications followed by a confirmation phone call. This corrects ARCA number 02-12-1c1-A-01 for direction and control for Salem County EOC issued during the May 22, 2012, Hope Creek Full Scale Plume Phase Exercise.

- c. **DEFICIENCY:** None
- d. **PLAN ISSUES:** 3.c.1.

ISSUE NO.: 02-12-3c1-P-01

CRITERION: PADs are implemented for people with disabilities and those with access/functional needs other than schools within areas subject to protective actions.

CONDITION: The Salem City Emergency Operations Center (EOC) had available a special needs survey compiled by Salem County Office of Emergency Management (OEM) from public responses. This survey provided names addresses and phone numbers of all those claiming to have special needs. Unfortunately, it did not

include what the special need(s) was (were). To determine the particular need(s), if any, a staffer had to access the original information provided, which was available on the web at a secure site, and scroll through the forms. With 19 self-listers this was a time consuming task.

POSSIBLE CAUSE: Not having the special needs included in the survey compiled by Salem County and sent to municipalities.

REFERENCE: NUREG-0654 J.10.c.d.g

EFFECT: Due to the voluntary evacuation of special needs individuals well before the release, there was no impact from this issue during this exercise. However, if time were critical this delay in determining the specific needs could cause problems. Additionally, if the internet were to go down there would be no way to ascertain what needs the people have and what resources the EOC needs to dispatch.

RECOMMENDATION: Include the actual special need(s) in the list.

- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES - RESOLVED: None
- g. PRIOR ISSUES - UNRESOLVED: None

3.3.2.18 Salem City - Backup Route Alerting

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

- a. MET: 3.a.1, 5.a.3.
- 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

3.3.2.19 Salem City Traffic Control Point

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

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

3.3.2.20 Cumberland County Emergency Operations Center

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, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.a.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

3.3.2.21 Cumberland County Traffic and Access Control Point

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

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

3.3.2.22 Cumberland County - School Interview - Morris Goodwin Public School

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

- a. MET: 3.c.2.
- 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

3.3.2.23 Cumberland County - School Interview - Stow Creek Township School

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

- a. MET: 3.c.2.
- 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

3.3.2.24 Cumberland County - School Interview - Woodland Country Day School

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

- a. MET: 3.c.2.
- 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

3.3.2.25 Cumberland County General Population Reception Center - Bridgeton High School

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

- a. MET: 3.a.1, 3.b.1, 6.a.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

3.3.2.26 Cumberland County - General Population Bus Company - Sheppard Bus Service

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

- a. MET: 3.a.1, 3.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

3.3.2.27 Cumberland County - Emergency Worker Decon Center - Bridgeton Fire Department

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

- a. MET: 3.a.1, 6.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

3.3.2.28 Greenwich Township Emergency Operations Center

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, 3.a.1, 3.b.1, 3.c.2, 3.d.1, 3.d.2.
- 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

3.3.2.29 Greenwich Township - Disabilities and Access Functional Needs

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

- a. MET: 3.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

3.3.2.30 Greenwich Township - Backup Route Alerting

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

- a. MET: 3.a.1, 5.a.3.
- 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

3.3.2.31 Stow Creek Township Emergency Operations Center

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, 3.a.1, 3.b.1, 3.c.2, 3.d.1, 3.d.2.
- 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

3.3.2.32 Stow Creek Township - Backup Route Alerting

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

- a. MET: 3.a.1, 5.a.3.
- 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

3.3.2.33 Stow Creek - Disabilities and Access Functional Needs Township Hearing Impaired

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

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

SECTION 4: CONCLUSION

Based on the results of the exercise, the offsite radiological emergency response plans and preparedness for the State of New Jersey and the affected local jurisdiction are deemed adequate to provide reasonable assurance that appropriate measures can be taken to protect the health and safety of the public in the event of a radiological emergency. Therefore, 44 CFR Part 350 approval of the offsite radiological emergency response plans and preparedness for the State of New Jersey site-specific to Salem Hop[e Creek Nuclear Power Plant will remain in effect.

APPENDIX A: IMPROVEMENT PLAN

Issue Number: 02-10-1d1-P-05		Criterion: 1d1
<p>ISSUE: The dedicated line from the Mannington Township EOC to Salem County EOC is not shown in Annex A of the New Jersey State Radiological Emergency Response Plan Appendix 1.3, Table 1-3.3 for Mannington Township.</p>		
<p>RECOMMENDATION: Update the Appendix to reflect the current EOC communications capabilities.</p>		
<p>CORRECTIVE ACTION DESCRIPTION:</p>		
CAPABILITY:	PRIMARY RESPONSIBLE AGENCY:	
CAPABILITY ELEMENT:	START DATE:	
AGENCY POC:	ESTIMATED COMPLETION DATE:	

Issue Number: 02-12-3a1-A-05		Criterion: 3a1
<p>ISSUE: The Quinton Emergency Operation Center (EOC) did not have adequate supplies of potassium iodide to support emergency response operations at the facility.</p>		
<p>RECOMMENDATION: The Quinton Township EOC received a message from the Salem County EOC at 1818 requesting all EOCs to ensure they have enough supplies in the worker protection kits to all emergency workers. When this message was received it should have been an indication to check the quantity of supplies to see if it was sufficient to cover all emergency workers in Quinton Township. It is recommended that as soon as the facility is declared operational and fully staffed that the radiological officer in charge of KI take note of how much is needed to ensure they are properly stocked.</p>		
<p>CORRECTIVE ACTION DESCRIPTION:</p>		
CAPABILITY:	PRIMARY RESPONSIBLE AGENCY:	
CAPABILITY ELEMENT:	START DATE:	
AGENCY POC:	ESTIMATED COMPLETION DATE:	

Issue Number: 02-12-3c1-P-01		Criterion: 3c1
<p>ISSUE: The Salem City Emergency Operations Center (EOC) had available a special needs survey compiled by Salem County Office of Emergency Management (OEM) from public responses. This survey provided names addresses and phone numbers of all those claiming to have special needs. Unfortunately, it did not include what the special need(s) was (were). To determine the particular need(s), if any, a staffer had to access the original information provided, which was available on the web at a secure site, and scroll through the forms. With 19 self-listers this was a time consuming task.</p>		
<p>RECOMMENDATION: Include the actual special need(s) in the list.</p>		
<p>CORRECTIVE ACTION DESCRIPTION:</p>		
CAPABILITY:	PRIMARY RESPONSIBLE AGENCY:	
CAPABILITY ELEMENT:	START DATE:	
AGENCY POC:	ESTIMATED COMPLETION DATE:	

Issue Number: 02-10-5b1-A-03		Criterion: 5b1
<p>ISSUE: Display used in the Media Briefing Room included an incorrect EAS Station. A slide showing EAS Stations for the State of New Jersey had not been updated to reflect the change from WKKW to WENJ.</p>		
<p>RECOMMENDATION: Slides should be updated to correct the EAS station information. Slides should be reviewed annually for changes or whenever the emergency information changes.</p>		
<p>CORRECTIVE ACTION DESCRIPTION:</p>		
CAPABILITY:	PRIMARY RESPONSIBLE AGENCY:	
CAPABILITY ELEMENT:	START DATE:	
AGENCY POC:	ESTIMATED COMPLETION DATE:	

Issue Number: 02-10-2a1-P-06		Criterion: 2a1
<p>ISSUE: The State SOP-305, Rev 20., June 2007, states, "...the exposure of emergency workers performing missions critical to reducing the collective dose to the general public will be controlled on the basis of Self Reading Dosimeter [SRD] readings. Adjustments for CEDE [Committed Effective Dose Equivalent] which estimates internal dose] will be made to exposure records post-accident on the basis of exposure assessments." However, within the State SOPs, the units for the New Jersey State administrative dose limits are not consistent and are incorrectly applied to SRD readings. The SRDs read out in units of roentgen (R) and represent an estimate of external exposure only. The SRDs have no capability to estimate internal dose.</p> <p>Within the State SOPs, the New Jersey State administrative dose limit is expressed as 1.25 rem Total Effective Dose Equivalent which is external dose plus internal dose. Other places in the SOPs, it is expressed in roentgen. For example, Attachment 305-2, Rev. 20, June 2007, GUIDANCE ON DOSE LIMITS FOR WORKERS PERFORMING EMERGENCY SERVICES, states that the New Jersey administrative dose limit is 1.25 R, but the notes state, "The dose limit is the sum of the external effective dose equivalent and the committed effective dose equivalent [internal]." The external effective dose equivalent and the committed effective dose equivalent should be expressed in units of rem not R. Attachment 901-3, Rev. 5, October 2007, is also entitled GUIDANCE ON DOSE LIMITS FOR WORKERS PERFORMING EMERGENCY SERVICES and lists the New Jersey State administrative dose limit as 1.25 rem which includes internal plus external doses. However, an SRD cannot estimate the internal contribution to dose.</p>		
<p>RECOMMENDATION: Review State SOPs and attachments to assure that the units applied to the emergency worker dose limit are appropriate and consistent.</p>		
<p>CORRECTIVE ACTION DESCRIPTION:</p>		
CAPABILITY:	PRIMARY RESPONSIBLE AGENCY:	
CAPABILITY ELEMENT:	START DATE:	
AGENCY POC:	ESTIMATED COMPLETION DATE:	

Issue Number: 02-12-5b1-A-02		Criterion: 5b1
<p>ISSUE: The New Jersey Regional Operations and Intelligence Center (ROIC) received information from Salem County EOC about two traffic impediments impacting evacuation routes. Staff at the ROIC entered the information into E-Team but neglected to inform the Emergency News Center about traffic diversion routes affecting two evacuation routes.</p> <p>After no further action was taken, a Mission Coordination representative was asked by the evaluator if the new diverted route would be communicated to the Emergency News Center to disseminate the new route to the public. The response was "no", and the evacuating public would be informed by the posted signs and the law enforcement at the Traffic Control Points.</p> <p>The REP PROGRAM MANUAL (Rev. 2012, p. III-46) states that "OROs must demonstrate the capability, as required by the scenario, to identify and take appropriate actions concerning impediments to evacuation. The impediment must occur during the evacuation and be on an evacuation route such that re-routing of traffic is required, triggering decision-making and coordination with the JIC to communicate the alternate route to evacuees leaving the area."</p>		
<p>RECOMMENDATION: Update SOP-906 to include procedures to inform the Emergency News Center and the EAS radio station of any alternate routes that are established.</p>		
<p>CORRECTIVE ACTION DESCRIPTION:</p>		
CAPABILITY:	PRIMARY RESPONSIBLE AGENCY:	
CAPABILITY ELEMENT:	START DATE:	
AGENCY POC:	ESTIMATED COMPLETION DATE:	

Issue Number: 02-10-4a3-P-08		Criterion: 4a3
<p>ISSUE: During both air sampling and counting activities, Field Monitoring Team Vanguard A conducted an initial radiation survey and took open and closed window readings at both waist level and ground level. However, they did not conduct surveys during and after sampling. Although a Ludlum Model 3 with 44-6 open/closed window probe, Attachment 302-10 Rev 28, February 2010, does not require any additional readings to be taken.</p>		
<p>RECOMMENDATION: Revise Attachment 302-10 Rev 28, February 2010, to require radiological monitoring during and after air sampling.</p>		
<p>CORRECTIVE ACTION DESCRIPTION:</p>		
CAPABILITY:	PRIMARY RESPONSIBLE AGENCY:	
CAPABILITY ELEMENT:	START DATE:	
AGENCY POC:	ESTIMATED COMPLETION DATE:	

APPENDIX B: EXERCISE TIMELINE

Table 1 - Exercise Timeline

DATE: 2012-05-22, SITE: Salem Hope Creek Nuclear Generating Station, NJ

Emergency Classification Level or Event	Time Utility Declared	NJ SEOC	NJ SHC BNE EOF	NJ SHC ENC	NJ SHC EAS	SC SCEOC	SC ET EOC
Unusual Event	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Alert	1541	1603	N/A	1604	1734	1556	1645
Site Area Emergency	1729	1735	1729	1730	1800	1741	1729
General Emergency	1912	1921	1912	1920	N/A	1934	1945
Simulated Rad. Release Started	2000	2002	2000	2050	N/A	2022	2033
Simulated Rad. Release Terminated	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Facility Declared Operational		1605	1720	1730	N/A	1620	1700
Governor Declared State of Emergency		1755	1804	1755	N/A	1755	1755
Exercise Terminated		2205	2320	2205	N/A	2204	2120
"Heads Up" Siren Activation		1801	N/A	1843	N/A	1801	N/A
"Heads Up" EAS Message		1806	N/A	N/A	N/A	1806	N/A
1st Protective Action Decision:		1942	1942	1942	N/A	1949	2007
1st Siren Activation		1950	N/A	1950	N/A	1949	2007
1st EAS Message		1955	N/A	1955	N/A	1949	2007
2nd Protective Action Decision:		2038	2040	2041	N/A	2038	2038
2nd Siren Activation		2046	N/A	2046	N/A	2046	2046
2nd EAS Message		2051	N/A	2051	N/A	2051	2051
KI Administration Decision: Emergency Workers		1942	1912	2008	N/A	1948	1945
KI Administration Decision: General Public		1942	N/A	2008	N/A	N/A	1945

Table 1 - Exercise Timeline

DATE: 2012-05-22, SITE: Salem Hope Creek Nuclear Generating Station, NJ

Emergency Classification Level or Event	Time Utility Declared	SC LAC EOC	SC MT EOC	SC PT EOC	SC QT EOC	SC SC EOC	CC CCEOC
Unusual Event	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Alert	1541	1546	1544	1659	1556	1627	1609
Site Area Emergency	1729	1745	1752	1806	1753	1758	1745
General Emergency	1912	1935	1941	1945	2008	1951	1934
Simulated Rad. Release Started	2000	N/A	2029	2029	2029	2035	2028
Simulated Rad. Release Terminated	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Facility Declared Operational		1645	1706	1607	1643	1700	1705
Governor Declared State of Emergency		1814	1815	1813	1815	1815	1800
Exercise Terminated		2030	2135	2204	2120	2118	2203
"Heads Up" Siren Activation		1813	1812	1805	N/A	1925	1800
"Heads Up" EAS Message		1813	1812	1814	N/A	1925	1800
1st Protective Action Decision:		2006	2008	2006	2015	2005	1948
1st Siren Activation		2006	2008	2006	N/A	2005	1948
1st EAS Message		2006	2008	2013	N/A	2005	1948
2nd Protective Action Decision:		N/A	2103	2119	2112	2109	2043
2nd Siren Activation		N/A	2103	N/A	2120	2109	2043
2nd EAS Message		N/A	2103	2104	2120	2109	2043
KI Administration Decision: Emergency Workers		1935	2000	1945	1949	2001	1948
KI Administration Decision: General Public		2006	2008	2119	2112	2109	1948

Table 1 - Exercise Timeline
DATE: 2012-05-22, SITE: Salem Hope Creek Nuclear
Generating Station, NJ

Emergency Classification Level or Event	Time Utility Declared	CC GT EOC	CC SCT EOC
Unusual Event	N/A	N/A	N/A
Alert	1541	1612	1615
Site Area Emergency	1729	1746	1804
General Emergency	1912	1935	1936
Simulated Rad. Release Started	2000	2029	2029
Simulated Rad. Release Terminated	N/A	N/A	N/A
Facility Declared Operational		1720	1643
Governor Declared State of Emergency		1811	1811
Exercise Terminated		2205	2204
"Heads Up" Siren Activation		1759	1801
"Heads Up" EAS Message		1759	1806
1st Protective Action Decision:		1951	2003
1st Siren Activation		1951	2003
1st EAS Message		1951	2003
2nd Protective Action Decision:		2045	2046
2nd Siren Activation		2045	2046
2nd EAS Message		2045	2046
KI Administration Decision: Emergency Workers		N/A	1943
KI Administration Decision: General Public		N/A	2003

APPENDIX C: EXERCISE EVALUATORS AND TEAM LEADERS

Unclassified
Radiological Emergency Preparedness Program (REP)

After Action Report/Improvement Plan

Salem Hope Creek Nuclear Generating Station

DATE: 2012-05-22, SITE: Salem Hope Creek Nuclear Generating Station, NJ

LOCATION	EVALUATOR	AGENCY
State Emergency Operation Center	Chris Cammarata *Kevin Reed Daryl Thome	FEMA RII FEMA RII ICFI
Bureau of Nuclear Engineering - Emergency Operations Facility	*Joseph Keller Miriam Weston	ICFI FEMA RII
State Radiological Field Team A	Ronald Biernacki	ICFI
State Radiological Field Team B	Michael DeBonis	USEPA
State-Traffic Control Points-Five Mile Posts	*Kevin Reed	FEMA RII
NJ State Access Control Point	*Kevin Reed	FEMA RII
Salem Hope Creek Emergency News Center	*John Rice Melissa Savilonis	FEMA RI FEMA - RI
Salem Hope Creek EAS Station	Russell Fox	FEMA
New Jersey Bureau of Nuclear Engineering-Forward Command Post	Henry Christiansen David Stuenkel	ICFI ICFI
Salem County Emergency Operations Center	*William Cullen Sara Gelves Patricia Mason Cheryl Weaver	FEMA R II FEMA FEMA RII ICFI
Salem County - School Interview - Elsinboro Township School	Laura Forrest	FEMA RII
Salem County - School Interview - John Fenwick Elementary School	Laura Forrest	FEMA RII
Salem County - School Interview - Lower Alloways Creek Elementary School	Laura Forrest	FEMA RII
Salem County - School Interview - Quinton Elementary School	Laura Forrest	FEMA RII
Salem County - School Bus Company - BR Williams	Miriam Weston	FEMA RII
Salem County Transit Dependent Bus Run	Patricia Mason	FEMA RII
Salem County - General Population Bus Company - B.R. Williams	Patricia Mason	FEMA RII
Salem County - Medical Services Hospital - Salem Memorial Hospital	*Kevin Reed	FEMA RII
Salem County Medical Service Transport - Pennsville EMS	Patricia Mason	FEMA RII
Elsinboro Township Emergency Operations Center	Meg Swearingen	ICFI
Lower Alloways Creek Emergency Operations Center	David White	ICFI
Mannington Township Emergency Operations Center	Gary Bolender	ICFI
Pennsville Township Emergency Operations Center	*Rebecca Fontenot	FEMA HQ
Pennsville Township - Backup Route Alerting	Barbara Thomas	FEMA RI
Quinton Township Emergency Operations Center	Patricia Gardner	FEMA - HQ
Salem City Emergency Operations Center	Samuel Nelson	ICFI
Salem City - Backup Route Alerting	David Kayen	ICFI
Salem City Traffic Control Point	*Kevin Reed	FEMA RII
Cumberland County Emergency Operations Center	*Brian Hasemann Mabel Santiago Michele Sturman Angie Thompson	FEMA RII FEMA FEMA FEMA
Cumberland County Traffic and Access Control Point	Laura Forrest	FEMA RII
Cumberland County - School Interview - Morris Goodwin Public School	Miriam Weston	FEMA RII
Cumberland County - School Interview - Stow Creek Township School	Miriam Weston	FEMA RII
Cumberland County - School Interview - Woodland Country Day School	Miriam Weston	FEMA RII

Unclassified
 Radiological Emergency Preparedness Program (REP)

After Action Report/Improvement Plan

Salem Hope Creek Nuclear Generating Station

Cumberland County General Population Reception Center - Bridgeton High School	Patricia Mason *Kevin Reed Miriam Weston	FEMA RII FEMA RII FEMA RII
Cumberland County - General Population Bus Company - Sheppard Bus Service	Laura Forrest	FEMA RII
Cumberland County - Emergency Worker Decon Center - Bridgeton Fire Department	Patricia Mason *Kevin Reed	FEMA RII FEMA RII
Greenwich Township Emergency Operations Center	*David Petta	ICFI
Greenwich Township - Disabilities and Access Functional Needs	Don Carlton	FEMA RI
Greenwich Township - Backup Route Alerting	Don Carlton	FEMA RI
Stow Creek Township Emergency Operations Center	Roy Smith	ICFI
Stow Creek Township - Backup Route Alerting	Laura Forrest	FEMA RII
Stow Creek - Disabilities and Access Functional Needs Township Hearing Impaired	Laura Forrest	FEMA RII
* Team Leader		

APPENDIX D: ACRONYMS AND ABBREVIATIONS

Acronym	Meaning
CAD	Computer Aided Dispatch
CC	Cumberland County
CEMC	County Emergency Management Coordinator
CERT	Certified Emergency Response Team
CREST	Continuous Radiological Environmental Surveillance Telemetry
CSA	Chief School Administrator
CST	Civil Support Team
DAD	Digital Alarming Dosimeter
DEMC	Deputy Emergency Management Coordinator
DRD	Direct Reading Dosimeter
EAL	Emergency Action Level
EAS	Emergency Alert System
ECL	Emergency Classification Level
ED	Electronic Dosimeter
EMC	Emergency Management Coordinator
EMD	Emergency Management Director
EMS	Emergency Medical Service
ENC	Emergency News Center
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EPZ	Emergency Planning Zone
ERM	Emergency Response Manager
ERPA	Emergency Radiological Preparedness Area
EW	Emergency Worker
FCP	Forward Command Post
FMT	Field Monitoring Team
GE	General Emergency
GFD	Greenwich Fire Department
GT	Greenwich Township
HCGS	Hope Creek Generation Station
HCNGS	Hope Creek Nuclear Generating Station
HF	High Frequency
HNGS	Hope Nuclear Generating Station
IC	Incident Commander

Unclassified
Radiological Emergency Preparedness Program (REP)

After Action Report/Improvement Plan

Salem Hope Creek Nuclear Generating Station

ICMF	Initial Contact Message Form
JIC	Joint Information Center
NETS	Nuclear Emergency Telephone System
NGS	Nuclear Generating Station
NJS	New Jersey State
NJSP	New Jersey State Police
PAD	Protective Action Decisions
PIO	Public Information Officer
PPE	Personal Protective Equipment
RACES	Radio Amateur Civil Emergency Services
REA	Radiological Emergency Area
REP	Radiological Emergency Preparedness
RERP	Radiological Emergency Response Plan
RO	Radiological Officer
ROIC	Regional Operations Intelligence Center
RSO	Radiation Safety Officer
SAE	Site Area Emergency
SCEOC	Salem City Emergency Operations Center
SCRO	Salem City Radiological Officer
SCVFD	Salem City Volunteer Fire Department
SEOC	State Emergency Operations Center
SHCNGS	Salem Hope Creek Nuclear Generation Station
SNB	Special News Broadcast
SOP	Standard Operating Procedure
SRAO	State Radiological Assessment Officer
TCP	Traffic Control Points
TLD	Thermo Luminescent Dosimeters
UHF	Ultra High Frequency
USCG	United States Coast Guard
VHF	Very High Frequency

APPENDIX E: EXERCISE PLAN

HOPE CREEK MAY 22, 2012 EXERCISE EXTENT OF PLAY AGREEMENT

Rev. 6

NEW JERSEY GROUND RULES

***REAL LIFE EMERGENCIES TAKE PRIORITY OVER EXERCISE PLAY.**

_ There will be injects as elements of the scenario. There will be no free play messages.

_ A control cell will inject public inquiry messages at the State EOC.

-- State Controllers will provide injects at the County and municipal EOC=s.

_ A State Controller will inject radiological data for field radiological activities (i.e. Field Monitoring Teams, Reception Centers, EWDC=s).

_ In accordance with REP Program Strategic Review Initiative 1.5 and the Interim Radiological Emergency Preparedness (REP) Program Manual Section III. I: During tabletop exercises, drills, and other demonstrations conducted out-of-sequence from an integrated exercise, if FEMA and the offsite response organizations (OROs) agree, the FEMA Evaluator may have the participants re-demonstrate an activity that is determined to be not satisfactorily demonstrated. Immediate correction of issues in an integrated exercise is authorized only if it would not be disruptive and interrupt the flow of the exercise and affect other Evaluation Areas".

EXTENT OF PLAY

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.a - Mobilization

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

EXTENT OF PLAY AGREEMENT:

BNE/EOF

The BNE will pre-position Staff in the area and will arrive at the EOF approximately 60 minutes after notification by the State OEM of an ALERT or greater ECL notification.

BNE/FCP

The BNE will pre-position Staff in the area and will arrive at the FCP approximately 60 minutes after the declaration of an ALERT or greater ECL notification.

BNE/FMT

Two (2) State FMTs will demonstrate instrument checkout and field air-sampling procedures during the afternoon of May 22, 2012 (Approx. 1400). The two (2) field teams will remain in the area until FCP staff arrives and will not be required to perform a second instrument checkout.

ENC

New Jersey ENC Staff will be pre-positioned and arrive approximately 60 minutes after notification of an ALERT or greater ECL notification.

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.b - Facilities

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

EXTENT OF PLAY AGREEMENT:

Not Demonstrated

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.c - Direction and Control

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

EXTENT OF PLAY AGREEMENT:

There are no modifications from the NJRERP.

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.d - Communications Equipment

Criterion 1.d.1: At least two communications systems are available, at least one operates properly, and communication links are established and maintained with appropriate locations. Communications capabilities are managed in support of emergency operations. (NUREG-0654 FEMA-REP-1, F.1.2)

EXTENT OF PLAY AGREEMENT:

State/County/municipal EOCs

The use of 800 mhz as a backup to commercial telephone will be demonstrated between the State EOC and the risk county EOCs.

The use of County Radio as a backup to commercial telephone will be demonstrated between the Salem County EOC and the risk municipal EOCs.

The use of County Radio as a backup to commercial telephone will be demonstrated between the

Cumberland County EOC and the risk municipal EOCs.

BNE FMT/FCP

The DEP mobile radio on simplex frequency will be the primary communication system. The cell phone will be the backup.

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

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

Criterion 1.e.1: Equipment, maps, displays, dosimetry, potassium iodide (KI), and other supplies are sufficient to support emergency operations. (NUREG 0654 FEMA-REP-1, H.7, 10; J.10.a, b, e, J.11; K.3.a)

EXTENT OF PLAY AGREEMENT:

In the NJRERP, Accident Assessment is a State responsibility therefore; radiological monitoring points and population by evacuation area is not displayed on maps at the county and municipal EOCs. The data on evacuation times and populations from the Evacuation Times estimate Study and other sources are condensed into a single document entitled DEMSTATs. The State uses the DEMSTATs to determine the affected population, ERPAs, and evacuation time estimates.

The New Jersey State Police Calibration Laboratory calibrates field team equipment. The State RERP Plan requires annual calibration of this equipment. Therefore, the calibration sticker for this equipment shows a calibration due date which reflects the annual calibration cycle. The instruments are considered calibrated as long as the current date does not exceed one year after the calibration date. Calibration records for instruments are available for inspection at respective counties.

No equipment (i.e. barriers, traffic cones, signs, etc.) will be deployed to the field.

FMTs

Two (2) State FMTs will demonstrate instrument checkout and field-air-sampling procedures during the afternoon of May 22, 2012 (Approx. 1400). The two (2) field teams will remain in the area until FCP staff arrives and will not be required to perform a second instrument checkout.

During demonstration, one responder from each field team will demonstrate donning gloves and booties for the FEMA evaluators. FMTs will simulate the donning of protective clothing during the exercise. Contamination control will be verbalized to the evaluators during the exercise.

Check sources for field monitoring instruments may be shared among FMTs at the FCP prior to being dispatched.

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

Sub-element 2.a. Emergency Worker Exposure Control

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

EXTENT OF PLAY AGREEMENT:

There are no modifications from the NJRERP.

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

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

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

REP-1, I.8, 10, and Supplement (3)

EXTENT OF PLAY AGREEMENT:

The back-up for the electronic dose projection model at the EOF is hand calculations based on the NRC's Response Technical Manual. Hand calculations will only be demonstrated if electronic systems fail.

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

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

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

EXTENT OF PLAY AGREEMENT:

There are no modifications from the NJRERP.

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

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

Criterion 2.c.1: Protective action decisions are made as appropriate, for special population groups. (NUREG-0654 FEMA-REP-1, J.9, J.10.d, e)

EXTENT OF PLAY AGREEMENT:

There are no modifications from the NJRERP

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

Sub-element 2.d - Radiological Assessment and Decision Making for the Ingestion Exposure Pathway

Criterion 2.d.1: Radiological consequences for the ingestion pathway are assessed and appropriate protective action decisions are made based on the ORO planning criteria. (NUREG-0654 FEMA-REP-1, J.9, J.11)

EXTENT OF PLAY AGREEMENT:

Not demonstrated this exercise.

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

Sub-element 2.e. - Radiological Assessment and Decision-Making Concerning Relocation, Re-entry, and Return

Criterion 2.e.1: Timely relocation, re-entry, and return decisions are made and coordinated as appropriate, based on assessments of the radiological conditions and criteria in the ORO_s plans and/or procedures. (NUREG-0654 FEMA-REP-1, I.1; J.9; M.1)

EXTENT OF PLAY AGREEMENT:

Not demonstrated this exercise.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

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

Criterion 3.a.1: The OROs issue appropriate dosimetry, KI and procedures, and manage radiological exposure to emergency workers in accordance with the plans and procedures.

Emergency workers periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. ORO's maintain appropriate record-keeping of the administration of KI to emergency workers. (NUREG-0654/FEMA-REP-1, J.10e, K.3a, b; K.4)

EXTENT OF PLAY AGREEMENT:

Maximum authorized mission exposure limits may be referred to as mission dose, dose limit, or turn back value. The New Jersey limit is 1.25R. The emergency worker exposure control kits contain Electronic Dosimeters and/or Direct-reading dosimeters (DRDs). The 0-20 R and 0-200 mR dosimeters are available for backup. Inspection dates (including leak test information) for this instrumentation is on file at the New Jersey State Police Calibration Laboratory and will be visually inspected and evaluated by FEMA at the ROIC during the exercise.

BNE

FCP and State Field Monitoring teams may substitute electronic dosimeters for DRDs.

BNE and others may utilize the DHSS Dosimetric Radiological Information System (DORIS) to track doses of emergency workers, but will not be evaluated.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.b - Implementation of KI Decision

Criterion 3.b.1: KI and appropriate instructions are available if a decision to recommend use of

KI be made. Appropriate record keeping of the administration of KI for and institutionalized individuals and the general public is maintained. (NUREG-0654/FEMA-REP-1, J.10e, f)

EXTENT OF PLAY AGREEMENT:

There are no modifications from the NJRERP.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

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

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

EXTENT OF PLAY AGREEMENT:

Evacuation of Transportation Dependent Population

Evacuation of Transportation Dependent Population will be demonstrated out of sequence for Salem County on April 27, 2012 and for Cumberland County on April 24, 2012 by interview with the FEMA Evaluator.

Notification of Hearing Impaired

The notification of a hearing impaired individual will be demonstrated out of sequence on May 22, 2012 by discussion at Salem County-Elsinboro and Cumberland County -Greenwich Twp and Stow Creek Twp.

The list of hearing impaired individuals will be available for inspection at each municipal EOC. The list will be reviewed but not retained by the FEMA evaluator.

There will be no actual notification of hearing impaired individuals.

Evacuation of Non- Institutionalized Mobility Impaired Individuals

_ The notification of non-institutionalized mobility impaired individual will be demonstrated out of sequence on May 22, 2012 by discussion at Elsinboro Twp in Salem County and Cumberland County- Greenwich Twp and Stow Creek Twp.

_ The list of non-institutionalized mobility impaired individuals will be available for inspection at each municipal EOC. The list will be reviewed but not retained by the FEMA evaluator. There will be no evacuation of mobility impaired persons.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

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

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

EXTENT OF PLAY AGREEMENT:

EVACUATION OF SCHOOL POPULATIONS

Evacuation bus route evaluated for BRW in Salem County. FEMA evaluator will interview driver on April 27, 2012.

Evacuation bus route evaluated for Sheppard Bus Co. Stow Creek School in Cumberland County. The FEMA evaluator will interview driver on April 24, 2012.

SCHOOL INTERVIEWS

Interviews for Salem County will be conducted by FEMA with either school superintendents or principals for Elsinboro School, Lower Alloway Creek School, Quinton School, and Fenwick School on April 27, 2012.

Interviews for Cumberland County will be conducted by FEMA with either school

superintendents or principals for Morris Goodwin School, Stow Creek School, Woodland Country Day School on April 24, 2012.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.d. - Implementation of Traffic and Access Control

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

EXTENT OF PLAY AGREEMENT:

Traffic and Access Control Points (TCPs and ACPs)

The activation of an Access Control Post will demonstrated out of sequence on April 12, 2012 through an interview with a FEMA evaluator with the New Jersey State Police.

Salem County-The Salem City Police Department will discuss traffic control with the FEMA evaluator out of sequence on April 12, 2012.

Cumberland County Sheriff will discuss traffic control with the FEMA evaluator out of sequence on April 24, 2012.

There will be no actual activation of Access Control or Traffic Control.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.d. - Impediments to Evacuation

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

EXTENT OF PLAY AGREEMENT:

Impediments to evacuation

_ The State Police Field Operation Section personnel will discuss with the FEMA evaluator at the State EOC how impediments to evacuation would be overcome as indicated on controller inject.

_ The Salem County Road Department will discuss with the FEMA evaluator how impediments to evacuation would be overcome as indicated on controller inject.

- The Cumberland County Road Department will discuss with the FEMA evaluator how impediments to evacuation would be overcome as indicated on controller inject.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.e - Implementation of Ingestion Pathway Decisions

Criterion 3.e.1: The ORO demonstrates the availability appropriate use of adequate information regarding water, food, supplies, milk, and agricultural production within the ingestion pathway emergency planning zone for implementation of protective actions. (NUREG-0654 FEMA-REP-1, J.9, 11).

EXTENT OF PLAY AGREEMENT:

Not demonstrated this exercise.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.e - Implementation of Ingestion Pathway Decisions

Criterion 3.e.2: Appropriate measures, strategies, and pre-printed instructional material are developed for implementing protective action decisions for contaminated water, food products, milk, and agricultural production. (NUREG-0654 FEMA-REP-1, J.9, 11).

EXTENT OF PLAY AGREEMENT:

Not demonstrated this exercise.

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.f. - Implementation of Relocation, Re-entry, and Return Decisions

Criterion 3.f.1: Decisions regarding controlled re-entry of emergency workers and relocation and return of public are coordinated with appropriate organizations and implemented. (NUREG-0654 FEMA-REP-1, M.1, 3)

EXTENT OF PLAY AGREEMENT:

Not demonstrated this exercise.

EVALUATION AREA 4: FIELD MEASUREMENTS AND ANALYSIS

Sub-element 4.a.1 - Plume Phase Field Measurements and Analysis

Criterion 4.a.1: [RESERVED]

EVALUATION AREA 4: FIELD MEASUREMENTS AND ANALYSIS

Sub-element 4.a. - Plume Phase Field Measurements and Analysis

Criterion 4.a.2: Field teams are managed to obtain sufficient information to help characterize the release and to control radiation exposure. (NUREG-0654 FEMA-REP-1, H.12; I.8, 11; J.10.a)

EXTENT OF PLAY AGREEMENT:

There are no modifications from the NJRERP.

EVALUATION AREA 4: FIELD MEASUREMENTS AND ANALYSIS

Sub-element 4.a. - Plume Phase Field Measurements and Analysis

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

EXTENT OF PLAY AGREEMENT:

Chain of Custody Forms will be completed during the exercise by FMTs. However, the transfer of samples to a laboratory will not be demonstrated. The transfer of samples will be addressed through a FEMA interview with the field monitoring teams.

FMTs will perform air samples as instructed by the FCP.

EVALUATION AREA 4: FIELD MEASUREMENTS AND ANALYSIS

Sub-element 4.b - Post Plume Phase Field Measurements and Sampling

Criterion 4.b.1: The field teams demonstrate the capability to make appropriate measurements and to collect appropriate samples (e.g., food crops, milk, vegetation, and soil) to support adequate assessments and protective action decision-making. (NUREG-0654 FEMA-REP-1, I.8; J.11)

EXTENT OF PLAY AGREEMENT:

Not demonstrated this exercise.

EVALUATION AREA 4: FIELD MEASUREMENTS AND ANALYSIS

Sub-element 4.c - Laboratory Operations

Criterion 4.c.1: The laboratory is capable of performing required radiological analysis to support

protective action decisions. (NUREG-0654 FEMA-REP-1, C.; J.11)

EXTENT OF PLAY AGREEMENT:

Not demonstrated this exercise.

EVALUATION AREA 5: EMERGENCY NOTIFICATION & PUBLIC INFORMATION

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

Criterion 5.a.1: Activities associated with the 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. (10 CFR Part 50, Appendix E.IV.D & NUREG-0654 FEMA-REP-1, E.5, 6, 7)

EXTENT OF PLAY AGREEMENT:

The Primary EAS Station WENJ-FM will be in automated mode during the exercise therefore the OEM will simulate the broadcast of the message using the SAGE ENCODER DECODER (ENDEC) encoder. There will be no actual siren sounding and no actual broadcasting of EAS messages. The Hope Creek siren system was tested on April 10, 2012.

EVALUATION AREA 5: EMERGENCY NOTIFICATION & PUBLIC INFORMATION

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

Criterion 5.a.2: RESERVED

EVALUATION AREA 5: EMERGENCY NOTIFICATION & PUBLIC INFORMATION

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

Criterion 5.a.3: 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)

EXTENT OF PLAY AGREEMENT:

Backup route alerting will be demonstrated Out of Sequence prior to the start of the exercise. No message will be broadcast. The state controller will use inject to identify routes.

Cumberland County

5/22/12 Route 134 Greenwich and 133A Stow Creek.

Salem County

5/22/12 Route 102 Pennsville and 104 Salem city

EVALUATION AREA 5: EMERGENCY NOTIFICATION & PUBLIC INFORMATION

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

Criterion 5.a.4 Activities associated with FEMA approved exception areas (where applicable) are completed in timely manner 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)

There are no exception areas for Salem/Hope Creek site.

EVALUATION AREA 5: EMERGENCY NOTIFICATION & PUBLIC INFORMATION

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

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

EXTENT OF PLAY AGREEMENT:

Public Instruction and Emergency Information

EAS Follow-up Special News Broadcast are provided to Primary EAS Station only and the media at the ENC.

Public Inquiry

_ The public inquiry function will be staffed by at least five operators with one supervisor at the State EOC.

_ Inject messages will identify at least two false or misleading information to enable the public inquiry function to identify trends and false rumors.

EVALUATION AREA 6: SUPPORT OPERATION/FACILITIES

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

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

EXTENT OF PLAY AGREEMENT:

_ One Reception Center will be demonstrated out of sequence at Cumberland County Bridgeton High, May 8, 2012.

_ One portal monitor will be utilized for monitoring the general population. Six (6) clean evacuees will be monitored for the 20% population timing and one (1) contaminated evacuee for male and female decon. Staff will be provided to act as evacuees.

_ Two radiation monitoring staff will be present and demonstrate, one (1) for male decontamination and one (1) for female decontamination. They will process one person each.

_ Vehicle monitoring and decon posts will be staffed with a minimum of two (2) emergency workers.

_ Two vehicles will be demonstrated for monitoring and decontamination, one (1) clean vehicle and one (1) contaminated.

_ There will be only a representative (small) sample of supplies available at the facility.

_ Decontamination techniques will be simulated.

_ Reception Center floors will not be covered with paper/plastic during this demonstration. However, it will be available for inspection. Distribution of Potassium Iodide to the general public will be demonstrated by the County Department of Health.

EVALUATION AREA 6: SUPPORT OPERATION/FACILITIES

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

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

EXTENT OF PLAY AGREEMENT:

Bridgeton Fire Department Emergency Worker Decontamination Center will be demonstrated out of sequence on May 2, 2012.

Two radiation monitoring staff will be present and demonstrate, one (1) for male decontamination and one (1) for female decontamination. They will process one person each.

Vehicle monitoring and decon posts will be staffed with a minimum of two (2) emergency workers.

Two vehicles will be demonstrated for monitoring and decontamination, one (1) clean vehicle and one (1) contaminated.

There will be only a representative (small) sample of supplies available at the facility.

Decontamination techniques will be simulated.

EWDC floors will not be covered with paper/plastic during this demonstration. However, it will be available for inspection.

EVALUATION AREA 6: SUPPORT OPERATION/FACILITIES

Sub-element 6.c - Temporary Care of Evacuees

Criterion 6.c.1: Managers of congregate care facilities demonstrate that the centers have resources to provide services and accommodations consistent with American Red Cross planning guidelines.

Managers demonstrate the procedures to assure that evacuees have been monitored for contamination and have been decontaminated as appropriate prior to entering congregate care facilities. (NUREG-0654 FEMA-REP-1, J.10.h, J.12)

EXTENT OF PLAY AGREEMENT:

ARC in Salem and Cumberland not evaluated.

EVALUATION AREA 6: SUPPORT OPERATION/FACILITIES

Sub-element 6.d - Transportation and Treatment of Contaminated Injured Individuals

Criterion 6.d.1: The facility/ORO has 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.5a, b; L.1, 4)

EXTENT OF PLAY AGREEMENT:

The Pennsville Twp. EMS will demonstrate SOP-408 on May 1, 2012.

The use of flashing lights and sirens for exercise play will be simulated.

Memorial Hospital of Salem County will provide the medical services on May 1, 2012.

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