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FEMA

JAN 28 2013

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

To whom it may concern:

Enclosed is the final After Action Report/Improvement Plan for the Susquehanna Steam Electric Station (SSES) Radiological Emergency Preparedness Exercise that was held on October 23, 2012.

There were no deficiencies identified during the exercise. Six Areas Requiring Corrective Action (ARCAs) were identified; one ARCA was immediately re-demonstrated successfully and three others were re-demonstrated successfully on December 11, 2012. Two ARCAS were successfully re-demonstrated on January 4, 2013. One ARCA from a previous exercise was successfully re-demonstrated. Three new planning issues were identified.

Based on the results of the exercise, the offsite radiological emergency response plans and preparedness for the Commonwealth of Pennsylvania and the affected local jurisdictions, site-specific to SSES, are adequate to protect the public health and safety in the event of a radiological emergency at the site.

If you have any questions, please contact Richard Kinard at (215) 931-5558.

Sincerely,

MaryAnn Tierney
Regional Administrator

Enclosure

IX49
NRR

Susquehanna Steam Electric Station

After Action Report/ Improvement Plan

Exercise Date - October 23, 2012

Radiological Emergency Preparedness (REP) Program

FEMA

Published January 23, 2013

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Susquehanna Steam Electric Station
After Action Report/Improvement Plan

Published January 23, 2013

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EXECUTIVE SUMMARY

On October 23, 2012, a full-scale plume exercise for the 10 Mile Emergency Planning Zone (EPZ) around the Susquehanna Steam Electric Station (SSES) was evaluated by the Federal Emergency Management Agency (FEMA), Region III. Out-of-Sequence demonstrations were conducted on October 23 and October 24, 2012. The purpose of the Exercise and Out-of-Sequence demonstrations was to assess the capabilities of State, county, and local jurisdictions to implement Radiological Emergency Response Plans (RERP) and Procedures to protect the property and lives of residents and transients in the event of an emergency at SSES.

The findings in this report are based on the evaluations of the Federal evaluator team, with final determinations made by the FEMA, Region III Regional Assistance Committee (RAC) Chairperson, and approved by FEMA Headquarters. These reports are provided to the Nuclear Regulatory Commission (NRC) and participating states. State and local governments utilize the findings contained in these reports for the purposes of planning, training, and improving emergency preparedness.

The most recent full-scale exercise at this site was evaluated on October 5, 2010.

There were no Deficiencies during this exercise. Six (6) Areas Requiring Corrective Action (ARCA) were identified; one (1) ARCA was successfully re-demonstrated during the exercise, three (3) ARCAS were successfully Re-demonstrated on December 11, 2012 and two (2) ARCAs were successfully re-demonstrated on January 4, 2013. Three (3) Planning Issues (PI) were identified as a result of this exercise. One (1) ARCA from a previous exercise was successfully re-demonstrated and resolved.

FEMA wishes to acknowledge the efforts of many individuals in the Commonwealth of Pennsylvania and Columbia County and Luzerne County (risk counties) and the seven (7) support counties: Lackawanna, Lycoming, Montour, Northumberland, Schuylkill, Union and Wyoming.

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

SECTION 1: EXERCISE OVERVIEW

1.1 Exercise Details

Exercise Name
Susquehanna Steam Electric Station

Type of Exercise
Plume

Exercise Date
October 23, 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 Susquehanna Steam Electric Station exercise:

State Jurisdictions

- Pennsylvania Department of Agriculture
- Pennsylvania Department of Environmental Protection, Bureau of Radiation Protection
- Pennsylvania Department of Environmental Protection, HAZMAT
- Pennsylvania Department of Health
- Pennsylvania Department of Corrections
- Pennsylvania Department of General Services
- Pennsylvania Department of Military and Veterans Affairs
- Pennsylvania Department of Public Welfare
- Pennsylvania Department of Transportation
- Pennsylvania Emergency Management Agency
- Pennsylvania Fish and Boat Commission
- Pennsylvania Army National Guard
- Pennsylvania Army National Guard, Company D, 228th FSC
- Pennsylvania Office of Administration

Pennsylvania State Police
Pennsylvania State Police, Frackville Barracks
Pennsylvania State Police, Troop P
Pennsylvania Turnpike Commission

Risk Jurisdictions

Beaver Main Elementary School
Benton Area School District
Berwick Area School District
Berwick High School
Berwick Middle School
Black Creek Rescue Squad
Black Creek Township Board of Supervisors
Bloomsburg Area School District
Borough of Berwick Codes Department
Borough of Berwick Department of Emergency Services
Borough of Berwick Department of Public Works
Borough of Berwick Fire Department
Borough of Berwick Office of the Mayor
Borough of Berwick Police Department
Briar Creek Township Emergency Management Agency
Briar Creek Township Fire and Rescue
Briar Creek Township Police Department
Briar Creek Township Supervisor
Butler Township Emergency Management
Butler Township Police Department
Central Columbia Area School District
Central Columbia Elementary School
Columbia County 911
Columbia County Commissioners
Columbia County Department of Health
Columbia County Department of Public Safety
Columbia County Emergency Management Agency
Columbia County Fire and Rescue
Columbia County Geographic Information System

Columbia County Information Technology
Columbia County Public Information Office
Columbia County Sheriff's Office
Columbia-Montour AVTS
Crestwood High School
Crestwood Middle School
Crestwood School District
Espry Fire Company, No. 1
Fairmont Township
Greater Nanticoke Area Elementary School
Greater Nanticoke Area High School
Greater Nanticoke Area School District
Hazleton Area 9th Grade Center
Hazleton Area Career Center
Hazleton Area School District
Huntington Mills Elementary School
Huntington Township Board of Supervisors
Huntington Township Emergency Management Agency
Huntington Township Volunteer Fire Department
Kennedy Elementary School
LR Appleman Elementary School
Luzerne County 911
Luzerne County Emergency Management Agency
Luzerne County Engineering Department
Luzerne County Security
Luzerne County Sheriff's Office
Mifflin Township Emergency Management Agency
Mifflin Township Fire Department
Nescopeck Ambulance
Nescopeck Emergency Management Agency
Nescopeck Fire Department
Nescopeck Fire Explorer Post 2534
Newport Township Fire Department
Northwest Area Middle School/High School

Northwest Area School District
Nuremberg-Weston Volunteer Fire Company
Orange Street Elementary School
Salem Township Board of Supervisors
Salem Township Emergency Management Agency
Salem Township Fire Department
Salem Township Police Department
Shickshinny Borough Council
Shickshinny Borough Fire Department
Shickshinny Borough Mayor
Shickshinny Emergency Medical Services
Shickshinny Volunteer Fire Department
South Butler Volunteer Fire Department
South Centre Township
South Centre Township Police Department
South Centre Volunteer Fire Company
Union Township
Valley Elementary/Middle School
Wanamie Fire Department
West Side Vo-Tech School
Wilkes-Barre AVTS
Wright Township Fire Department

Support Jurisdictions

Auxiliary Communication Services
Bucknell University
Buffalo Valley Regional Police
Citizens Fire Company
Covington Fire Company Ambulance
Danville Area School District
DATCOM Product Services, HAZMAT Team
Evangelista Community Hospital
Greenfield Volunteer Fire Company
Humane Fire Company
Lackawanna County 911

Lackawanna County Emergency Management Agency
Lackawanna County Health Department
Lackawanna County Planning Department
Lackawanna County Volunteer Services
Lycoming County Emergency Management Agency
Meredith Hose Company
Mifflinburg School District
Montour County Commissioners
Montour County Emergency Management Agency
Montour County Sheriff's Office
Northumberland County Commissioner
Northumberland County Emergency Management Agency
Penn State Worthington Campus
Sacramento Community Fire Company
Schuylkill County 911
Schuylkill County Emergency Management Agency
Schuylkill County Geographic Information System Department
Schuylkill County Planning
Schuylkill County Sheriff's Office
Schuylkill Federal Correctional Institution
Susquehanna Emergency Health Services Council
Tunkhannock Borough Police Department
Union County 911
Union County Agricultural
Union Township Fire Department
Walker Hose Company
William Cameron Fire Department
Wyoming County Emergency Management Agency

Private Organizations

Amateur Radio Emergency Service
American Red Cross - Central Communities Chapter
American Red Cross - Northumberland Chapter
American Red Cross - Schuylkill Chapter
American Red Cross - Scranton Chapter

American Red Cross - Snyder Chapter
American Red Cross - Union Chapter
American Red Cross - Wyoming Chapter
AmeriCorps
ASL Services
PPL - Susquehanna
Radio Amateur Civil Emergency Services
Southern Baptist Church Volunteer Organization

Federal Jurisdictions

Federal Emergency Management Agency
United States Department of Agriculture
United States Environmental Protection Agency

SECTION 2: EXERCISE DESIGN SUMMARY

2.1 Exercise Purpose and Design

On December 7, 1979, the President directed the Federal Emergency Management Agency (FEMA) to assume the lead responsibility for all off-site nuclear planning and response. FEMA's activities were conducted pursuant to 44 Code of Federal Regulations (CFR) Parts 350, 351 and 352. These regulations are a key element in the Radiological Emergency Preparedness (REP) Program that was established following the Three Mile Island Nuclear Station accident in March, 1979.

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

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

Taking the lead in offsite emergency planning and in the review and evaluation of Radiological Emergency Response Plans (RERPs) and procedures developed by State and local governments;

Determining whether such plans and procedures can be implemented on the basis of observation and evaluation of exercises of the plans and procedures conducted by State and local governments;

Responding to requests by the U.S. Nuclear Regulatory Commission (NRC) pursuant to the Memorandum of Understanding between the NRC and FEMA dated June 17, 1993 (Federal Register, Vol. 58, No. 176, September 14, 1993); and coordinating the activities of the following Federal agencies with responsibilities in the radiological emergency planning process:

- U.S. Department of Commerce,
- U.S. Nuclear Regulatory Commission,
- U.S. Environmental Protection Agency,
- U.S. Department of Energy,
- U.S. Department of Health and Human Services,

- U.S. Department of Transportation,
- U.S. Department of Agriculture,
- U.S. Department of the Interior, and
- U.S. Food and Drug Administration.

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

A Radiological Emergency Preparedness (REP) exercise was conducted on October 23, 2012, to assess the capabilities of State and local emergency preparedness organizations in implementing their RERPs and procedures to protect the public health and safety during a radiological emergency involving Susquehanna Steam Electric Station (SSES). The purpose of this exercise report is to present the exercise results and findings on the performance of the off-site response organizations (OROs) during a simulated radiological emergency. The findings presented in this report are based on the evaluations of the Federal evaluator team, with final determinations made by the FEMA Region III RAC Chairperson and approved by FEMA Headquarters. These reports are provided to the NRC and participating States. State and local governments utilize the findings contained in these reports for the purposes of planning, training, and improving emergency response capabilities.

The criteria utilized in the FEMA evaluation process are contained in the following:

NUREG-0654/FEMA-REP-1, Rev. 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980; "Radiological Emergency Preparedness Program Manual," April 2012;

Section 1 of this report, entitled "Exercise Overview", presents the "Exercise Planning Team Leadership" and the "Participating Organizations".

Section 2 of this report, entitled "Exercise Design Summary", includes the "Exercise Purpose and Design", "Exercise Objectives, Capabilities, and Activities", and the "Scenario Summary".

Section 3 of this report, entitled "Analysis of Capabilities", presents detailed "Exercise Evaluation and Results" information on the demonstration for each jurisdiction or functional entity evaluated in a jurisdiction-based, issue-only format ("Criteria Evaluation Summaries").

This section also contains:

(1) Descriptions of all Deficiencies, Areas Requiring Corrective Action (ARCA), and Planning Issues assessed during this exercise, including recommended corrective actions and the State and local governments' schedule of corrective actions for each identified exercise issue;

(2) Descriptions of ARCAs and Planning Issues assessed during previous exercises and resolved at this exercise, including the corrective action demonstrated, as well as ARCAs or Planning Issues assessed during previous exercises and scheduled for demonstration at this exercise which remain unresolved.

Section 4 of this report, entitled "Conclusion" is a description of the Region's overall assessment of the capabilities of the participating organizations.

Appendix A - Improvement Plan. A description of Areas Requiring Corrective Action and Planning Issues, the parties responsible for implementing a corrective action and time frame for completion.

Appendix B - Exercise Time Line. A table that depicts the times that events and notifications were noted at participating agencies and locations.

Appendix C - Exercise Evaluators and Team Leaders. A table listing the names,organizations, and evaluation responsibilities of the evaluators and management.

Appendix D - Acronyms and Abbreviations. An alphabetized table defining the acronyms and abbreviations used in this report.

Appendix E - Exercise Plan/Extent-of-Play. A narrative description of information developed to implement the exercise, including the Extent-of-Play Agreement, with a detailed description of the exercise criteria and the participants' expected responses to the exercise scenario.

Emergency Planning Zone Description

The SSES is located in northeastern Pennsylvania, on the Susquehanna River, in Salem Township, Luzerne County. The plant is owned and operated by Pennsylvania Power & Light

Company. Two boiling water reactors generate an electrical output of 1,194 megawatts each. Unit 1 began commercial operation on June 8, 1983, and Unit 2 on February 12, 1985.

The site encompasses 2,566 acres and is divided into two parts. The principal portion, containing the major operating equipment and buildings, is located 3,000 feet west of the river. The other portion houses the water intake apparatus located near U.S. Route 11. Route 11 passes through the site in a north/south direction, providing both primary and secondary access to the plant. The plant occupies approximately 100 acres of the site. The coordinates are approximately 41° 5'30" north and 76° 8'55" west.

The topography of the plant site is hilly, with elevations ranging from 500 feet above mean sea level (MSL) at the river to about 1,100 feet above MSL at the northwest corner of the site. The plant grade is 670 feet above MSL. The minimum exclusion distance is 1,800 feet; all land within the exclusion area is owned by SSES. The surface soil in the area is considered to be glacial outwash and glacial till soils, which are typical of uplands and terraces. The bedrock consists primarily of red shale of the catskill formation.

The immediate vicinity of the plant is rural, surrounded by farms and undeveloped land. A total of 112 sirens are used for notification of the public; the sirens were installed for coverage of the plume exposure pathway. According to 2010 census data, the nearest population center is Shickshinny Borough (Luzerne County), with a population of 838, located about four miles north of the plant. The nearest population center with more than 25,000 people is the City of Hazleton, with a population of 25,340, located 13 miles to the southeast.

The Berwick Airfield in Salem Township, Luzerne County, serves private aircraft and lies approximately five miles west of the plant. The airfield presents no risk to the plant. The closest major airport is the Wilkes-Barre/Scranton Airport, located 28 miles northeast of the site.

The 10-mile EPZ contains an estimated population of 71,301, according to 2010 census data.

2.2 Exercise Objectives, Capabilities and Activities

The objective of the SSES 2012 Plume Exercise is to demonstrate the capabilities of State and local emergency management agencies to mobilize emergency management and emergency response personnel, to activate emergency operations centers and support facilities, and to protect the health, lives, and property of the citizens residing within the 10 mile Emergency Planning Zone (EPZ).

Emergency management agencies use a variety of resources, including radios, telephones, the Internet, the media, the Emergency Alert System (EAS), and the utility Alert and Notification System (ANS) sirens to demonstrate the ability to communicate among multiple levels of government and provide timely, accurate, and sufficiently detailed information to the public. The EAS and ANS were simulated and media information was prepared but not actually released.

An essential capability of the Radiological Emergency Preparedness Program (REPP) is to evacuate, monitor and decontaminate if necessary, and provide temporary care and shelter to displaced residents from the EPZ. The ability of the support counties to mobilize personnel and resources to establish reception, monitoring and decontamination, and mass care centers was demonstrated.

The protection of school children is also a vital mission of the REPP. School districts and selected schools demonstrated the capability to communicate and coordinate the collection, evacuation, transportation and shelter of students attending schools within the EPZ. Provisions for students who live within the EPZ, but attend school outside were also evaluated.

2.3 Scenario Summary

All information below is scenario simulated. Due to maintenance requirements at Susquehanna Steam Electric Station the utility operations simulator was not employed for this exercise. A utility control cell provided exercise data to players to simulate emergency conditions requiring off-site response.

There are two nuclear units at the Susquehanna Steam Electric Station (SSES). Both are Boiling Water Reactors, MARK 2 design. SSES Unit 1 will be participating in the exercise.

On October 23, 2012, SSES Units 1 and 2 are operating at 100 percent power. The pre-existing equipment conditions at Unit 1 are that one of the two trains of the standby gas treatment system is out of service, the liquid radiation waste monitor is not operable and the leakage of reactor coolant into the drywell is elevated.

The weather is clear with light winds at about 4 miles per hour (mph) from 287 degrees, i.e., from the West (W) into the East (E). The stability class is varying between E and F. These conditions are expected to remain unchanged into the night.

At 1700, the exercise begins in the Exercise Control Cell. At approximately 1749, an Alert Emergency Classification Level will be declared based on Emergency Action Level (EAL) RA.1, liquid release greater than 200 times technical specification requirements (TRM). Earlier, at 1729, the operators recognized that a planned discharge of liquid radioactive waste to the Susquehanna River was from the wrong tank. It is expected that the State BRP will determine that a protective action should be recommended to the city of Danville to shut down the drinking water supply. Unit 1 continues to operate at 100 percent power.

At 1850, there are indications from the radiation monitoring system that there are two ongoing airborne radioactive releases to the environment, one from the Turbine Building Vent and the other from the Reactor Building Vent. Both pathways are filtered and monitored. The cause of the radiological release is a loss of reactor coolant accident into the drywell (primary containment structure) and a failure to completely close the vents and valves in the reactor containment system at two different locations in the plant. Also, the automatic signal to shut down the reactor failed to insert all the control rods and the reactor remains at greater than 5 percent power. Operators initiate manual actions to shut the reactor down. The drywell pressure and temperature will continue to rise.

At approximately 1900, a Site Area Emergency is declared based on EAL MS-3, "Anticipated transient without scram and reactor power greater than 5 percent". At this time there is a loss of both the reactor coolant system barrier and the reactor containment barrier. Radiation monitors in the plant are elevated, indicating that there is a small amount of damage to the fuel clad barrier. The wind direction is 281 degrees, the wind speed is 3.3 mph and the stability class is E. At 2015, the drywell temperature continues to rise (350 degrees) as the drywell sprays and suppression pool cooling are inoperable. In order to reduce the leakage of reactor coolant into

the drywell, the Plant Operators begin to rapidly depressurize the reactor system and this leads to further damage to the fuel clad and an increase in the radiological release. At approximately 2020, a General Emergency is declared based on EAL MG-3, "Heat Capacity Temperature Limit curve is exceeded". Also, concurrently the drywell radiation monitor reading is approaching 3000 R/hr, the limit for declaring the loss of the fuel clad barrier. A Protective Action Recommendation is issued by SSES to "Evacuate the 0-2 miles 360° area; shelter in the 2 to 10 mile 360° area" It is expected that the State of PA and the Counties will evacuate the 10 mile Emergency Planning Zone and issue potassium iodide to the public and emergency workers.

Subsequent dose projections by SSES will indicate that the EPA Protective Action Guides (PAG) are exceeded in the 0 to 1 mile distance from the SSES. Hence, SSES will determine that a PAR based on radiological conditions is not necessary. Radioactive releases will continue beyond the end of the exercise. The wind direction remains at 289 degrees and the wind speed is 4 mph with stability class F. The plume footprint is entirely within Luzerne County. Field monitoring team results will identify that the amount of radioiodine present in the release is smaller than the dose projections.

At 2130, the SSES Evaluated Exercise will end if all objectives are met and when announced by the PA State EOC.

SECTION 3: ANALYSIS OF CAPABILITIES

3.1 Exercise Evaluation and Results

The matrix in Table 3.1, on the following pages, presents the status of the exercise evaluation area criteria from the REP Exercise Evaluation Methodology that were scheduled for demonstration during this exercise by all participating jurisdictions and functional entities. Exercise evaluation area criteria are listed by number and the demonstration status of the criteria is indicated by the use of the following letters:

(D) Deficiency: an observed or identified inadequacy of organizational performance in an exercise that could cause a finding that offsite emergency preparedness is not adequate to provide reasonable assurance that appropriate protective measures can be taken in the event of a radiological emergency to protect the health and safety of the public living in the vicinity of a nuclear power plant.

(A) Area Requiring Corrective Action (ARCA): an observed or identified inadequacy of organizational performance in an exercise that is not considered, by itself, to adversely impact public health and safety.

(P) Plan Issue: an observed or identified inadequacy in the ORO's emergency plan or implementing procedures, rather than in the ORO's performance. Plan Issues are not exercise issues and are required to be corrected through the revision of the appropriate plans or procedures during the next annual plan review and update, submitted for FEMA review, and reported in the State Annual Letter of Certification.

(N) Not Demonstrated: term applied to the status of a REP exercise Evaluation Area Criterion indicating that the ORO, for a justifiable reason, did not demonstrate the Evaluation Area Criterion, as required in the extent-of-play agreement or at the 2 year/8 year exercise cycle required in the FEMA REP Program Manual.

(M) Met: status of a REP exercise Evaluation Area Criterion indicating that the participating ORO demonstrated all demonstration criteria for the Evaluation Area Criterion to the level required in the extent of-of-play agreement with no Deficiencies or ARCAs assessed in the current exercise and no unresolved prior ARCAs.

3.2 Summary Results of Exercise Evaluation

Contained in this section are the results and findings of the evaluation of the Commonwealth of Pennsylvania jurisdictions and locations that participated in the October 23, 2012, biennial Radiological Emergency Preparedness (REP) exercise and the October 23-24, 2012 out of sequence evaluations. The exercise was held to test the offsite emergency response capabilities of local governments in the 10-mile Emergency Planning Zone (EPZ) surrounding the Susquehanna Steam Electric Station (SSES).

Each jurisdiction and functional entity was evaluated on the basis of its demonstration of the Exercise Evaluation Area Criteria contained in the Radiological Emergency Preparedness Program Manual (REPMAN). Detailed information on the Exercise Evaluation Area criteria and the Explan/Extent-of-Play agreement used in this exercise are found in Appendix E: Exercise Plan, of this report.

Note: The Pennsylvania Emergency Management Agency, Pennsylvania Joint Information Center/Rumor Control, and Pennsylvania Accident Assessment Center participated in this exercise to provide direction and control as well as emergency public information; however, the Exercise Evaluation Criteria relevant to these activities were evaluated at a previous exercise, therefore, "Not Observed" is assigned to these locations for this exercise.

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 Explan/Extent-of-Play agreement.

Table 3.1 - Summary of Exercise Evaluation (8 pages)

DATE: 2012-10-23 SITE: Susquehanna Steam Electric Station, PA M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated		PA EOC	PA JIC/RumCon	PAAACSEOCBRP	BRP R3V	SFMT A SER	SFMT B SER	PA TACP SPBB	CoCo EOC	CoCoEWMDSCMVS	CoCoBrkB/BCBEOC	CoCoBrCrkTpEOC
Emergency Operations Management												
Mobilization	1a1	N	N		M	M	M		M		M	M
Facilities	1b1										M	
Direction and Control	1c1	N		N					M		M	M
Communications Equipment	1d1	N	N	N	M	M	M	M	M	M	M	M
Equipment and Supplies to Support Operations	1e1	N	N	N	M	M	M	M	M	M	M	M
Protective Action Decision Making												
Emergency Worker Exposure Control	2a1			N								
Dose Assessment & PARs & PADs for the Emergency Event	2b1			N								
Dose Assessment & PARs & PADs for the Emergency Event	2b2	N										
PADs for disabilities & access/functional needs people	2c1	N										
Radiological Assessment & Decision-making for Ingestion Pathway	2d1											
Radiological Assessment & Decision-making for Relocation/Reentry/Return	2e1											
Protective Action Implementation												
Implementation of Emergency Worker Exposure Control	3a1	N			M	M	M	M	M	M	M	M
Implementation of KI PAD for Institutionalized Individuals/Public	3b1	N							M			
Implementation of PADs for disabilities & access/functional needs people	3c1	N							M		M	M
Implementation of PADs for Schools	3c2								M		M	M
Implementation of Traffic & Access Control	3d1	N						M	M		M	M
Impediments to Evacuation	3d2							M	M		M	M
Availability & use of Commodity & Resource Information	3e1											
Preprinted Materials for Implementing PADs for Commodities & Resources	3e2											
Implementation of Relocation/Reentry/Return Decisions	3f1											
Field Measurement and Analysis												
RESERVED	4a1											
Field Team Management	4a2			N	M							
Plume Phase Field Measurement, Handling, & Analyses	4a3					M	M					
Post Plume Phase Field Measurements & Sampling	4b1											
Laboratory Operations	4c1											
Emergency Notification and Public Info												
Activation of the Prompt Alert & Notification System	5a1	N							M		M	M
RESERVED	5a2											
Activation of the Back-up ANS	5a3								M			M
Activation of the Exception Area ANS	5a4											
Emergency Information & Instructions for the Public/Media	5b1	N	N						M			
Support Operations/Facilities												
Monitoring, Decontamination, & Registration of Evacuees	6a1											
Monitoring/Decontamination of Emergency Workers/Equipment/Vehicles	6b1									M		
Temporary Care of Evacuees	6c1											
Transportation/Treatment of Contaminated Injured Individuals	6d1											

Table 3.1 - Summary of Exercise Evaluation (Continued. page 2/8)

DATE: 2012-10-23 SITE: Susquehanna Steam Electric Station, PA M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated		CoCoBrCkTwpBuRA	CoCoMflnTpEOC	CoCoMflnTpTACP	CoCoSCtrTpEOC	CoCoBntmASD	CoCoBntmASDLRAES	CoCoBrwkASD	CoCoBwkASDBwkAHS	CoCoBwkASDBwkAMS	CoCoBwkASDOSES	CoCoBlmsbrgASD
Emergency Operations/Management												
Mobilization	1a1	M	M	M	N							
Facilities	1b1											
Direction and Control	1c1		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 disabilities & access/functional needs people	2c1											
Radiological Assessment & Decision-making for Ingestion Pathway	2d1											
Radiological Assessment & Decision-making for Relocation/Reentry/Return	2e1											
Protective Action Implementation												
Implementation of Emergency Worker Exposure Control	3a1	M	M	M	M							
Implementation of KI PAD for Institutionalized Individuals/Public	3b1											
Implementation of PADs for disabilities & access/functional needs people	3c1		M									
Implementation of PADs for Schools	3c2		M			M	M	M	M	M	M	M
Implementation of Traffic & Access Control	3d1		M	M								
Impediments to Evacuation	3d2		M	M								
Availability & use of Commodity & Resource Information	3e1											
Preprinted Materials for Implementing PADs for Commodities & Resources	3e2											
Implementation of Relocation/Reentry/Return Decisions	3f1											
Field Measurement and Analysis												
RESERVED	4a1											
Field Team Management	4a2											
Plume Phase Field Measurement, Handling, & Analyses	4a3											
Post Plume Phase Field Measurements & Sampling	4b1											
Laboratory Operations	4c1											
Emergency Notification and Public Info												
Activation of the Prompt Alert & Notification System	5a1		M									
RESERVED	5a2											
Activation of the Back-up ANS	5a3	M										
Activation of the Exception Area ANS	5a4											
Emergency Information & Instructions for the Public/Media	5b1											
Support Operations/Facilities												
Monitoring, Decontamination, & Registration of Evacuees	6a1											
Monitoring/Decontamination of Emergency Workers/Equipment/Vehicles	6b1											
Temporary Care of Evacuees	6c1											
Transportation/Treatment of Contaminated Injured Individuals	6d1											

Table 3.1 - Summary of Exercise Evaluation (Continued. page 3/8)

DATE: 2012-10-23 SITE: Susquehanna Steam Electric Station, PA M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated		CoCoBlmbgASDBMES	CoCoCCSD	CoCoCCSDCCES	CoCoCMAVTS	LzCo EOC	LzCoEWMDSSVFC	LzCoBlkCrkTpEOC	LzCoBtrTp/CngmEOC	LzCoHT/NCBEOC	LzCoNscpkBrEOC
Emergency Operations Management											
Mobilization	1a1					M		M	M	M	M
Facilities	1b1										
Direction and Control	1c1					M		M	M	M	M
Communications Equipment	1d1					M	M	M	M	M	M
Equipment and Supplies to Support Operations	1e1					M	M	M	M	M	M
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 disabilities & access/functional needs people	2c1										
Radiological Assessment & Decision-making for Ingestion Pathway	2d1										
Radiological Assessment & Decision-making for Relocation/Reentry/Return	2e1										
Protective Action Implementation											
Implementation of Emergency Worker Exposure Control	3a1					M	M	M	M	M	M
Implementation of KI PAD for Institutionalized Individuals/Public	3b1					M					
Implementation of PADs for disabilities & access/functional needs people	3c1					M		M	M	M	M
Implementation of PADs for Schools	3c2	M	M	M	P	M		N	M	N	M
Implementation of Traffic & Access Control	3d1					M		M	M	M	M
Impediments to Evacuation	3d2					M		M	M	M	M
Availability & use of Commodity & Resource Information	3e1										
Preprinted Materials for Implementing PADs for Commodities & Resources	3e2										
Implementation of Relocation/Reentry/Return Decisions	3f1										
Field Measurement and Analysis											
RESERVED	4a1										
Field Team Management	4a2										
Plume Phase Field Measurement, Handling, & Analyses	4a3										
Post Plume Phase Field Measurements & Sampling	4b1										
Laboratory Operations	4c1										
Emergency Notification and Public Info											
Activation of the Prompt Alert & Notification System	5a1					M		M	N	M	M
RESERVED	5a2										
Activation of the Back-up ANS	5a3					M					
Activation of the Exception Area ANS	5a4										
Emergency Information & Instructions for the Public/Media	5b1					M					
Support Operations/Facilities											
Monitoring, Decontamination, & Registration of Evacuees	6a1										
Monitoring/Decontamination of Emergency Workers/Equipment/Vehicles	6b1						M				
Temporary Care of Evacuees	6c1										
Transportation/Treatment of Contaminated Injured Individuals	6d1										

Table 3.1 - Summary of Exercise Evaluation (Continued. page 4/8)

DATE: 2012-10-23 SITE: Susquehanna Steam Electric Station, PA M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated		LzCoNscpkBrTACP	LzCoNwptTwpEOC	LzCoNwptTwpBuRA	LzCoSlmTwpEOC	LzCoShksnyBEOC	LzCoUTwpEOC	LzCo CSD	LzCoCSDCHS	LzCo CSD CMS	LzCoGNASD
Emergency Operations/Management											
Mobilization	1a1	M	M	M	M	M	M				
Facilities	1b1					M					
Direction and Control	1c1		M		M	M	M				
Communications Equipment	1d1	M	M	M	M	M	M				
Equipment and Supplies to Support Operations	1e1	M	M	M	M	M	M				
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 disabilities & access/functional needs people	2c1										
Radiological Assessment & Decision-making for Ingestion Pathway	2d1										
Radiological Assessment & Decision-making for Relocation/Reentry/Return	2e1										
Protective Action Implementation											
Implementation of Emergency Worker Exposure Control	3a1	M	M	M	M	M	M				
Implementation of KI PAD for Institutionalized Individuals/Public	3b1										
Implementation of PADs for disabilities & access/functional needs people	3c1		M		M	M	M				
Implementation of PADs for Schools	3c2		M		M	M	M	M	M	M	M
Implementation of Traffic & Access Control	3d1	M	M		M	M	M				
Impediments to Evacuation	3d2	M	N		M	M	N				
Availability & use of Commodity & Resource Information	3e1										
Preprinted Materials for Implementing PADs for Commodities & Resources	3e2										
Implementation of Relocation/Reentry/Return Decisions	3f1										
Field Measurement and Analysis											
RESERVED	4a1										
Field Team Management	4a2										
Plume Phase Field Measurement, Handling, & Analyses	4a3										
Post Plume Phase Field Measurements & Sampling	4b1										
Laboratory Operations	4c1										
Emergency Notification and Public Info											
Activation of the Prompt Alert & Notification System	5a1		M		M	M	M				
RESERVED	5a2										
Activation of the Back-up ANS	5a3		M	M							
Activation of the Exception Area ANS	5a4										
Emergency Information & Instructions for the Public/Media	5b1										
Support Operations/Facilities											
Monitoring, Decontamination, & Registration of Evacuees	6a1										
Monitoring/Decontamination of Emergency Workers/Equipment/Vehicles	6b1										
Temporary Care of Evacuees	6c1										
Transportation/Treatment of Contaminated Injured Individuals	6d1										

Table 3.1 - Summary of Exercise Evaluation (Continued. page 5/8)

DATE: 2012-10-23 SITE: Susquehanna Steam Electric Station, PA M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated		GNASDJSFHS	GNASDKES	GNASDGNEC	LzCoHASD	HASD HACC	HASD NGC	LzCoHASDVES	LzCoNASD	NASDHnlkES	NASDNJ/SHS
Emergency Operations Management											
Mobilization	1a1										
Facilities	1b1										
Direction and Control	1c1										
Communications Equipment	1d1										
Equipment and Supplies to Support Operations	1e1										
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 disabilities & access/functional needs people	2c1										
Radiological Assessment & Decision-making for Ingestion Pathway	2d1										
Radiological Assessment & Decision-making for Relocation/Reentry/Return	2e1										
Protective Action Implementation											
Implementation of Emergency Worker Exposure Control	3a1										
Implementation of KI PAD for Institutionalized Individuals/Public	3b1										
Implementation of PADs for disabilities & access/functional needs people	3c1										
Implementation of PADs for Schools	3c2	M	M	M	P	P	M	M	M	M	M
Implementation of Traffic & Access Control	3d1										
Impediments to Evacuation	3d2										
Availability & use of Commodity & Resource Information	3e1										
Preprinted Materials for Implementing PADs for Commodities & Resources	3e2										
Implementation of Relocation/Reentry/Return Decisions	3f1										
Field Measurement and Analysis											
RESERVED	4a1										
Field Team Management	4a2										
Plume Phase Field Measurement, Handling, & Analyses	4a3										
Post Plume Phase Field Measurements & Sampling	4b1										
Laboratory Operations	4c1										
Emergency Notification and Public Info											
Activation of the Prompt Alert & Notification System	5a1										
RESERVED	5a2										
Activation of the Back-up ANS	5a3										
Activation of the Exception Area ANS	5a4										
Emergency Information & Instructions for the Public/Media	5b1										
Support Operations/Facilities											
Monitoring, Decontamination, & Registration of Evacuees	6a1										
Monitoring/Decontamination of Emergency Workers/Equipment/Vehicles	6b1										
Temporary Care of Evacuees	6c1										
Transportation/Treatment of Contaminated Injured Individuals	6d1										

Table 3.1 - Summary of Exercise Evaluation (Continued. page 6/8)

DATE: 2012-10-23 SITE: Susquehanna Steam Electric Station, PA M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated		LzCoWSAVTS	LzCoWBAVTS	LC EOC (S)	LC RC BLC	LC MCC PSU	LC MDC MVES	LC MCC MVES	LC MCC DHS	LyCo EOC (S)	LyCo RC LyMI
Emergency Operations Management											
Mobilization	1a1			M						M	
Facilities	1b1					M					
Direction and Control	1c1			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	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 disabilities & access/functional needs people	2c1										
Radiological Assessment & Decision-making for Ingestion Pathway	2d1										
Radiological Assessment & Decision-making for Relocation/Reentry/Return	2e1										
Protective Action Implementation											
Implementation of Emergency Worker Exposure Control	3a1						M				
Implementation of KI PAD for Institutionalized Individuals/Public	3b1										
Implementation of PADs for disabilities & access/functional needs people	3c1										
Implementation of PADs for Schools	3c2	M	M								
Implementation of Traffic & Access Control	3d1										
Impediments to Evacuation	3d2										
Availability & use of Commodity & Resource Information	3e1										
Preprinted Materials for Implementing PADs for Commodities & Resources	3e2										
Implementation of Relocation/Reentry/Return Decisions	3f1										
Field Measurement and Analysis											
RESERVED	4a1										
Field Team Management	4a2										
Plume Phase Field Measurement, Handling, & Analyses	4a3										
Post Plume Phase Field Measurements & Sampling	4b1										
Laboratory Operations	4c1										
Emergency Notification and Public Info											
Activation of the Prompt Alert & Notification System	5a1										
RESERVED	5a2										
Activation of the Back-up ANS	5a3										
Activation of the Exception Area ANS	5a4										
Emergency Information & Instructions for the Public/Media	5b1			M						M	
Support Operations/Facilities											
Monitoring, Decontamination, & Registration of Evacuees	6a1					M	M	M	M		
Monitoring/Decontamination of Emergency Workers/Equipment/Vehicles	6b1										
Temporary Care of Evacuees	6c1					M		M	M		
Transportation/Treatment of Contaminated Injured Individuals	6d1										

Table 3.1 - Summary of Exercise Evaluation (Continued. page 7/8)

DATE: 2012-10-23 SITE: Susquehanna Steam Electric Station, PA M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated		LyCo MDC HHS	LyCo MCC HHS	MtCo EOC (S)	NC EOC (S)	NC RC SHS S	NC RC MDC SHS S	NC MCC SHS S	ScCo EOC (S)	ScCoRCMJSHS	ScCoMDCMJSHS
Emergency Operations Management											
Mobilization	1a1			M	M				M		
Facilities	1b1										
Direction and Control	1c1			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	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 disabilities & access/functional needs people	2c1										
Radiological Assessment & Decision-making for Ingestion Pathway	2d1										
Radiological Assessment & Decision-making for Relocation/Reentry/Return	2e1										
Protective Action Implementation											
Implementation of Emergency Worker Exposure Control	3a1	M	M			M	M			M	M
Implementation of KI PAD for Institutionalized Individuals/Public	3b1										
Implementation of PADs for disabilities & access/functional needs people	3c1										
Implementation of PADs for Schools	3c2										
Implementation of Traffic & Access Control	3d1										
Impediments to Evacuation	3d2										
Availability & use of Commodity & Resource Information	3e1										
Preprinted Materials for Implementing PADs for Commodities & Resources	3e2										
Implementation of Relocation/Reentry/Return Decisions	3f1										
Field Measurement and Analysis											
RESERVED	4a1										
Field Team Management	4a2										
Plume Phase Field Measurement, Handling, & Analyses	4a3										
Post Plume Phase Field Measurements & Sampling	4b1										
Laboratory Operations	4c1										
Emergency Notification and Public Info											
Activation of the Prompt Alert & Notification System	5a1										
RESERVED	5a2										
Activation of the Back-up ANS	5a3										
Activation of the Exception Area ANS	5a4										
Emergency Information & Instructions for the Public/Media	5b1			M	M				M		
Support Operations/Facilities											
Monitoring, Decontamination, & Registration of Evacuees	6a1	M	M			M	M	M		M	M
Monitoring/Decontamination of Emergency Workers/Equipment/Vehicles	6b1										
Temporary Care of Evacuees	6c1		M					M			
Transportation/Treatment of Contaminated Injured Individuals	6d1										

Table 3.1 - Summary of Exercise Evaluation (Continued. page 8/8)

DATE: 2012-10-23 SITE: Susquehanna Steam Electric Station, PA M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated		ScCoMCCMJSHS	ScCoMCCNSJSHS	UC EOC (S)	UC RC MES	UC MCC LAMS	UC MDC LAMS	WyCo EOC (S)	WyCo RC THS	WyCo MDC THS	WyCo MCC THS
Emergency Operations Management											
Mobilization	1a1			M				M			
Facilities	1b1		M								
Direction and Control	1c1			M				M			
Communications Equipment	1d1	M	M	M	M	M		M	M		M
Equipment and Supplies to Support Operations	1e1	M	M	M	M	M	M	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 disabilities & access/functional needs people	2c1										
Radiological Assessment & Decision-making for Ingestion Pathway	2d1										
Radiological Assessment & Decision-making for Relocation/Reentry/Return	2e1										
Protective Action Implementation											
Implementation of Emergency Worker Exposure Control	3a1		M			M	M		M	M	M
Implementation of KI PAD for Institutionalized Individuals/Public	3b1										
Implementation of PADs for disabilities & access/functional needs people	3c1										
Implementation of PADs for Schools	3c2										
Implementation of Traffic & Access Control	3d1										
Impediments to Evacuation	3d2										
Availability & use of Commodity & Resource Information	3e1										
Preprinted Materials for Implementing PADs for Commodities & Resources	3e2										
Implementation of Relocation/Reentry/Return Decisions	3f1										
Field Measurement and Analysis											
RESERVED	4a1										
Field Team Management	4a2										
Plume Phase Field Measurement, Handling, & Analyses	4a3										
Post Plume Phase Field Measurements & Sampling	4b1										
Laboratory Operations	4c1										
Emergency Notification and Public Info											
Activation of the Prompt Alert & Notification System	5a1										
RESERVED	5a2										
Activation of the Back-up ANS	5a3										
Activation of the Exception Area ANS	5a4										
Emergency Information & Instructions for the Public/Media	5b1			M				M			
Support Operations/Facilities											
Monitoring, Decontamination, & Registration of Evacuees	6a1	M	M			M	M		M	M	M
Monitoring/Decontamination of Emergency Workers/Equipment/Vehicles	6b1										
Temporary Care of Evacuees	6c1	M	M			M					M
Transportation/Treatment of Contaminated Injured Individuals	6d1										

3.3 Criteria Evaluation Summaries

3.3.1 Pennsylvania Jurisdictions

3.3.1.1 Pennsylvania Emergency Operations Center

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

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

3.3.1.2 Pennsylvania Joint Information Center/Rumor Control

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

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

3.3.1.3 Pennsylvania Accident Assessment Center, State Emergency Operations Center-Bureau of Radiation Protection

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

a. MET: None
b. AREAS REQUIRING CORRECTIVE ACTION: None
c. DEFICIENCY: None
d. PLAN ISSUES: None

e. NOT DEMONSTRATED: 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.1, 4.a.2.
f. PRIOR ISSUES - RESOLVED: None
g. PRIOR ISSUES - UNRESOLVED: None

3.3.1.4 Pennsylvania Bureau of Radiation Protection, Radiological Rapid Response Vehicle

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

a. MET: 1.a.1, 1.d.1, 1.e.1, 3.a.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: None
g. PRIOR ISSUES - UNRESOLVED: None

3.3.1.5 PA State Field Monitoring Team A, South East Region

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

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

ISSUE NO.: 63-12-3a1-A-01

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: Field Monitoring Team A (FMT A) members were not cognizant of KI usage.

POSSIBLE CAUSE: The FMT A was not briefed or trained on KI use including: dosages, precautions, limitations, and potential side effects.

REFERENCE: NUREG-0654/FEMA-REP-1, J.10.e

EFFECT: Without appropriate training, individuals may take KI when it would not be medically advisable to do so. Additionally, if a FMT member chooses to not take KI voluntarily, the Field Team Coordinator may have to replace the individual.

CORRECTIVE ACTION DEMONSTRATED: On December 11, 2012 the members of FMT A, and the Field Team Coordinator were asked questions regarding the use of KI. This included dosages for adults, potential adverse effects, who should and should not take KI and the purpose of taking KI. All members of the team correctly responded to the questions. The Field Team Coordinator briefing has been modified to include more detailed information on the use of KI by the Field Team members. The Field Team members stated they knew to advise the Field Team Coordinator if they were unable, or unwilling, to take KI prior to the team being assembled so the Field Team Coordinator could replace those individuals.

ISSUE NO.: 63-12-4a3-A-02

CRITERION: 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.

CONDITION: Field Monitoring Team A (FMT A) members were not able to demonstrate how they would use their Ludlum 2221, with 44-9 pancake Geiger-Muller (GM) detector, to conduct monitoring for contamination on equipment, supplies and themselves.

POSSIBLE CAUSE: The FMT A had not been trained on how to use the 44-9 pancake GM detector to monitor surfaces for contamination.

REFERENCE: NUREG-0654/FEMA-REP-1, I.8

EFFECT: If equipment is not surveyed, they could cross-contaminate future air samples.

CORRECTIVE ACTION DEMONSTRATED: On December 11, 2012, the members of Field Team A correctly demonstrated the use of the 44-9 probe with the Ludlum 2221 instrument correctly being operationally checked, to include source check and then for the monitoring of their equipment and themselves for contamination. The demonstrators simulated that the air sampling head was contaminated. The Field Team correctly demonstrated decontamination to below limits for this equipment in accordance with plans and procedures. In addition, they demonstrated one team member monitoring another team member for contamination using the correct limits for personnel.

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 PA State Field Monitoring Team B, South East Region

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

a. MET: 1.a.1, 1.d.1, 1.e.1, 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

3.3.1.7 Pennsylvania State Traffic and Access Control Points, State Police Barracks Bloomsburg

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, 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 Risk Jurisdictions

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

3.3.2.2 Columbia County Emergency Worker Monitoring and Decontamination Station, Columbia Montour Vo-Tech School

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, 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

3.3.2.3 Columbia County, Berwick Borough/Briar Creek Borough Emergency Operations Center

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

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

3.3.2.4 Columbia County, Briar 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.c.1, 3.c.2, 3.d.1, 3.d.2, 5.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

3.3.2.5 Columbia County, Briar Creek Township Back-up Route Alerting

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

a. MET: 1.a.1, 1.d.1, 1.e.1, 3.a.1, 5.a.3.
b. AREAS REQUIRING CORRECTIVE ACTION: 5.a.3.

ISSUE NO.: 63-12-5a3-A-03

CRITERION: Backup alert and notification of the public is completed within a reasonable time following detection by the ORO of a failure of the primary alert and notification system.

CONDITION: The Briar Creek Township back-up route alerting team did not complete back-up route alerting within the prescribed time limit of 45 minutes.

POSSIBLE CAUSE: The route/sector alert teams were not briefed or issued dosimetry prior to the notice of a failed siren.

REFERENCE: NUREG-0654/FEMA-REP-1, E.6, Appendix 3.B.2.c

EFFECT: Residents in the vicinity of the failed siren would not have received notification in a timely manner.

CORRECTIVE ACTION DEMONSTRATED: Briar Creek Township Backup Route Alerting was successfully re-demonstrated by Briar Creek Emergency Management Agency (BCEMA) and Briar Creek Fire Department (BCFD) on October 25, 2012. A simulated Alert message was received by BCEMA at 1845. BCFD personnel were mobilized to the EOC at 1850. Backup Route Alert teams (2) were provided a radiological briefing along with simulated dosimetry and Potassium Iodide. A simulated siren failure notification was received at 1854 and route alert teams were dispatched. The route alert teams completed backup route alerting in less than 45 minutes.

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 Columbia County, Mifflin 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.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

3.3.2.7 Columbia County, Mifflin Township Traffic and Access Control Points

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

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

3.3.2.8 Columbia County, South Centre Township Emergency Operations Center

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

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

ISSUE NO.: 63-10-3a1-A-01

ISSUE: Emergency workers at the South Centre Township EOC and South Centre Township Traffic and Access Control Points did not read their dosimetry every 30 minutes or record exposure information during the exercise.

CORRECTIVE ACTION DEMONSTRATED: The South Centre Township Chief of Police, acting as the Radiation Safety Officer (RSO) explained at length, and on multiple occasions, the need to check issued dosimetry every thirty (30) minutes.

g. PRIOR ISSUES - UNRESOLVED: None

3.3.2.9 Columbia County, Benton Area School District

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

3.3.2.10 Columbia County, Benton Area School District, L. Ray Appleman 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

3.3.2.11 Columbia County, Berwick Area School District

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

3.3.2.12 Columbia County, Berwick Area School District, Berwick High 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

3.3.2.13 Columbia County, Berwick Area School District, Berwick Area Middle 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

3.3.2.14 Columbia County, Berwick Area School District, Orange Street 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

3.3.2.15 Columbia County, Bloomsburg Area School District

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

3.3.2.16 Columbia County, Bloomsburg Area School District, Beaver-Main 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

3.3.2.17 Columbia County, Central Columbia School District

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

3.3.2.18 Columbia County, Central Columbia School District, Central Columbia 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

3.3.2.19 Columbia County, Columbia-Montour Area Vocational Technical School

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

a. MET: None
b. AREAS REQUIRING CORRECTIVE ACTION: None
c. DEFICIENCY: None
d. PLAN ISSUES: 3.c.2.

ISSUE NO.: 63-12-3c2-P-01

CRITERION: OROs/school officials implement protective actions for schools.

CONDITION: The school does not have a system to notify parents of students that live inside the Emergency Planning Zone (EPZ) and they attend a school outside the EPZ.

POSSIBLE CAUSE: The plan relies on parent's receiving information about the status of their students from EAS messages.

REFERENCE: NUREG-0654/FEMA-REP-1, J.10.c,d,e,g

EFFECT: Parents may not be aware that their children need to be picked up from the school during an emergency event.

RECOMMENDATION: Incorporate a process for contacting parents to pick up their children.

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

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

3.3.2.21 Luzerne County Emergency Worker Monitoring and Decontamination Station, Sweet Valley Fire Company

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, 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

3.3.2.22 Luzerne County, Black 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.c.1, 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: 3.c.2.
f. PRIOR ISSUES - RESOLVED: None
g. PRIOR ISSUES - UNRESOLVED: None

3.3.2.23 Luzerne County, Butler Township/Conyngham Borough 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.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: 5.a.1.
f. PRIOR ISSUES - RESOLVED: None
g. PRIOR ISSUES - UNRESOLVED: None

3.3.2.24 Luzerne County, Huntington Township/New Columbia Borough 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.c.1, 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: 3.c.2.
f. PRIOR ISSUES - RESOLVED: None
g. PRIOR ISSUES - UNRESOLVED: None

3.3.2.25 Luzerne County, Nescopeck Borough 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.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

3.3.2.26 Luzerne County, Nescopeck Borough Traffic and Access Control

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

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

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

3.3.2.28 Luzerne County, Newport Township Back-up Route Alerting

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

a. MET: 1.a.1, 1.d.1, 1.e.1, 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

3.3.2.29 Luzerne County, Salem 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.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

3.3.2.30 Luzerne County, Shickshinny Borough Emergency Operations Center

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

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

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

3.3.2.32 Luzerne County, Crestwood School District

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

3.3.2.33 Luzerne County, Crestwood School District, Crestwood High 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

3.3.2.34 Luzerne County, Crestwood School District, Crestwood Middle 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

3.3.2.35 Luzerne County, Greater Nanticoke Area School District

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

3.3.2.36 Luzerne County, Greater Nanticoke Area School District, John S. Fine High 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

3.3.2.37 Luzerne County, Greater Nanticoke Area School District, Kennedy 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

3.3.2.38 Luzerne County, Greater Nanticoke Area School District, Greater Nanticoke Elementary Center

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

3.3.2.39 Luzerne County, Hazleton Area School District

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

a. MET: None
b. AREAS REQUIRING CORRECTIVE ACTION: None
c. DEFICIENCY: None
d. PLAN ISSUES: 3.c.2.

ISSUE NO.: 63-12-3c2-P-02

CRITERION: OROs/school officials implement protective actions for schools.

CONDITION: The Hazleton Area School District (HASD) has an Emergency Operations Plan (EOP) that lacks specific itemized tasks to be accomplished during an emergency at the Susquehanna Steam Electric Station (SSES), and there are no supporting written procedures or checklists.

POSSIBLE CAUSE: The HASD has not developed written operational procedures to facilitate implementation of their EOP during an emergency at the SSES.

REFERENCE: NUREG-0654/FEMA-REP-1, J.10.c, d, e, g

EFFECT: Without specific HASD staff present, fill-in personnel might be unable to fully accomplish all required tasks in a timely manner.

RECOMMENDATION: The HASD should develop written procedures and checklists itemizing tasks to be completed by specific staff positions for each Emergency Classification Level.

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

3.3.2.40 Luzerne County, Hazleton Area School District, Hazleton Area Career Center

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

a. MET: None
b. AREAS REQUIRING CORRECTIVE ACTION: None
c. DEFICIENCY: None
d. PLAN ISSUES: 3.c.2.

ISSUE NO.: 63-12-3c2-P-03

CRITERION: OROs/school officials implement protective actions for schools.

CONDITION: The Hazleton Area Career Center (HACC) uses the school district's emergency operations plan (EOP), but lacks site-specific written procedures and

checklists to be used during an emergency at the Susquehanna Steam Electric Station (SSES).

POSSIBLE CAUSE: The HACC has not developed written operational procedures to facilitate accomplishment of site-specific EOP requirements during an emergency at the SSES.

REFERENCE: NUREG-0654/FEMA-REP-1, J.10.c, d, e, g

EFFECT: Without specific HACC staff present, fill-in personnel might be unable to fully accomplish all required tasks in a timely manner.

RECOMMENDATION: The HACC should develop written procedures and checklists itemizing tasks to be completed by specific staff positions for each Emergency Classification Level.

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

3.3.2.41 Luzerne County, Hazleton Area School District, Ninth Grade Center

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

3.3.2.42 Luzerne County, Hazelton Area School District, Valley 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

3.3.2.43 Luzerne County, Northwest Area School District

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

3.3.2.44 Luzerne County, Northwest Area School District, Hunlock 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

3.3.2.45 Luzerne County, Northwest Area School District, Northwest Jr./Sr. High 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

3.3.2.46 Luzerne County, West Side Area Vocational - Technical 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

3.3.2.47 Luzerne County, Wilkes-Barre Area Vocational - Technical 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

3.3.3 Support Jurisdictions

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

3.3.3.2 Lackawanna County Reception Center, Big Lots Center

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

a. MET: 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: None

3.3.3.3 Lackawanna County Mass Care Center, Pennsylvania State University

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

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

3.3.3.4 Lackawanna County Monitoring and Decontamination Center, Mid-Valley Elementary School

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

a. MET: 1.e.1, 3.a.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

3.3.3.5 Lackawanna County Mass Care Center, Mid-Valley Elementary School

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

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

3.3.3.6 Lackawanna County Mass Care Center, Dunmore High School

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

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

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

3.3.3.8 Lycoming County Reception Center, Lycoming Mall

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

a. MET: 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: None

3.3.3.9 Lycoming County Monitoring and Decontamination Center, Hughesville High School

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

a. MET: 1.e.1, 3.a.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

3.3.3.10 Lycoming County Mass Care Center, Hughesville High School

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

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

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

3.3.3.13 Northumberland County Reception Center, Shikellemy High School, Sunbury

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, 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

3.3.3.14 Northumberland County Monitoring and Decontamination Center, Shikellemy High School - Sunbury

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

a. MET: 1.e.1, 3.a.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

3.3.3.15 Northumberland County Mass Care Center, Shikellemy High School - Sunbury

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

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

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

3.3.3.17 Schuylkill County Reception Center, Mahanoy Jr/Sr High School

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, 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

3.3.3.18 Schuylkill County Monitoring and Decontamination Center, Mahanoy Jr/Sr High School

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

a. MET: 1.e.1, 3.a.1, 6.a.1.
b. AREAS REQUIRING CORRECTIVE ACTION: 6.a.1.

ISSUE NO.: 63-12-6a1-A-04

CRITERION: The reception center facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees.

CONDITION: Vehicle monitoring was not performed in accordance with Schuylkill

County Emergency Management Agency Nuclear/Radiological Incident Plan, Rev 3, 2012, Appendix 4, Attachment H.

POSSIBLE CAUSE: Personnel did not demonstrate detailed familiarity with the plans and procedures.

REFERENCE: NUREG-0654, FEMA-REP-1, J.12

EFFECT: Using the incorrect sequence of steps could have resulted in the unnecessary spread of contamination.

CORRECTIVE ACTION DEMONSTRATED: Vehicle monitoring was correctly re-demonstrated on December 11, 2012, in accordance with plans and procedures. Two personnel were present for the demonstration. One individual acted as supervisor and note taker and directed the activities of the monitoring person by using a checklist. The monitoring person physically examined a vehcile using a Ludlum 2241-2 radiation meter with Ludlum 44-9 probe attached. The instrument used was correctly operationally checked, to include the source check, and was within it's calibration period. Protective covering for the probe and gloves for the operator were simulated.

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

3.3.3.19 Schuylkill County Mass Care Center, Mahanoy Jr/Sr High School

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

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

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

3.3.3.20 Schuylkill County Mass Care Center, North Schuylkill Jr/Sr High School

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

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

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

3.3.3.22 Union County Reception Center, Montandon Elementary School

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

a. MET: 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: None

3.3.3.23 Union County Mass Care Center, Lewisburg Area Middle School

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

3.3.3.24 Union County Monitoring and Decontamination Center, Lewisburg Area Middle School

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

a. MET: 1.e.1, 3.a.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

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

3.3.3.26 Wyoming County Reception Center, Tunkhannock High School

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, 6.a.1.
b. AREAS REQUIRING CORRECTIVE ACTION: 1.e.1.

ISSUE NO.: 63-12-1e1-A-05

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

CONDITION: The Wyoming County reception center, temporarily relocated to the Tunkhannock Middle School, was not set up to control arriving traffic, or to facilitate exterior operations in time of darkness.

POSSIBLE CAUSE: The Tunkhannock High School is the primary reception center location and was unavailable, so the adjacent middle school was used for the demonstration. The team that normally conducts monitoring/decontamination operations did not employ all equipment necessary to support operations.

REFERENCE: NUREG-0654/FEMA-REP-1, A.3; C.4; J.10.h; J.12

EFFECT: Without appropriate traffic control patterns in effect, the staff will be unable to control the flow of vehicles, or to minimize the potential spread of contamination. Without appropriate lighting, monitoring of vehicles may be incomplete or improperly done.

CORRECTIVE ACTION DEMONSTRATED: On January 4, 2013, Wyoming County Emergency Management successfully re-demonstrated Reception procedures. The Emergency Management Coordinator provided aerial photographs of the Tunkhannock Middle School and High School properties. These photos were marked to show the placement of traffic control points, barriers, cones, and signs to appropriately direct evacuees to designated parking areas and subsequently to the Monitoring and Decontamination Center. The equipment for the Reception Center is maintained in a trailer and staged at the WCEOC parking lot. The WC EMC

provided an inventory of the contents of the trailer.

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

3.3.3.27 Wyoming County Monitoring and Decontamination Center, Tunkhannock High School

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

a. MET: 1.e.1, 3.a.1, 6.a.1.
b. AREAS REQUIRING CORRECTIVE ACTION: 6.a.1.

ISSUE NO.: 63-12-6a1-A-06

CRITERION: The reception center facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees.

CONDITION: During monitoring, the probe brushed against the person being monitored.

POSSIBLE CAUSE: Inadequate training and/or procedure review.

REFERENCE: NUREG-0654/FEMA-REP-1, A.3; C.4; J.10.h; J.12

EFFECT: Possible inaccurate readings and inadvertent spread of contamination.

CORRECTIVE ACTION DEMONSTRATED: On January 4, 2013, Wyoming County Emergency Management successfully re-demonstrated evacuee monitoring. One volunteer demonstrated use of the radiation detection meter, while another acted as subject. The meter used was a Ludlum 2211-3 GM detector with a 44-9 Gamma probe attached and covered with a thin plastic bag for contamination protection. The equipment was within the calibration period. The monitor performed an operation

check of the meter in accordance with procedures. The monitor simulated wearing latex or nitrile gloves. The monitor demonstrated the proper procedure for frisking a person for radiation contamination: starting from the front, head, shoulders, arms, hands, chest, legs, then the same on the back, finishing with the feet. The speed and distance of the probe was appropriate.

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

3.3.3.28 Wyoming County Mass Care Center, Tunkhannock High School

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

SECTION 4: CONCLUSION

As previously stated, the State and local emergency management organizations displayed knowledge of their emergency plans and procedures and adequately implemented them, thereby demonstrating reasonable assurance that those agencies can respond and protect the health, lives, and property of the residents of the SSES Emergency Planning Zone.

APPENDIX A: IMPROVEMENT PLAN

Issue Number: 63-12-3c2-P-01	Criterion: 3c2
ISSUE: The school does not have a system to notify parents of students that live inside the Emergency Planning Zone (EPZ) and they attend a school outside the EPZ.	
RECOMMENDATION: Incorporate a process for contacting parents to pick up their children.	
CORRECTIVE ACTION DESCRIPTION: Plan modification.	
CAPABILITY: Emergency Public Information and Warning	PRIMARY RESPONSIBLE AGENCY: Columbia County Emergency Management
CAPABILITY ELEMENT: Planning	START DATE: 2013-01-23
AGENCY POC: Michelle Frye 570-389-5734	ESTIMATED COMPLETION DATE: 2013-06-23

Issue Number: 63-12-3c2-P-02	Criterion: 3c2
ISSUE: The Hazleton Area School District (HASD) has an Emergency Operations Plan (EOP) that lacks specific itemized tasks to be accomplished during an emergency at the Susquehanna Steam Electric Station (SSES), and there are no supporting written procedures or checklists.	
RECOMMENDATION: The HASD should develop written procedures and checklists itemizing tasks to be completed by specific staff positions for each Emergency Classification Level.	
CORRECTIVE ACTION DESCRIPTION: Plan Modification	
CAPABILITY: Emergency Public Information and Warning	PRIMARY RESPONSIBLE AGENCY: Luzerne County Emergency Mangement Agency
CAPABILITY ELEMENT: Planning	START DATE: 2013-01-23
AGENCY POC: Stephen Bekanich 570-820-4400	ESTIMATED COMPLETION DATE: 2013-06-23

Issue Number: 63-12-3c2-P-03	Criterion: 3c2
ISSUE: The Hazleton Area Career Center (HACC) uses the school district's emergency operations plan (EOP), but lacks site-specific written procedures and checklists to be used during an emergency at the Susquehanna Steam Electric Station (SSES).	
RECOMMENDATION: The HACC should develop written procedures and checklists itemizing tasks to be completed by specific staff positions for each Emergency Classification Level.	
CORRECTIVE ACTION DESCRIPTION: Plan modification.	
CAPABILITY: Emergency Operations Center Management	PRIMARY RESPONSIBLE AGENCY: Luzerne County Emergency Management Agency
CAPABILITY ELEMENT: Planning	START DATE: 2013-01-23
AGENCY POC: Stephen Berkanich 570-820-4400	ESTIMATED COMPLETION DATE: 2013-06-23

APPENDIX B: EXERCISE TIMELINE

The tables on the following pages present the times at which key events and activities occurred during the SSES exercise on October 23, 2012. Also included are times notifications were made to the participating agencies and functional entities.

Table 1 - Exercise Timeline
DATE: 2012-10-23, SITE: Susquehanna Steam Electric Station, PA

Emergency Classification Level or Event	Time Utility Declared	PA EOC	CoCo EOC	CoCoBrkB/BCBEOC	CoCoBrCrkTpEOC	CoCoMfnTpEOC	LzCo EOC
Unusual Event	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Alert	1749	1801	1754	1802	1801	1801	1754
Site Area Emergency	1900	1904	1904	1911	1914	1917	1904
General Emergency	2002	2009	2009	2012	2012	2012	2009
Simulated Rad. Release Started	1900	1904	1904	1912	1912	1917	1904
Simulated Rad. Release Terminated	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Facility Declared Operational		1834	1815	1814	1810	1834	1810
Declaration of State of Emergency		1925	1925	1928	2033	1935	1926
Exercise Terminated		2130	2130	2132	1935	1935	2130
Early Precautionary Actions:		1856	1856	N/A	1941	1945	1856
1st Protective Action Decision:		1915	1915	1939	1925	1928	1915
1st Siren Activation		1925	1925	N/A	N/A	N/A	1925
1st EAS or EBS Message		1928	1928	N/A	N/A	N/A	1928
2nd Protective Action Decision:		2022	2022	2033	2033	2033	2022
2nd Siren Activation		2032	2032	N/A	N/A	N/A	2032
2nd EAS or EBS Message		2035	2035	N/A	N/A	N/A	2035
KI Administration Decision:		2022	2022	2033	2033	2033	2022

Table 1 - Exercise Timeline

DATE: 2012-10-23, SITE: Susquehanna Steam Electric Station, PA

Emergency Classification Level or Event	Time Utility Declared	LzCoBlkCrkTpEOC	LzCoBtrTp/CngmEOC	LzCoHT/NCBEOC	LzCoNscpkBrEOC	LzCoNwptTwpEOC	LzCoSlmTwpEOC
Unusual Event	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Alert	1749	1758	1804	1803	1819	1804	N/A
Site Area Emergency	1900	1909	1913	1909	1915	1909	1909
General Emergency	2002	2012	2015	2011	2012	2010	2011
Simulated Rad. Release Started	1900	1909	1909	1909	2002	1909	1909
Simulated Rad. Release Terminated	N/A	N/A	N/A	N/A	N/A	N/A	NA
Facility Declared Operational		1822	1822	1838	1850	1826	1816
Declaration of State of Emergency		1934	1934	1941	1944	1940	1934
Exercise Terminated		2130	2130	2133	2049	2142	2115
Early Precautionary Actions:		1934	2030	1941	1940	1940	1941
1st Protective Action Decision:		1928	1940	2030	2027	2030	2030
1st Siren Activation		N/A	N/A	N/A	N/A	N/A	N/A
1st EAS or EBS Message		N/A	N/A	N/A	N/A	N/A	N/A
2nd Protective Action Decision:		N/A	N/A	2030	N/A	N/A	N/A
2nd Siren Activation		N/A	N/A	N/A	N/A	N/A	N/A
2nd EAS or EBS Message		N/A	N/A	N/A	N/A	N/A	N/A
KI Administration Decision:		2028	2038	2030	2027	2033	2030

Table 1 - Exercise Timeline

DATE: 2012-10-23, SITE: Susquehanna Steam Electric Station, PA

Emergency Classification Level or Event	Time Utility Declared	LzCoShksnyBEOC	LzCoUnwpEOC	LCEOC (S)	LyCo EOC (S)	MtCo EOC (S)	NC EOC (S)
Unusual Event	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Alert	1749	1800	1843	1806	1754	0925	1803
Site Area Emergency	1900	1910	1907	1912	1904	0950	1910
General Emergency	2002	2016	2011	2011	2011	2039	2011
Simulated Rad. Release Started	1900	N/A	1932	1912	1942	N/A	1915
Simulated Rad. Release Terminated	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Facility Declared Operational		1827	1920	1811	1839	0945	1840
Declaration of State of Emergency		1934	1939	1939	1925	N/A	1930
Exercise Terminated		2135	2130	2130	2130	1115	2130
Early Precautionary Actions:		N/A	N/A	1925	N/A	N/A	1907
1st Protective Action Decision:		N/A	N/A	1928	1928	1943	1928
1st Siren Activation		N/A	N/A	N/A	N/A	N/A	N/A
1st EAS or EBS Message		N/A	N/A	N/A	N/A	N/A	N/A
2nd Protective Action Decision:		N/A	N/A	2033	2033	N/A	2033
2nd Siren Activation		N/A	N/A	N/A	N/A	N/A	N/A
2nd EAS or EBS Message		N/A	N/A	N/A	N/A	N/A	N/A
KI Administration Decision:		2032	2028	2033	2033	N/A	2023

Table 1 - Exercise Timeline

DATE: 2012-10-23, SITE: Susquehanna Steam Electric Station, PA

Emergency Classification Level or Event	Time Utility Declared	ScCoEOC (S)	UCEOC (S)	WyCoEOC (S)
Unusual Event	N/A	N/A	N/A	N/A
Alert	1749	1809	1808	1758
Site Area Emergency	1900	1911	1912	1912
General Emergency	2002	2011	2016	2014
Simulated Rad. Release Started	1900	2011	1955	2012
Simulated Rad. Release Terminated	N/A	N/A	N/A	N/A
Facility Declared Operational		1836	2000	1807
Declaration of State of Emergency		1836	1932	1942
Exercise Terminated		2130	2130	2130
Early Precautionary Actions:		1925	1925	1940
1st Protective Action Decision:		1911	1923	1925
1st Siren Activation		N/A	N/A	N/A
1st EAS or EBS Message		N/A	N/A	N/A
2nd Protective Action Decision:		2033	2030	2035
2nd Siren Activation		N/A	N/A	N/A
2nd EAS or EBS Message		N/A	N/A	N/A
KI Administration Decision:		2033	2030	2035

APPENDIX C: EXERCISE EVALUATORS AND TEAM LEADERS

The following is the list of Evaluators and Team Leaders for the SSES 2012 Plume Exercise evaluated on October 23 and 24, 2012. The managing staff consisted of:

Darrell Hammons, FEMA Reg. III, Regional Assistance Committee Chairperson
Barton Freeman, FEMA Reg. III, Exercise Evaluation Program Manager and Site Specialist
John Price, FEMA Reg. III, Team Leader, Pennsylvania Emergency Operations Center
Martin Vyenielo, FEMA Reg. III, Team Leader, Technical Evaluations
John Rice, FEMA Reg. I, Team Leader, School Evaluations
Joseph Suders, FEMA Reg. III, Team Leader, Support Counties
Rick Kinard, FEMA Reg. III, Reception/Mon-Decon/Mass Care
Matthew Wiedimer, FEMA Reg. III, Team Leader, Columbia County and Municipalities
Robert Neff, FEMA Reg. III, Team Leader, Luzerne County and Municipalities

Also, the following personnel evaluated locations as representatives of the Regional Assistance Committee:

Marcos Aquino, US Environmental Potection Agency, Region III

Additional evaluation assistance was provided by FEMA Regions I, II, and VII and Headquarters, by providing the following Radiological Emergency Preparedness Program personnel:

Kenneth Wierman, FEMA HQ, REPP
Bridget Ahlgrim, FEMA HQ, REPP
Kerris Bates, FEMA HQ, REPP
Helen Laforge, Region I
Robert Swartz, Region I
Ryan Jones, Region I
Ingrid Bruns, Region I
Don Carlton, Region I
Kevin Reed, Region II
Laurel Ryan, Region VII
Miriam Weston, Region II

DATE: 2012-10-23, SITE: Susquehanna Steam Electric Station, PA

LOCATION	EVALUATOR	AGENCY
Pennsylvania Emergency Operations Center	*John Price William Vocke	FEMA RIII ICFI
Pennsylvania Joint Information Center/Rumor Control	William Vocke	ICFI
Pennsylvania Accident Assessment Center, State Emergency Operations Center-Bureau of Radiation Protection	Ronald Bonner	ICFI
Pennsylvania Bureau of Radiation Protection, Radiological Rapid Response Vehicle	*Martin Vyenielo	FEMA RIII
PA State Field Monitoring Team A, South East Region	Marcy Campbell	ICFI
PA State Field Monitoring Team B, South East Region	Thomas Essig	ICFI
Pennsylvania State Traffic and Access Control Points, State Police Barracks Bloomsburg	James Greer	ICFI
Columbia County Emergency Operations Center	Gary Bolender Brian Hasemann Helen LaForge *Matthew Wiedemer	ICFI FEMA RII FEMA RI FEMA RIII
Columbia County Emergency Worker Monitoring and Decontamination Station, Columbia Montour Vo-Tech School	Michael Henry	ICFI
Columbia County, Berwick Borough/Briar Creek Borough Emergency Operations Center	Mark Dalton Kenneth Wierman	ICFI FEMA HQ
Columbia County, Briar Creek Township Emergency Operations Center	Clark Duffy Barbara Thomas	ICFI FEMA RI
Columbia County, Briar Creek Township Back-up Route Alerting	Clark Duffy	ICFI
Columbia County, Mifflin Township Emergency Operations Center	Gary Goldberg Robert Swartz	ICFI FEMA RI
Columbia County, Mifflin Township Traffic and Access Control Points	Gary Goldberg	ICFI
Columbia County, South Centre Township Emergency Operations Center	Ryan Jones	FEMA - RI
Columbia County, Benton Area School District	Michael Petullo	ICFI
Columbia County, Benton Area School District, L. Ray Appleman Elementary School	Michael Petullo	ICFI
Columbia County, Berwick Area School District	Danny Loomis	ICFI
Columbia County, Berwick Area School District, Berwick High School	Robert Lemeshka	ICFI
Columbia County, Berwick Area School District, Berwick Area Middle School	Rosemary Samsel	ICFI
Columbia County, Berwick Area School District, Orange Street Elementary School	Debra Schneck	ICFI
Columbia County, Bloomsburg Area School District	Thomas Hegele	ICFI
Columbia County, Bloomsburg Area School District, Beaver-Main Elementary School	Roger Kowieski	ICFI
Columbia County, Central Columbia School District	Reggie Rodgers	ICFI
Columbia County, Central Columbia School District, Central Columbia Elementary School	Reggie Rodgers	ICFI
Columbia County, Columbia-Montour Area Vocational Technical School	Ronald Bonner	ICFI
Luzerne County Emergency Operations Center	Ingrid Bruns *Robert Neff Bart Ray Roy Smith	FEMA RI FEMA RIII ICFI ICFI

Luzerne County Emergency Worker Monitoring and Decontamination Station, Sweet Valley Fire Company	Thomas Gahan	ICFI
Luzerne County, Black Creek Township Emergency Operations Center	Don Carlton Kevin Reed	FEMA RI FEMA RII
Luzerne County, Butler Township/Conyngham Borough Emergency Operations Center	Todd Davidson Laurel Ryan	ICFI FEMA RVII
Luzerne County, Huntington Township/New Columbia Borough Emergency Operations Center	Bruce Swiren Miriam Weston	ICFI FEMA RII
Luzerne County, Nescopeck Borough Emergency Operations Center	Bridget Ahlgrim Frank Cordaro	FEMA HQ ICFI
Luzerne County, Nescopeck Borough Traffic and Access Control	Frank Cordaro	ICFI
Luzerne County, Newport Township Emergency Operations Center	Henry Christiansen Paul Nied	ICFI ICFI
Luzerne County, Newport Township Back-up Route Alerting	Paul Nied	ICFI
Luzerne County, Salem Township Emergency Operations Center	Kerris Bates Michael Meshenberg	FEMA HQ ICFI
Luzerne County, Shickshinny Borough Emergency Operations Center	Marcos Aquino David Kayen	EPA RIII ICFI
Luzerne County, Union Township Emergency Operations Center	Thomas Hegele John Wills	ICFI ICFI
Luzerne County, Crestwood School District	Robert Walker	ICFI
Luzerne County, Crestwood School District, Crestwood High School	Robert Walker	ICFI
Luzerne County, Crestwood School District, Crestwood Middle School	Alan Bevan	ICFI
Luzerne County, Greater Nanticoke Area School District	Wes Ryals	ICFI
Luzerne County, Greater Nanticoke Area School District, John S. Fine High School	Wes Ryals	ICFI
Luzerne County, Greater Nanticoke Area School District, Kennedy Elementary School	Robert Duggleby	ICFI
Luzerne County, Greater Nanticoke Area School District, Greater Nanticoke Elementary Center	Carol D. Shepard	ICFI
Luzerne County, Hazleton Area School District	Clayton Spangenberg	ICFI
Luzerne County, Hazleton Area School District, Hazleton Area Career Center	Clayton Spangenberg	ICFI
Luzerne County, Hazleton Area School District, Ninth Grade Center	Meg Swearingen	ICFI
Luzerne County, Hazelton Area School District, Valley Elementary School	Lynn Steffensen	ICFI
Luzerne County, Northwest Area School District	William Vocke	ICFI
Luzerne County, Northwest Area School District, Hunlock Elementary School	Cheryl Weaver	ICFI
Luzerne County, Northwest Area School District, Northwest Jr./Sr. High School	William Vocke	ICFI
Luzerne County, West Side Area Vocational - Technical School	James Hickey	ICFI
Luzerne County, Wilkes-Barre Area Vocational - Technical School	Bruce Swiren	ICFI
Lackawanna County Emergency Operations Center	*Joseph Suders	FEMA RIII
Lackawanna County Reception Center, Big Lots Center	Michael Petullo	ICFI
Lackawanna County Mass Care Center, Pennsylvania State University	Reggie Rodgers	ICFI
Lackawanna County Monitoring and Decontamination Center, Mid-Valley Elementary School	Reggie Rodgers	ICFI
Lackawanna County Mass Care Center, Mid-Valley Elementary School	Michael Petullo	ICFI

Lackawanna County Mass Care Center, Dunmore High School	Michael Petullo	ICFI
Lycoming County Emergency Operations Center	Daniel Lerch	FEMA RIII
Lycoming County Reception Center, Lycoming Mall	James Hickey	ICFI
Lycoming County Monitoring and Decontamination Center, Hughesville High School	Cheryl Weaver	ICFI
Lycoming County Mass Care Center, Hughesville High School	James Hickey	ICFI
Montour County Emergency Operations Center	*Richard Kinard	FEMA RIII
Northumberland County Emergency Operations Center	Tina Lai-Thomas	FEMA RIII
Northumberland County Reception Center, Shikellemy High School, Sunbury	Danny Loomis	ICFI
Northumberland County Monitoring and Decontamination Center, Shikellemy High School - Sunbury	Alan Bevan	ICFI
Northumberland County Mass Care Center, Shikellemy High School - Sunbury	Robert Lemeshka	ICFI
Schuylkill County Emergency Operations Center	Lee Torres	FEMA RIII
Schuylkill County Reception Center, Mahanoy Jr/Sr High School	Rosemary Samsel	ICFI
Schuylkill County Monitoring and Decontamination Center, Mahanoy Jr/Sr High School	Robert Walker	ICFI
Schuylkill County Mass Care Center, Mahanoy Jr/Sr High School	Rosemary Samsel	ICFI
Schuylkill County Mass Care Center, North Schuylkill Jr/Sr High School	Barton Freeman	FEMA RIII
Union County Emergency Operations Center	*Michael Shuler	FEMA RIII
Union County Reception Center, Montandon Elementary School	Debra Schneck	ICFI
Union County Mass Care Center, Lewisburg Area Middle School	Meg Swearingen	ICFI
Union County Monitoring and Decontamination Center, Lewisburg Area Middle School	Wes Ryals	ICFI
Wyoming County Emergency Operations Center	Kathy Duran John Rice	FEMA Region 3 FEMA RI
Wyoming County Reception Center, Tunkhannock High School	Clayton Spangenberg	ICFI
Wyoming County Monitoring and Decontamination Center, Tunkhannock High School	Carol D. Shepard	ICFI
Wyoming County Mass Care Center, Tunkhannock High School	Lynn Steffensen	ICFI
* Team Leader		

APPENDIX D: ACRONYMS AND ABBREVIATIONS

Acronym	Meaning
AA	Administrative Assistant
ACP	Access Control Point
ACS	Auxiliary Communication System
ADA	American Disabilities Act
AED	Artificial External Defibrillator
ALARA	As Low As Reasonably Achievable
ARC	American Red Cross
ARCA	Area Requiring Corrective Action
ARES	Amateur Radio Emergency Services
BASD	Bloomsburg Area School District
BCEMA	Briar Creek Emergency Management Agency
BCFD	Briar Creek Fire Department
BCT	Briar Creek Township
BCTEOC	Briar Creek Township Emergency Operations Center
BFD	Berwick Fire Department
BPD	Borough Police Department
BTCB	Butler Township Conyngham Borough
CART	County Animal Rescue Team
CCEMA	Columbia County Emergency Management Agency
CCEMO	Columbia County Emergency Management Office
CCEOC	Columbia County Emergency Operations Center
CEMA	County Emergency Management Agency
CEOC	County Emergency Operations Center
CHS	Crestwood High School
CMS	Crestwood Middle School
CSD	Crestwood School District
DRD	Direct Reading Dosimeters
DVD	Digital Versatile Disc
EAL	Emergency Action Level
EAS	Emergency Alert System
ECL	Emergency Classification Level
ECS	Emergency Communications System
EM	Emergency Manager
EMA	Emergency Management Agency

EMC	Emergency Management Coordinator
EMD	Emergency Management Director
EMSO	Emergency Medical Services Officer
ENR	Emergency Notification Report
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EOP	Emergency Operations Plan
EPA	Environmental Protection Agency
EPZ	Emergency Planning Zone
ERPA	Emergency Response Planning Areas
ESF	Emergency Support Function
EW	Emergency Workers
FD	Fire Department
FEMA	Federal Emergency Management Agency
FMT	Field Monitoring Teams
FRSO	Fire Rescue Services Officer
FTC	Field Team Coordinator
GE	General Emergency
GM	Geiger Muller
GNA	Greater Nanticoke Area
GPS	Global Positioning System
HACC	Hazleton Area Career Center
HAHS	Hazleton Area High School
HASD	Hazleton Area School District
IPZ	Ingestion Pathway Zone
JIC	Joint Information Center
LCEMA	Lycoming County Emergency Management Agency
LCEOC	Lycoming County Emergency Operations Center
LIU	Local Intermediate Unit
MCC	Mass Care Center
NASD	Nanticoke Area School District
NFD	Newport Fire Department
NRC	Nuclear Regulatory Commission
ORO	Off-site Response Organization
PA	Public Address
PAD	Protective Action Decision
PEMA	Pennsylvania Emergency Management Agency
PI	Planning Issues
PIO	Public Information Officer
PM	Portal Monitor

PPE	Personal Protective Equipment
PRD	Permanent Record Dosimeter
PSO	Police Services Officer
PSP	Pennsylvania State Police
PUC	Public Utility Commission
RAC	Regional Assistance Committee
RACES	Radio Amateur Civil Emergency Services
RAT	Route Alert Team
RCRS	Road Condition Reporting System
REP	Radiological Emergency Preparedness
RERP	Radiological Emergency Response Plan
RO	Radiological Officer
RPO	Radiological Protection Officer
RPSO	Radiological Protection Services Officer
RSO	Radiation Safety Officer
SAE	Site Area Emergency
SBEOC	Shickshinny Borough Emergency Operation Center
SCEMA	Schuylkill County Emergency Management Agency
SEVAN	State Emergency Voice Activation Network
SOP	Standard Operating Procedure
SSES	Susquehanna Steam Electric Station
TCP	Traffic Control Point
TEDE	Total Effective Dose Equivalent
TO	Transportation Officer
TSC	Technical Support Center

APPENDIX E: EXERCISE PLAN

The enclosed Exercise Plan was created as an overall tool for facilitation and implementation of the Susquehanna Steam Electric Station (SSES) 2012 Plume Exercise and to integrate the concepts and policies of the Homeland Security Exercise Evaluation Program (HSEEP) with the Radiological Emergency Preparedness Program Exercise Methodology. The Exercise Plan was originally drafted and published by the Pennsylvania Emergency Management Agency (PEMA) as an independent document and is annexed here.

The "Susquehanna Steam Electric Station (SSES)'s Extent-of-Play 2012 Radiological Emergency Preparedness Exercise" was negotiated and agreed upon by FEMA Region III, PEMA, and the offices of emergency management of the Risk and Support jurisdictions. It is included as an Appendix of the Exercise Plan.

2012 Susquehanna Steam Electric Station FEMA Evaluated REP Exercise

Exercise Date: 10/23/12 Publishing Date: 08/04/12

PREFACE

The 2012 Susquehanna Steam Electric Station FEMA Evaluated REP Exercise is a Full Scale Exercise (FSE) sponsored jointly by FEMA and PEMA. This Exercise Plan (ExPlan) was produced with input, advice, and assistance from the Exercise Planning Team (EPT), which followed the guidance set forth in the Federal Emergency Management Agency (FEMA), Homeland Security Exercise and Evaluation Program (HSEEP).

The ExPlan gives officials, observers, media personnel, and players from participating organizations the information necessary to observe or participate in a nuclear power plant accident response exercise focusing on participants' emergency response plans, policies, and procedures as they pertain to this type of event. The information in this document is current as of the date of publication and is subject to change as dictated by the EPT.

The Susquehanna Steam Electric Station FEMA Evaluated REP Exercise is an *unclassified exercise*. The control of information is based more on public sensitivity regarding the nature of the exercise than on the actual exercise content. Some exercise material is intended for the exclusive use of exercise planners, Controllers, and Evaluators, but Players may view other materials deemed necessary to their performance. The ExPlan may be viewed by all exercise participants.

All exercise participants should use appropriate guidelines to ensure the proper control of information within their areas of expertise and to protect this material in accordance with current jurisdictional directives. Public release of exercise materials to third parties is at the discretion of DHS and the EPT.

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HANDLING INSTRUCTIONS

1. The title of this document is 2012 Susquehanna Steam Electric Station FEMA Evaluated REP *Exercise Plan (ExPlan).*
2. The information gathered in this ExPlan should be handled as sensitive information not to be disclosed. This document should be safeguarded, handled, transmitted, and stored in accordance with appropriate security directives. Reproduction of this document, in whole or in part, without prior approval from PEMA and FEMA is prohibited.
3. At a minimum, the attached materials will be disseminated only on a need-to-know basis and when unattended, stored in an area offering sufficient protection against theft, compromise, inadvertent access, and unauthorized disclosure.
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2012 SUSQUEHANNA STEAM ELECTRIC STATION FEMA EVALUATED REP EXERCISE

CHAPTER 1: GENERAL INFORMATION

Introduction

The is a full-scale exercise (FSE) designed to establish a learning environment for players to exercise emergency response plans, policies, and procedures as they pertain to Nuclear Power Plant incidents. An FSE is a complex event that requires detailed planning. To conduct an effective exercise, subject matter experts (SMEs) and local representatives from numerous agencies have taken part in the planning process and will take part in exercise conduct and evaluation.

This Exercise Plan (ExPlan) was produced at the direction of PEMA and FEMA with the input, advice, and assistance of the EPT. The 2012 Susquehanna Steam Electric Station REP Exercise is evidence of the growing partnership between State and local jurisdictions for response to the threats our Nation and communities face.

Confidentiality

The 2012 Susquehanna Steam Electric Station REP Exercise is an *unclassified exercise*. The control of information is based more on public sensitivity regarding the nature of the exercise than on the actual exercise content. Some exercise material is intended for the exclusive use of exercise planners, controllers, and evaluators, but players may view other materials deemed necessary to their performance. This ExPlan may be viewed by all exercise participants.

All exercise participants should use appropriate guidelines to ensure the proper control of information within their areas of expertise and protect this material in accordance with current directives.

Public release of exercise materials to third parties is at the discretion of the Federal Emergency Management Agency (FEMA), PEMA, and the EPT.

Purpose

The purpose of this exercise is to evaluate player actions against current response plans and capabilities for a nuclear power plant-related incident, and to comply with the requirements of 44 CFR 350 and the guidelines of NUREG 0654/FEMA-REP-1. Exercise planners utilized the elements described in the 67 FR 20580 (April 25, 2002) and the Radiological Emergency Preparedness (REP) Program Manual (April 2012) to develop this exercise.

The objective of FEMA and PEMA is to demonstrate reasonable assurance that the public can be protected during a nuclear power plant emergency.

Target Capabilities

The establishment of the National Preparedness Priorities have steered the focus of homeland security toward a capabilities-based planning approach. Capabilities-based planning focuses on planning under uncertainty, since the next danger or disaster can never be forecast with complete accuracy. Therefore, capabilities-based planning takes an all-hazards approach to planning and preparation which builds capabilities that can be applied to a wide variety of incidents. States and Urban Areas use capabilities-based planning to identify a baseline assessment of their homeland security efforts by comparing their current capabilities against the Target Capabilities List (TCL) and the critical tasks of the Universal Task List (UTL). This approach identifies gaps in current capabilities and focuses efforts on identifying and developing priority capabilities and tasks for the jurisdiction. These priority capabilities are articulated in the jurisdiction's homeland security strategy and Multi-Year Training and Exercise Plan (TEP), of which this exercise is a component.

The capabilities listed below have been selected by the EPT planning team from the priority capabilities identified in the Commonwealth of Pennsylvania Multi-Year TEP. These capabilities provide the foundation for development of the exercise objectives and scenario, as the purpose of this exercise is to measure and validate performance of these capabilities and their associated critical tasks.

- Interoperable Communications
- Laboratory Testing
- Citizen Evacuation and Shelter in Place
- Critical Resource Logistics and Distribution
- Emergency Operations Center Management
- Emergency Public Information and Warning
- Emergency Public Safety and Security Response
- Emergency Triage and Pre-Hospital Treatment
- Environmental Health
- Mass Care
- Mass Prophylaxis
- Medical Surge
- On-Site Incident Management
- Worker Health and Safety
- Food and Agriculture Safety and Defense
- Weapons of Mass Destruction and Hazardous Materials Response and Decontamination
- Economic and Community Recovery

Outstanding Issues

There is one open Areas Requiring Corrective Action (ARCAs) or Planning Issues as a result of the FEMA-evaluated plume-phase exercise at Susquehanna Steam Electric Station in 2010. Refer to Appendix C for further details regarding this issue.

CHAPTER 2: EXERCISE LOGISTICS

Exercise Summary

General

The 2012 Susquehanna Steam Electric Station REP Exercise is designed to establish a learning environment for players to exercise their plans and procedures for responding to an incident at a Nuclear Power Plant. The 2012 Susquehanna Steam Electric Station REP Exercise will be conducted during the evening of October 23rd. Exercise play is scheduled to conclude once evaluators determine that the exercise objectives have been met at each venue. Select portions of the exercise will occur out-of-sequence on the morning of October 23rd and during the evening of October 24th. For a full schedule of all exercise events, please reference Appendix A: Exercise Schedule.

Assumptions

Assumptions constitute the implied factual foundation for the exercise and, hence, are assumed to be present before the start of the exercise. The following general assumptions apply to the 2012 Susquehanna Steam Electric Station REP Exercise

- The exercise will be graded against the REP criteria. Elements outside the scope of the REP criteria will not be graded.
- This exercise will be conducted in a no-fault learning environment wherein systems and processes, not individuals, will be evaluated.
- Exercise simulation will be realistic and plausible, containing sufficient detail from which to respond.
- Exercise players will react to the information and situations as they are presented, in the same manner as if this had been a real event.

Constructs and Constraints

Constructs are exercise devices designed to enhance or improve exercise realism. Alternatively, constraints are exercise limitations that may detract from exercise realism. Constraints may be the inadvertent result of a faulty construct or may pertain to financial and staffing issues. Although there are a number of constructs and constraints (also known as exercise artificialities) for any exercise, the EPT recognizes and accepts the following as necessary:

- Exercise communication and coordination will be limited to the participating exercise venues and the Simulation Cell (SimCell).
- Only those communication methods listed in the Communication Directory will be available for players to use during the exercise.
- Out-of-Sequence play is allowed.

- Certain simulations are allowed.

The participating agencies may need to balance exercise play with real-world emergencies. It is understood that real-world emergencies will take priority.

Exercise Participants

The following are the categories of participants involved in this exercise; note that the term "participant" refers to all categories listed below, not just those playing in the exercise:

- *Players.* Players are agency personnel who have an active role in responding to the simulated emergency and perform their regular roles and responsibilities during the exercise. Players initiate actions that will respond to and mitigate the simulated emergency.
- *Controllers.* Controllers set up and operate the exercise site; plan and manage exercise play; act in the roles of response individuals and agencies not playing in the exercise. Controllers direct the pace of exercise play and routinely include members from the exercise planning team. They provide key data to players and may or initiate certain player actions to ensure exercise continuity.
- *Simulators.* Simulators are control staff personnel who role-play as nonparticipating organizations or individuals. They most often operate out of the SimCell, but may occasionally have face-to-face contact with players. Simulators function semi-independently under the supervision of SimCell controllers, enacting roles (e.g., as media reporters or next of kin) in accordance with instructions provided in the Master Scenario Events List (MSEL). All simulators are ultimately accountable to the Exercise Director and/or the Senior Controller.
- *Evaluators.* Evaluators are chosen to evaluate and provide feedback on a designated functional area of the exercise. They are chosen based on their expertise in the functional area(s) they have been assigned to review during the exercise and their familiarity with local emergency response procedures. Evaluators assess and document participants' performance against established emergency plans and exercise evaluation criteria, in accordance with HSEEP standards and within the bounds of REP Program guidance and regulations. They are typically chosen from amongst planning committee members or the agencies/organizations that are participating in the exercise. FEMA Evaluators will not serve as Controllers.
- *Actors.* Actors are exercise participants who act or simulate specific roles during exercise play. They are typically volunteers who have been recruited to play the role of victims or other bystanders.
- *Observers.* Observers visit or view selected segments of the exercise. Observers do not play in the exercise, and do not perform any control or evaluation functions. Observers will view the exercise from a designated observation area and will be asked to remain within the observation area during the exercise. VIPs are a type of observer, but are frequently grouped separately. A dedicated group of exercise Controllers should be assigned to manage these groups.

- *Media Personnel.* Some media personnel may be present as observers pending approval by the appropriate EMA personnel and exercise support team members. Media interaction may also be simulated by the SimCell to enhance realism and meet related exercise objectives. A dedicated group of exercise controllers should be assigned to manage these groups.
- *Support Staff.* Exercise support staff includes individuals who are assigned administrative and logistical support tasks during the exercise (i.e. registration, catering, etc.

Exercise Tools

Controller Handbook

The 2012 Susquehanna Steam Electric Station REP Exercise Controller Handbook is designed to help exercise Controllers conduct and evaluate an effective exercise. This Handbook also enables Controllers to understand their roles and responsibilities in exercise execution and evaluation. Should a Player, Observer, or media representative find an unattended Handbook, it should be provided to the nearest Controller or Evaluator. The Controller Handbook will be limited to the PEMA Lead Controller.

Master Scenario Events List

The MSEL outlines benchmarks that will occur during the exercise. Injects will not be included in the MSEL for the Plume portion of the 2012 Susquehanna Steam Electric Station REP Exercise because all injects will be driven by events that occur in the Simulator onsite at the Susquehanna Steam Electric Station.

Exercise Implementation

Exercise Play

Exercise play will begin in the afternoon of October 23rd with a situation update going to each participating venue. Play will proceed according to the events outlined in the MSEL, in accordance with established plans and procedures. The exercise will conclude upon the completion of operations and attainment of the exercise objectives, as determined by the FEMA evaluators.

Exercise Rules

The following are the general rules that govern exercise play:

- Real-world emergency actions take priority over exercise actions.
- Exercise participants will comply with real-world response procedures, unless otherwise directed by control staff.
- All communications (written, radio, telephone, etc.) made during the exercise will begin and end with the phrase, *"This is an exercise."*
- All observers of the exercise will not participate or provide input into exercise play.

Exercise participants placing telephone calls or initiating radio communication with the SimCell must identify the organization, agency, office, and/or individual with whom they wish to speak.

Safety Requirements

General

Exercise participant safety takes priority over exercise events. Although the organizations involved in the 2012 Susquehanna Steam Electric Station REP Exercise come from various response agencies, they share the basic responsibility for ensuring a safe environment for all personnel involved in the exercise. In addition, aspects of an emergency response are dangerous. Professional health and safety ethics should guide all participants to operate in their assigned roles in the safest manner possible. The following general requirements apply to the exercise:

- All exercise controllers, evaluators, and staff will serve as safety observers while the exercise activities are underway. Any safety concerns must be immediately reported to the Lead Controller.
- Participants will be responsible for their own and each other's safety during the exercise. It is the responsibility of all persons associated with the exercise to stop play if, in their opinion, a real safety problem exists. Once the problem is corrected, exercise play can be restarted.
- All organizations will comply with their respective environmental, health, and safety plans and procedures, as well as the appropriate Federal, State, and local environmental health and safety regulations.

Exercise Setup

Exercise setup involves the pre-staging and dispersal of exercise materials; including registration materials, documentation, signage, and other equipment as appropriate.

Accident Reporting and Real Emergencies

- Anyone observing a participant who is seriously ill or injured will first advise the nearest controller, then if possible, render aid, provided the aid does not exceed his or her training.
- The controller who is made aware of a real emergency will initiate the broadcast *"Real-World Emergency"* on the controller radio network, providing the following information to the Senior Controller and Exercise Director:
    - Venue/function
    - Location within the venue/function
    - Condition
    - Requirements

- The SimCell will be notified as soon as possible if a real emergency occurs.
- If the nature of the emergency requires a suspension of the exercise at the venue/function, all exercise activities at that facility will immediately cease. Exercise play may resume at that venue/function once the "Real-World Emergency" situation has been addressed.
- Exercise play at other venue/functions should not cease if one venue/function has declared a "Real-World Emergency" unless they are reliant on the affected venue.
- If a real emergency occurs that affects the entire exercise, the exercise may be suspended or terminated at the discretion of the Exercise Director and Senior Controller. The notification will be made from the SimCell.

Site Access

Observer Coordination

Each organization with observers will coordinate with PEMA, FEMA, the utility, and the facility owner for access to the exercise site (s). Observers will be escorted to an observation area for orientation and conduct of the exercise. All observers will be asked to remain within the designated observation area during the exercise. PEMA and/or utility representatives will be present to explain the exercise program and answer questions for the observers during the exercise.

Exercise Identification

Identification badges may be issued to exercise staff. All exercise personnel and observers will be identified by badges distributed by the staff from each participating agency.

Communications Plan

Exercise Start, Suspension, and Termination Instructions

The exercise is scheduled to run until the FEMA evaluators determine that the exercise objectives have been met. FEMA evaluators will work with PEMA through the State Emergency Operations Center to disseminate termination instructions to exercise participants.

All spoken and written communication will start and end with the statement, "THIS IS AN EXERCISE."

Player Communication

Players will use routine, in-place agency communication systems. Additional communication assets may be made available as the exercise progresses. The need to maintain capability for a real-world response may preclude the use of certain communication channels or systems that would usually be available for an actual emergency incident. In no instance will exercise communication interfere with real-world emergency communications. Each venue will coordinate its own internal communication networks and channels.

The primary means of communication among the SimCell, Controllers, and the venues will be telephone. A list of key telephone and fax numbers, and radio call signs will be available as a Communication Directory before the start of the exercise.

Player Briefing

Controllers/Evaluators may be required to read specific scenario details to the participants to begin exercise play. They may also have technical handouts or other materials to give to players in order to better orient them to the exercise environment.

Public Affairs

This exercise enables Players to demonstrate an increased readiness to deal with a nuclear power plant incident. Any nuclear power plant exercise may be a newsworthy event. Special attention must be given to the needs of the media, allowing them to get as complete and accurate a story as possible while ensuring their activities do not compromise the exercise realism, safety, or objectives.

FEMA, PEMA, and the utility are responsible for disseminating public information in advance of the exercise.

CHAPTER 3: PLAYER GUIDELINES

Exercise Staff

Exercise Director

The Exercise Director has the overall responsibility for planning, coordinating, and overseeing all exercise functions. He/she manages the exercise activities and maintains a close dialogue with the Controllers regarding the status of play and the achievement of the exercise design objectives.

Lead Controller

The Lead Controller is responsible for the overall organization of the 2012 Susquehanna Steam Electric Station REP Exercise the Lead Controller monitors exercise progress and coordinates decisions regarding deviations or significant changes to the scenario caused by unexpected developments during play. The Lead Controller monitors actions by individual Controllers and ensures they implement all designated and modified actions at the appropriate time. The Lead Controller debriefs the Controllers after the exercise and oversees the setup and takedown of the exercise.

Controllers

At least one controller will be onsite with every facility and field team participating in the exercise, and at each out-of-sequence interview. The Lead Facility Controller at each location will coordinate any changes that impact the scenario or affect other areas of play through the Lead Controller The individual controllers issue exercise materials to players as required and monitor the exercise timeline. Controllers also provide injects to the players as described in the MSEL.

Lead Evaluator

The Lead Evaluator is responsible for the overall evaluation of the 2012 Susquehanna Steam Electric Station REP Exercise the Lead Evaluator monitors exercise progress and stays in contact with the Lead Controller regarding changes to the exercise during play. The Lead Evaluator monitors actions of individual Evaluators and ensures they are tracking progress of the players in accordance with the Extent-of-Play. The Lead Evaluator debriefs the evaluators after the exercise and oversees the entire evaluation and After Action process.

Evaluators

Evaluators work under the direction of the Lead Evaluator, and as a team with Controllers. Evaluators are SMEs who record events that take place during the exercise and assess/submit documentation for review and inclusion in the After Action Report (AAR). FEMA will be responsible for the training and coordination of all evaluators during the 2012 Susquehanna Steam Electric Station REP Exercise.

Player Instructions

Before the Exercise

- Review the appropriate emergency plans, procedures, and exercise support documents.
- Be at the appropriate site at least 30 minutes before the start of the exercise. Wear appropriate uniform/identification badge.
- If you gain knowledge of the scenario before the exercise, notify a controller so that appropriate actions can be taken to ensure a valid evaluation.
- Read your Player Information Handout, which includes information on exercise safety.
- Please sign in.

During the Exercise

- Respond to the exercise events and information as if the emergency were real, unless otherwise directed by an exercise controller.
- Controllers will only give you information they are specifically directed to disseminate. You are expected to obtain other necessary information through existing emergency information channels.
- Do not engage in personal conversations with controllers, evaluators, observers, or media personnel while the exercise is in progress. If you are asked an exercise-related question, give a short, concise answer. If you are busy and cannot immediately respond, indicate so, but report back with an answer at the earliest time possible.
- If you do not understand the scope of the exercise or if you are uncertain about an organization's or agency's participation in an exercise, ask a controller.
- Parts of the scenario may seem implausible. Recognize that the exercise has objectives to satisfy and may require the incorporation of unrealistic aspects. Note that every effort has been made by the trusted agents to balance realism with safety and the creation of an effective learning and evaluation environment.
- All exercise communication will begin and end with the phrase "This is an exercise." This is a precaution taken so anyone overhearing the conversation will not mistake the exercise play for a real-world emergency.
- When communicating with the SimCell, identify the organization, agency, office, and/or individual with which you want to speak.
- Verbalize out loud when taking an action. This will ensure that evaluators are made aware of critical actions as they occur.
- Maintain a log of your activities. Many times, this log may include documentation of activities missed by a controller or evaluator.

Following the Exercise

- At the end of the exercise at your facility, participate in the brief critique with the controllers and evaluators.
- Complete the Participant Feedback Form. This form allows you to comment candidly on emergency response activities and effectiveness of the exercise. Please provide the completed form to a controller or evaluator.
- Provide any notes or materials generated from the exercise to your controller or evaluator for review and inclusion in the AAR.

Simulation Guidelines

Because the 2012 Susquehanna Steam Electric Station REP Exercise is of limited duration and scope, the physical description of what would fully occur at the incident sites and surrounding areas will be relayed to the Players by Simulators or Controllers.

If a real emergency occurs during the exercise, the exercise at your respective venue may be suspended or terminated at the discretion of the controller(s) at each venue. If a real emergency occurs, say "Real-World Emergency" and notify the nearest Controller and Evaluator.

CHAPTER 4: EVALUATION AND POST-EXERCISE ACTIVITIES

Exercise Documentation

The goal of the 2012 Susquehanna Steam Electric Station REP Exercise **is** to comprehensively exercise and evaluate the OROs' plans and capabilities as they pertain to a potential nuclear power plant incident. After the exercise, data collected by Controllers, Evaluators, the SimCell, and Players will be used to identify strengths and areas for improvement in the context of the exercise design objectives.

Exercise Evaluation Guides

DHS has developed Exercise Evaluation Guides (EEGs) that identify expected activities for evaluation, provide consistency across exercises, and link individual tasks to disciplines and expected outcomes.

The Federal Emergency Management Agency (FEMA) Region III has decided not to use EEG's as part of Exercise Documentation process.

Players Critique

Immediately following the completion of exercise play, Controllers will facilitate a critique with Players from their assigned location. The critique is an opportunity for Players to voice their opinions on the exercise and their own performance. At this time, Controllers can also seek clarification on certain actions and what prompted Players to take them. The critique should not last more than 30 minutes. Controllers should take notes during the critique and include these observations in their analysis.

Hotwash

Prior to the Participants and Public /Media Briefing, The Federal Emergency Management Agency (FEMA) will facilitate a Hotwash with the State, Risk and Support Counties, local jurisdictions and agencies participating in the exercise. The Hotwash is an opportunity for evaluators and participants to voice preliminary performance concerns, demonstrated strengths, and thank those who played. At this time, Evaluators can also seek clarification on certain actions and what prompted Players to take them. Evaluators should take notes during the Hotwash and include these observations in their analysis, if necessary. The Hotwash will occur at the East Mountain Business Center located in Wilkes-Barre, PA on October 25th at 03:00 p.m.

Evaluator Debriefing

Evaluators, and selected exercise participants will attend a facilitated Controller and Evaluator Debriefing. The date, time, and location will be determined at a later date. During the debriefing these individuals will discuss their observations of the exercise in an open environment to clarify actions taken during the exercise.

Participants and Public/Media Briefings

The Participants Briefing will be conducted after the exercise events have been concluded. The date, time, and location will be determined at a later date. The Public/Media Briefing will be conducted after the exercise events have been concluded. The Participants Briefing will occur at the East Mountain Business Center located in Wilkes-Barre, PA on October 26th at 10:00 a.m. and the Public/Media Briefing will be held directly after at 11:00 a.m.

After Action Report

The AAR is the culmination of the exercise. It is a written report outlining the strengths and areas for improvement identified during the exercise. The AAR will include the timeline, executive summary, scenario description, performance issues, planning issues, deficiencies, and capability analysis. The AAR will be drafted by a core group of individuals from the exercise planning team.

After Action Conference and Improvement Plan

The improvement process represents the comprehensive, continuing preparedness effort of which the 2012 Susquehanna Steam Electric Station REP Exercise is a part. The lessons learned and recommendations from the AAR will be incorporated into the Improvement Plan (IP).

After Action Conference

The After Action Conference (AAC) is a forum for jurisdiction officials to hear the results of the evaluation analysis, validate the findings and recommendations in the draft AAR, and begin development of the IP. The date, time, and location of the After Action Conference will be determined at a later date.

Improvement Plan

The IP identifies how recommendations will be addressed, including what actions will be taken, who is responsible, and the timeline for completion. It is created by key stakeholders from the 2012 Susquehanna Steam Electric Station REP Exercise participating agency officials during the AAC.

APPENDIX A: EXERCISE SCHEDULE

Table A.1 ***2012 Susquehanna Steam Electric Station REP Exercise*** *Schedule*

Time (Tentative)	Personnel	Activity
October 23rd, 2012		
09:00 – 11:00 a.m.	Risk County Schools	School Exercise
	Risk Counties	
Evening	Risk and Support Counties	Plume Exercise
	Risk Municipalities	
	State	
October 24th, 2012		
10:00 a.m. – 12:00 p.m.	PSP Bloomsburg Barracks	Traffic and Access Control Points
07:00 p.m. – 09:30 p.m.	Lackawanna, Lycoming, Northumberland, Schuylkill, Union, and Wyoming Counties	Reception Centers
07:00 p.m. – 09:30 p.m.	Lackawanna, Lycoming, Northumberland, Schuylkill, Union, and Wyoming Counties	Mon/Decon Centers
07:00 p.m. – 09:30 p.m.	Lackawanna, Lycoming, Northumberland, Schuylkill, Union, and Wyoming Counties	Mass Care Centers
07:00 p.m. – 09:30 p.m.	Columbia and Luzerne Counties	Emergency Worker Mon/Decon Centers
October 25th, 2012		
03:00 p.m. – 05:00 p.m.	State, Risk and Support Counties	Exercise Hotwash
October 26th, 2012		
10:00 a.m. – 11:00 a.m.	All Exercise participants	Exercise Participants
11:00 a.m. – 12:00 a.m.	Public/Media	Public/Media Briefing

APPENDIX B: REP MANUAL DEMONSTRATION MATRIX

REP MANUAL DEMONSTRATION CRITERIA FREQUENCY MATRIX (10/2011)

Note: This matrix is for full implementation of 10/11 manual some criteria frequency listed are not effective until HAB. (1b1, 5a3, 5a4)

Assessment Area and Sub-elements	NUREG-0654/ FEMA-REP-1 Criteria	Minimum Evaluation Frequency[85]	Out-of-Sequence Evaluation	Actual Incident Credit	Staff Ass't Visit
1. EMERGENCY OPERATIONS MANAGEMENT					
a. Mobilization					
1.a.1: OROs use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner.	A.1.a, e; A.3, 4; C.1, 4, 6; D.4; E.1, 2; H.3, 4	At least biennially	YES	YES	NO
b. Facilities					
1.b.1: Facilities are sufficient to support the emergency response.	H.3; G.3.a; J.10.h, J.12; K.5.b	No less than once every 8 years[86]	YES	YES	YES
c. Direction and Control					
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.	A.1.d; A.2.a,b; A.3; C.4, 6	At least biennially	NO	NO	NO
d. Communications Equipment					
1.d.1: At least two communication 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.	F.1,2	At least biennially	YES[87]	NO	NO
e. Equipment and Supplies to Support Operations					
1.e.1: Equipment, maps, displays, dosimetry, KI, and other supplies are sufficient to support emergency operations.	H.7, 10; I.7, 8, 9; J.10.a, b, e; J.11, 12; K.3.a; K.5.b	At least biennially	YES	NO	YES
2. PROTECTIVE ACTION DECISION-MAKING					
a. Emergency Worker Exposure Control					
2.a.1: OROs use a decision-making process, considering relevant factors and appropriate coordination, to ensure that an exposure control system, including use of KI, is in place for emergency workers, including provisions to authorize radiation exposure in excess of administrative limits or PAGs.	C.6; J.10.e, f; K.4	At least biennially	NO	NO	NO

Assessment Area and Sub-elements	NUREG-0654/ FEMA-REP-1 Criteria	Minimum Evaluation Frequency[85]	Out-of-Sequence Evaluation	Actual Incident Credit	Staff Ass't Visit
b. Dose Assessment & PARs & PADs for the Emergency Event					
2.b.1: Appropriate PARs are based on available information on plant condition, field monitoring data, and licensee and ORO dose projections, as well as knowledge of onsite and offsite environmental conditions.	I.10; Supp. 3	At least biennially	NO	NO	NO
2.b.2: A decision-making process involving consideration of appropriate factors and necessary coordination is used to make PADs for the general public (including the recommendation for use of KI, if ORO policy).	A.3; C.4, 6; D.4; J.9; J.10.f, m	At least biennially	NO	NO	NO
c. PADs for the Protection of persons with disabilities and access/functional needs					
2.c.1: PADs are made, as appropriate, for groups of people with disabilities and those with access/functional needs.	D.4; J.9; J.10.d,e	At least biennially	NO	NO	NO
d. Radiological Assessment and Decision-making for the Ingestion Exposure Pathway[88]					
2.d.1: Radiological consequences for the ingestion pathway are assessed and appropriate PADs are made based on the ORO planning criteria.	A.3; C.1, 4; D.4; J.9, 11	Every ingestion exercise	NO	NO	NO
e. Radiological Assessment & Decision-making Concerning Post-Plume Phase Relocation, Reentry, and Return					
2.e.1: Timely post-plume phase relocation, reentry, and return decisions are made and coordinated as appropriate, based on assessments of radiological conditions and criteria in the ORO's plan and/or procedures.	I.10; J.9; K.3.a; M.1	No less than once every 8 years	NO	NO	NO
3. PROTECTIVE ACTION IMPLEMENTATION					
a. Implementation of Emergency Worker Exposure Control					
3.a.1: 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.	J.10.e, K.3.a, b, K.4	At least biennially	YES	NO	NO
b. Implementation of KI Decision for Institutionalized Individuals and the Public					
3.b.1: 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.	J.10.e, f	At least biennially[89]	YES	NO	NO

Assessment Area and Sub-elements	NUREG-0654/ FEMA-REP-1 Criteria	Minimum Evaluation Frequency[85]	Out-of-Sequence Evaluation	Actual Incident Credit	Staff Ass't Visit
c. Implementation of Protective Actions for persons with disabilities and access/functional needs					
3.c.1: PADs are implemented for people with disabilities and those with access/functional needs other than schools within areas subject to protective actions.	J.10.c, d, e, g	No less than once every 8 years	YES	YES	YES
3.c.2: OROs/school officials implement protective actions for schools.	J.10.c, d, e, g	No less than once every 8 years[90]	YES	YES	YES
d. Implementation of Traffic and Access Control[91]					
3.d.1: Appropriate traffic and access control is established. Accurate instructions are provided to traffic and access control personnel.	A.3; C.1, 4; J.10.g, j	At least biennially	YES	YES	YES
3.d.2: Impediments to evacuation are identified and resolved.	J.10.k	At least biennially	YES	YES	YES
e. Implementation of Ingestion Pathway Decisions					
3.e.1: The ORO demonstrates the availability and appropriate use of adequate information regarding water, food supplies, milk, and agricultural production within the ingestion exposure pathway emergency planning zone for implementation of protective actions.	A.3; C.1, 4; J.11	Every ingestion exercise	YES	NO	NO
3.e.2: Appropriate measures, strategies, and pre-printed instructional material are developed for implementing PADs for contaminated water, food products, milk, and agricultural production.	G.1, J.9, 11	Every ingestion exercise	YES	NO	NO
f. Implementation of Post-Plume Phase Relocation, Reentry, and Return Decisions					
3.f.1: Decisions regarding controlled reentry of emergency workers and relocation and return of the public during the post-emergency phase are coordinated with appropriate organizations and implemented.	E.7; J.10.j; J.12; K.5.b; M.1,3	No less than once every 8 years	YES	NO	NO
4. FIELD MEASUREMENT AND ANALYSIS					
a. Plume Phase Field Measurement and Analyses					
4.a.1: [RESERVED]					
4.a.2: Field teams (two or more) are managed to obtain sufficient information to help characterize the release and to control radiation exposure.	C.1; H.12; I.7, 8, 11; J.10.a	Every full participation exercise[92]	YES	NO	NO

Assessment Area and Sub-elements	NUREG-0654/ FEMA-REP-1 Criteria	Minimum Evaluation Frequency[85]	Out-of-Sequence Evaluation	Actual Incident Credit	Staff Ass't Visit
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.	C.1; I.8, 9; H.12;J.10.a	Every full participation exercise	YES	NO	NO
b. Post Plume Phase Field Measurements and Sampling					
4.b.1: The field teams (two or more) demonstrate the capability to make appropriate measurements and collect samples (e.g., food crops, milk, water, vegetation, and soil) to support adequate assessments and protective action decision-making.	C.1; I.8; J.11	Every ingestion exercise	YES	NO	NO
c. Laboratory Operations					
4.c.1: The laboratory is capable of performing required radiological analyses to support PADs.	C.1; 3; J.11	No less than once every 8 years	YES	YES	NO
5. EMERGENCY NOTIFICATION AND PUBLIC INFORMATION					
a. Activation of the Prompt Alert and Notification System					
5.a.1: Activities associated with primary alerting and notification of the public are completed in a timely manner following the initial decision by authorized 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 REP guidance.	E.5, 6, 7	At least biennially	YES	NO	NO
5.a.2: [RESERVED]					
5.a.3: Backup alert and notification of the public is completed within a reasonable time following detection by the ORO of a failure of the primary alert and notification system.	E.6; Appendix 3.B.2.c	No less than once every 8 years	YES	NO	NO
5.a.4: Activities associated with FEMA approved exception areas (where applicable) are completed within 45 minutes of the initial decision by authorized offsite emergency officials to notify the public of an emergency situation.	E.6; Appendix 3.B.2.c	At least biennially	YES	NO	NO
b. Emergency Information and Instructions for the Public and the Media					
5.b.1: OROs provide accurate emergency information and instructions to the public and news media in a timely manner.	E.5, 7; G.3.a; G.4.a, c	At least biennially	YES	NO	NO
6. Support Operation/Facilities					
a. Monitoring, Decontamination, and Registration of Evacuees					
6.a.1: The reception center facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees.	A.3; C.4; J.10.h; J.12	No less than once every 8 years[93]	YES	YES	NO

Assessment Area and Sub-elements	NUREG-0654/ FEMA-REP-1 Criteria	Minimum Evaluation Frequency[85]	Out-of-Sequence Evaluation	Actual Incident Credit	Staff Ass't Visit
b. Monitoring and Decontamination of Emergency Workers and their Equipment and Vehicles					
6.b.1: The facility/ORO has adequate procedures and resources to accomplish monitoring and decontamination of emergency workers and their equipment and vehicles.	K.5.a, b	No less than once every 8 years	YES	YES	NO
c. Temporary Care of Evacuees					
6.c.1: Managers of congregate care facilities demonstrate that the centers have resources to provide services and accommodations consistent with planning guidelines. Managers demonstrate the procedures to assure that evacuees have been monitored for contamination and have been decontaminated as appropriate before entering congregate care facilities.	J.10.h; J.12	No less than once every 8 years[94]	YES	YES	YES
d. Transportation and Treatment of Contaminated Injured Individuals					
6.d.1: The facility/ORO has the appropriate space, adequate resources, and trained personnel to provide transport, monitoring, decontamination, and medical services to contaminated injured individuals.	F.2; H.10; K.5.a,b; L.1, 4	At least biennially[95]	YES	YES	NO

APPENDIX C: OPEN ISSUES

There is one open Areas Requiring Correction Action (ARCA) from the previous 2010 federally evaluated Susquehanna Steam Electric Station REP exercise:

Issue Number: 63-10-3.a.1-A-01

Condition: Emergency workers at the South Centre Township EOC and South Centre Township Traffic and Access Control Points did not read their dosimetry every 30 minutes or record exposure information during the exercise.

Possible Cause: The Radiological Officer (RO) did not request 30 minute reading or record them.

References: NUREG-0654/FEMA-REP-1, K.3.b
South Centre Township Radiological Response Plan

Effect: Emergency workers in the 10-mile Emergency Planning Zone could have been exposed to excessive radiation.

Corrective Action Description: After discussion with county and utility leaders and after careful consideration concerning the matter, the Commonwealth of Pennsylvania believes that the root cause of the matter rests either in a failure of education of the Radiological Officers and field personnel or a failure of the Radiological Officers and field personnel to follow the procedures given. The first priority would be to strengthen training to emphasis the need to do 30 minute dosimetry readings once the equipment is issued. Secondary priority would be a training emphasis for the EOC Radiological Officer to be more cognizant of the need for 30 minute dosimetry checks and to consider methods they could utilize to remind personnel at the appropriate times such as the use of timers/alarms.

APPENDIX D: EXTENT-OF-PLAY

The following Extent-of-Play for the Susquehanna Steam Electric Station 2012 Plume Exercise was completed and published on July 14, 2012. The Extent-of-Play detail provides the specific criteria and extent to which players will be expected to demonstrate their agencies' capabilities. The Extent-of-Play begins on the following page.

SUSQUEHANNA STEAM ELECTRIC STATION

EXTENT-OF-PLAY

2012 RADIOLOGICAL EMERGENCY PREPAREDNESS EXERCISE

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SUSQUEHANNA STEAM ELECTRIC STATION
2012 RADIOLOGICAL EMERGENCY PREPAREDNESS EXERCISE

METHOD OF OPERATION

1. Susquehanna Steam Electric Station (SSES)

The facility normally uses off-watch section personnel to participate in the exercise. The plant's simulated events, radiation readings, and emergency classifications will trigger offsite exercise actions. A pre-approved exercise scenario will be used. The SSES will notify the State EOC, the Bureau of Radiation Protection and Risk Counties of emergency classifications.

2. Bureau of Radiation Protection (BRP)

Personnel from the Pennsylvania Bureau of Radiation Protection (BRP) will be present and participate in the following aspects of the exercise as follows:

Plume Exercise – Nuclear facility EOF
Plume Exercise – Field Sampling Teams & Command Vehicle –October 23, 2012
BRP personnel working in the SEOC will not be evaluated as participants

3. PEMA Operations at State EOC / PEMA Headquarters

This "Method of Operation" Document includes activities for the Full-Scale Plume Exercise October 23, 2012, and the "Out of Sequence" Activities - October 23 & October 24, 2012.

A. Plume Exercise – October 23, 2012

The PEMA Directorate of Operations, augmented by designated PEMA personnel from the Fire Commissioner's Office, the Directorate of Administration, , plus Emergency Preparedness Liaison Officers (EPLO's) with accompanying response team members from designated state departments/agencies will comprise initial operations at the State Emergency Operations Center (EOC). The State EOC will participate but will NOT be evaluated during this exercise.

B. Plume Exercise – "Out of Sequence" Activities –October 23 & 24, 2012

The PEMA Directorate of Operations, augmented by designated PEMA personnel will disseminate exercise related messages to the participating Counties for dissemination to the participating School Districts during the morning of October 23, 2012. The State Emergency Operations Center (SEOC) and County EOC's will

participate however NOT be evaluated during the "Out of Sequence" component. PEMA personnel will serve as "observers" at the identified School Districts.

NOTE: The Montour County EOC will be evaluated during the school district exercise during the morning of October 23, 2012.

C. "Out of Sequence" Activities –October 23 & 24, 2012 - See Attachment A for Time

PEMA personnel will serve as "Observers" at the various field exercise locations during the evening "Out-of-Sequence" component October 24, 2012. An exercise Controller will remain in the State EOC. The State Emergency Operations Center (EOC) and Counties EOC's will NOT be evaluated during the evening "Out of Sequence" component October 24, 2012.

4. PEMA Area Office Operations

The PEMA Area Offices (Hamburg - Eastern Area and Harrisburg - Central Area) will not be activated nor evaluated during this exercise. Selected staff of the Area Offices will serve as Liaison Officers to Risk and Support Counties as assigned. Liaison Officers are exercise participants.

5. Counties Designated to Participate

A. Plume Phase Exercise: October 23, 2012

The two risk counties (Columbia and Luzerne), in coordination with PEMA, will demonstrate the capability to mobilize appropriate staff, activate their respective Emergency Operations Centers and implement emergency response operations to include sheltering and/or evacuation. County government will provide direction and coordination to risk municipalities. The six support Counties (Lackawanna, Lycoming, Northumberland, Schuylkill, Union and Wyoming) will participate in their assigned support roles. Actual sheltering or evacuation of the general public will be simulated.

NOTE: The Montour County EOC will not be evaluated during the plume phase exercise.

6. PEMA Liaison Officers

Liaison Officers will be present at the participating risk and support county EOC's, the SSES Emergency Operations Facility (EOF) and the SSES Joint Information Center (JIC) to provide assistance, guidance, and support. These Liaison Officers will participate as players in the plume phase exercise on October 23, 2012.

7. Controllers

A lead controller will be present in the state EOC for the plume exercise and the out of sequence school exercise. Controllers will be supplied by the utility and will be present at the emergency worker monitoring/decontaminating stations and the mass care monitoring/ decontamination centers on October 24, 2012. Controllers are not players. Controllers will provide pre-approved injects and information to the players, as appropriate, regarding radiological readings during the monitoring of personnel. Live radioactive sources will not be used. ***Exception:*** *individuals tasked with the setup of portal monitoring equipment will use a standard 1 micro curie Cesium 137 source for the purpose of conducting operational tests. Additionally, appropriate test sources will be available and used to verify the operation of the monitoring / survey instruments per manufacturer's recommendations.*

8. PEMA Observers

PEMA staff, qualified county emergency management personnel, and/or nuclear power plant personnel will be assigned, if required, to key locations for the purpose of observing, noting response actions and conditions, and recording observations for future use. Observers will not take an active part in the proceedings, but will interact with staff members to the extent necessary to fulfill their observer responsibilities. Coaching of players by observers is not permitted except to provide training as appropriate to participants awaiting a re-demonstration. (Refer to paragraph 13)

9. Department of Homeland Security (FEMA/REP) Evaluators

A. Plume Exercise:

Out of Sequence Period: October 23, 2012
Federal evaluators will be present at the identified "out-of-sequence" demonstration sites per Attachment A, Section I.A.1 These include the identified Public School District locations. **NOTE:** The Montour County EOC will be evaluated during the school district exercise during the morning of October 23, 2012.

Plume Phase Exercise: October 23, 2012
Evaluators representing the federal government will be present at the identified risk and support county EOC's to evaluate player response to the actual and simulated events in the exercise scenario. Additionally, one-third of the risk municipalities in Columbia and Luzerne counties will be federally evaluated. As required, a "floating-evaluator" will be made available for the purpose of evaluating any ORO locations not scheduled to have a federal evaluator, but having a prior issue (Attachment A, Section I.A.2 and I.A.3).

Out of Sequence Period: October 24, 2012
Federal evaluators will be present at identified Reception Centers, Emergency Worker Monitoring and Decontamination Stations and Mass Care / Shelters and Mass Care Monitoring and Decontamination Centers, as identified in Attachment A, Section I.B.1, I.B.2 and I.B.3.

Out of Sequence Period: October 24, 2012
Federal evaluators will be present at the identified "out-of-sequence" demonstration sites per Attachment A, I.A.5. This includes the Pennsylvania State Police location.

10. Demonstration Windows

In order to provide for more effective demonstrations, as well as to permit the release of volunteers from exercise play at a reasonable hour, periods of time (Demonstration Windows) have been designated during which specified actions will be accomplished / demonstrated.

The "demonstration windows" for this exercise are:

A. Plume Phase Exercise

The out-of-sequence MS-1 hospital demonstration was federally evaluated at Bloomsburg Hospital on April 6, 2011.

The out-of-sequence exercise window for school demonstrations will be from 9:00 - 11:00 a.m. on Tuesday, October 23, 2012.

The out-of-sequence demonstration of reception centers, mass care centers, monitoring/ decontamination centers and emergency worker stations will be conducted from 7:00 - 9:30 p.m. on Wednesday October 24, 2012. Locations are specified within Attachment A, Section II.

The out-of-sequence interview of Pennsylvania State Police traffic control / access control points will be from 10:00 a.m. - 12:00 noon on Wednesday, October 24, 2012.

Municipal TCP demonstrations will occur in conjunction with Municipal EOC operations on Tuesday October 23, 2012. (Please refer to the Extent-of-Play Demonstration Tables, Attachment A)

All demonstrations will commence promptly and, barring any complications, not continue beyond the time of the designated demonstration window.

County and municipal EOC operations will be conducted on October 23, 2012 from 4 p.m. – 10:30 p.m. with the exception of Montour County which will be evaluated during the out of sequence school phase on October 23, 2012. (Please refer to the Extent-of-Play Demonstration Tables, Attachment A)

B. Post Plume Exercise

NOTE: The last post-plume (ingestion) exercise was conducted August 2004 for the SSES location and in 2011 at Limerick for the last federally evaluated exercise for the state.

11. Stand-down

All jurisdictions will request approval on a jurisdiction by jurisdiction basis prior to stand-down.

A. Upon completion of all requirements and after having been informed by the FEMA / REP evaluator that all evaluation areas have been demonstrated and/or completed, the risk municipality EOC's may request approval from their county EOC to "stand-down".

B. Support counties may likewise request approval from the State EOC to terminate the exercise upon completion of all evaluated objectives.

C. The risk county EOC's will remain operational until the exercise is officially terminated by the State. The State EOC will issue an Exercise Termination Message.

12. General Concepts

An emergency plan is drafted to address the generally expected conditions of an emergency. Not everything in the emergency plan may be applicable for a given scenario. The main purpose of an emergency plan is to assemble sufficient expertise and officials so as to properly react to the events as they occur. The responders should not be so tied to a plan that they cannot take actions that are more protective of the public. Therefore, if, by not following the plan, the responders protect the public equally as well as provided in the plan, it should be noted for possible modification of the plan, but not classified as a negative incident. Furthermore, if, by following the plan there is a failure to protect the public health and safety, it should be noted so that the plan can be modified and the appropriate negative assessment corrected.

13. Re-demonstrations

During the out of sequence demonstrations on October 23 and October 24, 2012, or the plume phase demonstrations on October 23, 2012, any activity that is not satisfactorily demonstrated may be re-demonstrated by the participants during the exercise, provided it does not negatively interfere with the exercise. Refresher training may be provided by the players, observers, and/or controllers. Evaluators are not permitted to provide refresher training. Re-demonstrations will be negotiated between the players, observers, controllers, and evaluators. PEMA may advise the RAC Chair prior to initiating any re-demonstrations. It is permissible to extend the demonstration window, within reason, to accommodate the re-demonstration. Activities corrected from a re-demonstration will be so noted.

SUSQUEHANNA STEAM ELECTRIC STATION
2012 RADIOLOGICAL EMERGENCY PREPAREDNESS EXERCISE

EXTENT-OF-PLAY AGREEMENT

EVALUATION AREA 1

Emergency Operations Management

Sub-element 1.a – Mobilization

INTENT
This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to alert, notify, and mobilize emergency personnel, and activate and staff emergency facilities.

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.1.a, e; A.3, 4; C.1, 4, 6; D.4; E.1, 2; H.3, 4)

Assessment/Extent-of-Play
Assessment of this Demonstration Criterion may be accomplished during a full-scale or functional exercise, an actual event, or by means of drills conducted at any time.

Responsible OROs must demonstrate the capability to receive notification of an incident from the licensee; verify the notification; and contact, alert, and mobilize key emergency personnel in a timely manner and demonstrate the ability to maintain and staff 24-hour operations. Twenty-four-hour operations can be demonstrated during the exercise via rosters or shift changes or otherwise in an actual activation. Local responders must demonstrate the ability to receive and/or initiate notification to the licensees or other respective emergency management organizations of an incident in a timely manner, when they receive information from the licensee or alternate sources. Responsible OROs must demonstrate the activation of facilities for immediate use by mobilized personnel upon their arrival. Activation of facilities and staff, including those associated with the Incident Command System, must be completed in accordance with ORO plans/procedures. The location and contact information for facilities included in the incident command must be available to all appropriate responding agencies and the NPP after these facilities have been activated.

The REP program does not evaluate Incident Command System tactical operations, only coordination among the incident command, the utility, and all appropriate OROs, pursuant to plans/procedures.

Pre-positioning of emergency personnel is appropriate, in accordance with the Extent-of-Play Agreement, at those facilities located beyond a normal commuting distance from the individual's duty location or residence. This includes the staggered release of resources from an assembly

area. Additionally, pre-positioning of staff for out-of-sequence demonstrations may be used in accordance with the Extent-of-Play Agreement.

Initial law enforcement, fire service, HAZMAT, and emergency medical response to the NPP site may impact the ability to staff REP functions. The ability to identify and request additional resources or identify compensatory measures must be demonstrated. Exercises must also address the role of mutual aid in the incident, as appropriate. An integral part of the response to an HAB scenario at an NPP may also be within the auspices of the Federal Government (e.g., FBI, NRC, or DHS). Protocols for requesting Federal, state, local, and tribal law enforcement support must be demonstrated, as appropriate. Any resources identified through LOA/MOUs must be on the ORO's mobilization list so they can be contacted during an incident, if needed. All activities must be based on the ORO's plans/procedures and completed as they would be in an actual emergency, unless noted above or otherwise specified in the Extent-of-Play Agreement.

PEMA Negotiated Extent-of-Play: *Pre-positioning of state emergency personnel (Liaison Officers) at the Emergency Operations Facility (EOF), the Utility Joint Information Center (JIC) and Risk and Support Counties is appropriate due to the commuting distance from the individual's duty location or residence. Risk counties/municipalities and support counties will conduct call-outs to demonstrate the mobilization of key personnel. The utility JIC will be evaluated for this drill.*

- *Actual calls (or pager notifications) will be made to the county/municipal EOC personnel for the Plume Phase exercise, October 23, 2012 per plans and procedures.*
- *In all instances, the demonstration of a shift change is **NOT** required. Twenty-four hour staffing will be demonstrated by means of a roster or staffing chart.*
- *All out-of-sequence players will be pre-positioned and equipment will be demonstrated or shown to be in inventory (School District personnel, Pennsylvania State Police TCP/ACP, Reception Centers, Emergency Worker Monitoring and Decontamination Stations Mass Care/Sheltering Centers and Monitoring and Decontamination Centers and for the purpose of this exercise, Montour County EOC).*
- *Individuals working in state facilities and county EOCs may be prepositioned for the plume phase.*

Sub-element 1.b – Facilities

INTENT

This sub-element derives from NUREG–0654, which provides that Offsite Response Organizations (ORO) have facilities to support the emergency response.

Criterion 1.b.1: Facilities are sufficient to support the emergency response. (NUREG–0654, H.3).

Extent-of-Play
Facilities will only be specifically evaluated for this criterion if they are new or have substantial changes in structure or mission. Responsible OROs should demonstrate the availability of facilities that support the accomplishment of emergency operations. Some of the areas to be considered are: adequate space, furnishings, lighting, restrooms, ventilation, backup power and/or alternate facility (if required to support operations).
Facilities must be set up based on the ORO's plans and procedures and demonstrated as they would be used in an actual emergency, unless noted above or otherwise indicated in the Extent-of-Play agreement.

PEMA Negotiated Extent-of-Play: *Shickshinny Borough and the Berwick Borough/Briar Creek Borough EOCs are in new facilities after flooding damage in 2011 and will require evaluation under this criterion.*

Sub-element 1.c - Direction and Control

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to control their overall response to an emergency.

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; A.3; C.4, 6)

Assessment/Extent-of-Play
Assessment of this Demonstration Criterion may be accomplished in a full scale, functional, or tabletop exercise.

Leadership personnel must demonstrate the ability to carry out the essential management functions of the response effort (e.g., keeping staff informed through periodic briefings and/or other means, coordinating with other OROs, and ensuring completion of requirements and requests.) Leadership must demonstrate the ability to prioritize resource tasking and replace/supplement resources (e.g., through MOUs or other agreements) when faced with competing demands for finite resources. Any resources identified through LOA/MOUs must be on the ORO's mobilization list so they may be contacted during an incident, if needed.

All activities must be based on the ORO's plans/procedures and completed as they would be in an actual emergency, unless noted above or otherwise specified in the Extent-of-Play Agreement.

PEMA Negotiated Extent-of-Play: *None*

Sub-element 1.d – Communications Equipment – N/A

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs establish and operate reliable primary and backup communication systems to ensure communications with key emergency personnel at locations such as contiguous governments within the EPZ, Federal emergency response organizations, the licensee and its facilities, EOCs, Incident Command Posts, and FMTs.

Criterion 1.d.1: At least two communication 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)

Assessment/Extent-of-Play
Assessment of this Demonstration Criterion is accomplished initially in a baseline evaluation and subsequently in periodic testing and drills. System familiarity and use must be demonstrated as applicable in full scale, functional and tabletop exercises, or if their use would be required, during an actual event.

OROs must demonstrate that a primary system, and at least one backup system for fixed facilities, is fully functional at all times. Communications systems are maintained and tested on a recurring basis throughout the assessment period and system status is available to all operators. Periodic test results and corrective actions are maintained on a real time basis. If a communications system or systems are not functional, but exercise performance is not affected, no exercise issue will be assessed.

Communications equipment and procedures for facilities and field units are used as needed for transmission and receipt of exercise messages. All facilities, FMTs, and incident command must have the capability to access at least one communication system that is independent of the commercial telephone system. Responsible OROs must demonstrate the capability to manage the communication systems and ensure that all message traffic is handled without delays that might disrupt emergency operations. OROs must ensure that a coordinated communication link for fixed and mobile medical support facilities exists. Exercise scenarios may require the failure of a communication system and use of an alternate system, as negotiated in the Extent-of-Play Agreement.

All activities must be based on the ORO's plans/procedures and completed as they would be in an actual emergency, unless noted above or otherwise specified in the Extent-of-Play Agreement.

PEMA Negotiated Extent-of-Play: *The plant will communicate to the risk counties and State EOC utilizing the Automatic Ring Down System (ARD) (Primary) and telephone/internet (Secondary). Risk and Support Counties will intercommunicate with the State EOC via Telephone (Primary), SEVAN*

(Secondary) and other systems. In the event that the plant is unable to contact the state EOC then Luzerne County EOC will be contacted and fulfill the role of primary contact until such time as communications with the State EOC can be made.

Risk Counties will communicate with their risk municipalities via public safety radio frequencies (EMA Radio) (Primary), Commercial Telephone (Secondary), Internet, Fax, Amateur Radio Communications (ARES/RACES) or other available means.

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

INTENT

This sub-element derives from NUREG-0654, which provides that Offsite Response Organizations (ORO) have emergency equipment and supplies adequate to support the emergency response.

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

Assessment/Extent-of-Play
Assessment of this Demonstration Criterion is accomplished primarily through a baseline evaluation and subsequent periodic inspections.

A particular facility's equipment and supplies must be sufficient and consistent with that facility's assigned role in the ORO's emergency operations plans. Use of maps and other displays is encouraged. For non-facility-based operations, the equipment and supplies must be sufficient and consistent with the assigned operational role. At locations where traffic and access control personnel are deployed, appropriate equipment (e.g., vehicles, barriers, traffic cones, and signs) must be available, or their availability described.

Specific equipment and supplies that must be demonstrated under this criterion include KI inventories, dosimetry, and monitoring equipment, as follows:

KI: Responsible OROs must demonstrate the capability to maintain inventories of KI sufficient for use by: (1) emergency workers; (2) institutionalized individuals, as indicated in capacity lists for facilities; and (3) where stipulated by the plans/procedures, members of the general public (including transients) within the plume pathway EPZ. In addition, OROs must demonstrate provisions to make KI available to specialized response teams (e.g., civil support team, Special Weapons and Tactics Teams, urban search and rescue, bomb squads, HAZMAT, or other ancillary groups) as identified in plans/procedures). The plans/procedures must include the forms to be used for documenting emergency worker ingestion of KI, as well as a mechanism for identifying emergency workers that have declined KI in advance. Consider carefully the placement of emergency workers that have declined KI in advance.

ORO quantities of dosimetry and KI available and storage locations(s) will be confirmed by physical inspection at the storage location(s) or through documentation of current inventory submitted during the exercise, provided in the ALC submission, and/or verified during an SAV. Available supplies of KI must be within the expiration date indicated on KI bottles or blister packs. As an alternative, the ORO may produce a letter from a certified private or state laboratory indicating that the KI supply remains potent, in accordance with U.S. Pharmacopoeia standards.

Dosimetry: Sufficient quantities of appropriate direct-reading and permanent record dosimetry and dosimeter chargers must be available for issuance to all emergency workers who will be dispatched to perform an ORO mission. In addition, OROs must demonstrate provisions to make dosimetry available to specialized response teams (e.g., civil support team, Special Weapons and Tactics Teams, urban search and rescue, bomb squads, HAZMAT, or other ancillary groups) as identified in plans/procedures).

Appropriate direct-reading dosimetry must allow an individual(s) to read the administrative reporting limits and maximum exposure limits contained in the ORO's plans/procedures. Direct-reading dosimeters must be zeroed or operationally checked prior to issuance. The dosimeters must be inspected for Electric leakage at least annually and replaced when necessary. Civil Defense Victoreen Model 138s (CD V-138s) (0-200 mR), due to their documented history of Electric leakage problems, must be inspected for Electric leakage at least quarterly and replaced when necessary. This leakage testing will be verified during the exercise, through documentation submitted in the ALC and/or through an SAV.

Operational checks and testing of electronic dosimeters must be in accordance with the manufacturer's instructions and be verified during the exercise, through documentation submitted in the ALC and/or through an SAV.

Monitoring Instruments: All instruments must be inspected, inventoried, and operationally checked before each use. Instruments must be calibrated in accordance with the manufacturer's recommendations. Unmodified CDV-700 series instruments and other instruments without a manufacturer's recommendation must be calibrated annually. Modified CDV-700 instruments must be calibrated in accordance with the recommendation of the modification manufacturer. A label indicating such calibration must be on each instrument or calibrated frequency can be verified by other means. In addition, instruments being used to measure activity must have a sticker-affixed to their sides indicating the effective range of the readings. The range of readings documentation specifies the acceptable range of readings that the meter should indicate when it is response-checked using a standard test source.

For FMTs, the instruments must be capable of measuring gamma exposure rates and detecting beta radiation. These instruments must be capable of measuring a range of activity and exposure, including radiological protection/exposure control of team members and detection of activity on air sample collection media, consistent with the intended use of the instrument and the ORO's

plans/procedures. An appropriate radioactive check source must be used to verify proper operational response for each low-range radiation measurement instrument (less than 1R/hr) and for high-range instruments when available. If a source is not available for a high-range instrument, a procedure must exist to operationally test the instrument before entering an area where only a high-range instrument can make useful readings.

In areas where portal monitors are used, the OROs must set up and operationally check the monitor(s). The monitor(s) must conform to the standards set forth in the *Contamination Monitoring Standard for a Portal Monitor Used for Emergency Response,* FEMA-REP-21 (March 1995) or in accordance with the manufacturer's recommendations.

All activities must be based on the ORO's plans and procedures and completed, as they would be in an actual emergency, unless noted above or otherwise indicated in the extent-of-play agreement.

PEMA Negotiated Extent-of-Play:

Radiological Survey Instruments are calibrated per manufactures recommendations. Support counties do not have DRDs, or KI, but those responsible for reception centers and / or monitoring and decontamination centers will have PRDs. Simulated PRDs may be used for the evaluation.

Evaluation of KI quantities will be verified using inventory sheets. KI will not be removed from storage locations and boxes / packages will not be opened. KI questions will be addressed through interviews.
Electronic DRD's are in use in the SSES Plume EPZ. Calibration/testing information will be available to the evaluator. Pencil style DRD's may be in use as a backup such as when the electronic DRD's are being calibrated.

Reception Centers shall be evaluated on their ability to use maps or other documentation to direct evacuating persons to the correct Monitoring/Decontamination Centers and/or Mass Care Centers.

EVALUATION AREA 2

Protective Action Decision-Making

Sub-element 2.a - Emergency Worker Exposure Control

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to assess and control the radiation exposure received by emergency workers and have a decision chain in place, as specified in the ORO's plans/procedures, to authorize emergency worker exposure limits to be exceeded for specific missions.

Radiation exposure limits for emergency workers are the recommended accumulated dose limits or exposure rates that emergency workers may be permitted to incur during an emergency. These limits include any pre-established administrative reporting limits (that take into consideration TEDE or organ-specific limits) identified in the ORO's plans/procedures.

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

Assessment/Extent-of-Play
Assessment of this Demonstration Criterion must be assessed concurrently with a licensee exercise and may be demonstrated in a full scale, functional or tabletop exercise.

OROs authorized to send emergency workers into the plume exposure pathway EPZ must demonstrate a capability to comply with emergency worker exposure limits based on their emergency plans/procedures.

Participating OROs must also demonstrate the capability to make decisions concerning authorization of exposure levels in excess of pre-authorized levels and the number of emergency workers receiving radiation doses above pre-authorized levels. This would include providing KI and dosimetry in a timely manner to emergency workers dispatched onsite to support plant incident assessment and mitigating actions, in accordance with respective plans/procedures.

As appropriate, OROs must demonstrate the capability to make decisions on the distribution and administration of KI as a protective measure for emergency workers, based on their plans/procedures or projected thyroid dose compared with the established PAGs for KI administration.

PEMA Negotiated Extent-of-Play: *Radiological briefings (which may be supported by video) will be provided to address exposure limits, procedures to replace those personnel approaching exposure limits and how permission to exceed limits is obtained from the municipality and county. Emergency workers will also be briefed on when to take KI and on whose authority. Distribution of KI to emergency workers will be simulated.*

The completion of a "Dosimetry-KI Report Form" will be demonstrated.

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

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to independently project integrated dose from projected or actual dose rates and compare these estimates to the PAGs. OROs must have the capability to choose, among a range of protective actions, those most appropriate in a given emergency. OROs base these choices on PAGs from their plans/procedures or EPA's *Manual of Protective Action Guides and Protective Actions for Nuclear Incidents* and other criteria, such as plant conditions, licensee PARs, coordination of PADs with other political jurisdictions (e.g., other affected OROs and incident command), availability of in-place shelter, weather conditions, and situations, to include HAB incidents, the threat posed by the specific hostile action, the affiliated response, and the effect of an evacuation on the threat response effort, that create higher than normal risk from general population evacuation.

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

Assessment/Extent-of-Play
Assessment of this Demonstration Criterion must be accomplished concurrently with a licensee exercise and may be demonstrated in a full-scale, functional or tabletop exercise.

During the initial stage of the emergency response, following notification of plant conditions that may warrant offsite protective actions, the ORO must demonstrate the capability to use appropriate means, described in the plans/procedures, to develop PARs for decision-makers based on available information and recommendations provided by the licensee as well as field monitoring data, if available. The ORO must also consider any release and meteorological data provided by the licensee.

The ORO must demonstrate a reliable capability to independently validate dose projections. The types of calculations to be demonstrated depend on the data available and the need for assessments to support the PARs must be appropriate to the scenario. In all cases, calculation of projected dose must be demonstrated. Projected doses must be related to quantities and units of the PAG to which they will be compared. PARs must be promptly transmitted to decision-makers in a pre-arranged format.

When the licensee and ORO projected doses differ by more than a factor of 10, the ORO and licensee must determine the source of the difference by discussing input data and assumptions, using different models, or exploring possible reasons. Resolution of these differences must be incorporated into the PARs if timely and appropriate. The ORO must demonstrate the capability to use any additional data to refine projected doses and exposure rates and revise the associated PARs.

All activities must be based on the ORO's plans/procedures and completed as they would be in an actual emergency, unless noted above or otherwise specified in the Extent-of-Play Agreement.

PEMA Negotiated Extent-of-Play: *None/Not Evaluated*

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

Assessment/Extent-of-Play
Assessment of this Demonstration Criterion must be accomplished concurrently with a licensee exercise and may be demonstrated in a full-scale, functional or tabletop exercise.

OROs must have the capability to make both initial and subsequent PADs. OROs must demonstrate the capability to make initial PADs in a timely manner appropriate to the incident, based on information from the licensee, assessment of plant status and potential or actual releases, other available information related to the incident, input from appropriate ORO authorities (e.g., incident command), and PARs from the utility and ORO staff. In addition, a subsequent or alternate PAD may be appropriate if various conditions (e.g., an HAB incident, weather, release timing and magnitude) pose undue risk to an evacuation, or if evacuation may disrupt the efforts to respond to a hostile action.

OROs must demonstrate the ability to obtain supplemental resources (e.g., mutual aid) necessary to implement a PAD if local law enforcement, fire service, HAZMAT, and emergency medical resources are utilized to augment response to the NPP site or other key infrastructure.

Dose assessment personnel may provide additional PARs based on the subsequent dose projections, field monitoring data, or information on plant conditions. In addition, incident command must provide input regarding considerations for subsequent PARs based on the magnitude of the ongoing threat, the response, and/or site conditions. The decision-makers must demonstrate the capability to change protective actions based on the combination of all these factors.

If the ORO has determined that KI will be used as a protective measure for the general public under offsite plans/procedures, then it must demonstrate the capability to make decisions on the distribution and administration of KI to supplement sheltering and evacuation. This decision must be based on the ORO's plans/procedures or projected thyroid dose compared with the established PAG for KI administration. The KI decision-making process must involve close coordination with appropriate assessment and decision-making staff.

If more than one ORO is involved in decision making, all appropriate OROs must communicate and coordinate PADs with each other. In addition, decisions must be coordinated/communicated with incident command. OROs must demonstrate the capability to communicate the results of decisions to all the affected locations.

All activities must be based on the ORO's plans/procedures and completed as they would be in an actual emergency, unless noted above or otherwise specified in the Extent-of-Play Agreement.

PEMA Negotiated Extent-of-Play: *None/Not Evaluated*

Sub-element 2.c – PAD Consideration for the Protection of Persons with Disabilities and Access/Functional Needs

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to determine PADs, including evacuation, sheltering, and use of KI, if applicable, for groups of persons with disabilities and access/functional needs (e.g., hospitals, nursing homes, correctional facilities, schools, licensed daycare centers, mobility-impaired individuals, and transportation-dependent individuals). The focus is on those groups of persons with disabilities and access/functional needs that are, or potentially will be, affected by a radiological release from an NPP.

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

Assessment/Extent-of-Play
Assessment of this Demonstration Criterion must be accomplished concurrently with a licensee exercise and may be demonstrated in a full-scale, functional or tabletop exercise that would include the use of plant conditions transmitted from the licensee. Usually it is appropriate to implement evacuation in areas where doses are projected to exceed the lower end of the range of PAGs, except for incidents where there is a high-risk environmental condition or where high-risk groups (e.g., the immobile or infirm) are involved. In these cases, factors that must be considered include weather conditions, shelter availability, availability of transportation assets, risk of evacuation versus risk from the avoided dose, and precautionary school evacuations. In addition, decisions must be coordinated/communicated with the incident command. In situations where an institutionalized population cannot be evacuated, the ORO must consider use of KI.

Applicable OROs must demonstrate the capability to alert and notify all public school systems/districts of emergency conditions that are expected to or may necessitate protective actions for students. Demonstration requires that the OROs actually contact public school systems/districts during the exercise.

In accordance with plans/procedures, OROs and/or officials of public school systems/districts must demonstrate the capability to make prompt decisions on protective actions for students. The decision-making process, including any preplanned strategies for protective actions for that ECL,

must consider the location of students at the time (e.g., whether the students are still at home, en route to school, or at school).

All activities must be based on the ORO's plans/procedures and completed as they would be in an actual emergency, unless noted above or otherwise specified in the Extent-of-Play Agreement.

***PEMA Negotiated Extent- of-Play**: The State EOC will not be evaluated during this exercise; however, this element will be demonstrated during the plume phase exercise as a control mechanism.*

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

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the means to assess the radiological consequences for the ingestion exposure pathway, relate them to the appropriate PAGs, and make timely, appropriate PADs to mitigate exposure from the pathway.

During an incident at an NPP, a release of radioactive material may contaminate water supplies and agricultural products in the surrounding areas. Any such contamination would likely occur during the plume phase of the incident and, depending on the nature of the release, could impact the ingestion pathway for weeks or years.

Criterion 2.d.1: Radiological consequences for the ingestion pathway are assessed and appropriate protective action decisions are made based on the ORO's planning criteria. (NUREG-0654/FEMA-REP-1, A.3; C.1, 4; D.4; J.9,11)

Assessment/Extent-of-Play
Assessment of this Demonstration Criterion must be accomplished concurrently with a licensee exercise and may be demonstrated in a full-scale, functional or tabletop exercise that would include the use of plant conditions transmitted from the licensee.

OROs are expected to take precautionary actions to protect food and water supplies, or to minimize exposure to potentially contaminated water and food, in accordance with their respective plans/procedures. Often OROs initiate such actions based on criteria related to the facility's ECLs. Such actions may include recommendations to place milk animals on stored feed and use protected water supplies. The ORO must use its procedures to assess the radiological consequences of a release on the food and water supplies, such as the development of a sampling plan. The ORO's assessment must include evaluation of the radiological analyses of representative samples of water, food, and other ingestible substances of local interest from potentially impacted areas; characterization of the releases from the facility; and the extent of areas potentially impacted by the release. During this assessment, OROs must consider use of

agricultural and watershed data within the 50-mile EPZ. The radiological impacts on the food and water must then be compared to the appropriate ingestion PAGs contained in the ORO's plans/procedures. The plans/procedures contain PAGs based on specific dose commitment criteria or on criteria as recommended by current Food and Drug Administration (FDA) guidance. Timely and appropriate recommendations must be provided to the ORO decision-makers group for implementation decisions. OROs may also include a comparison of taking or not taking a given action on the resultant ingestion pathway dose commitments.

The ORO must demonstrate timely decisions to minimize radiological impacts from the ingestion pathway, based on the given assessments and other information. Any such decisions must be communicated and, to the extent practical, coordinated with neighboring OROs.

OROs must use Federal resources, as identified in the Nuclear/Radiological Incident Annex of the NRF and other resources (e.g., compacts or nuclear insurers). Evaluation of this criterion will take into consideration the level of Federal and other participating resources.

All activities must be based on the ORO's plans/procedures and completed as they would be in an actual emergency, unless noted above or otherwise specified in the Extent-of-Play Agreement.

PEMA Negotiated Extent-of-Play: *This sub-element will NOT be evaluated during this exercise. This element was demonstrated during the Post Plume Exercise conducted during the week of August 16, 2004 for SSES and on the week of March 7th, 2011 for the Commonwealth.*

Sub-element 2.e. – Radiological Assessment and Decision Making Concerning Post-Plume Phase Relocation, Reentry, and Return

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to make decisions on post-plume phase *relocation*, *reentry*, and *return* of the general public. These decisions are essential for protection of the public from direct long-term exposure to deposited radioactive materials from a severe incident at an NPP.

Criterion 2.e.1: Timely post-plume phase relocation, reentry, and return decisions are made and coordinated as appropriate, based on assessments of the radiological conditions and criteria in the ORO's plan and/or procedures. (NUREG-0654/FEMA-REP-1, I.10; J.9; K.3.a; M.1)

Assessment/Extent-of-Play
Assessment of this Demonstration Criterion must be accomplished concurrently with a licensee exercise and may be demonstrated in a full-scale, functional or tabletop exercise that would include the use of plant conditions transmitted from the licensee.

Relocation: OROs must demonstrate the capability to estimate integrated dose in contaminated areas and compare these estimates with PAGs; apply decision criteria for relocation of those individuals in the general public who have not been evacuated, but where actual or projected doses are in excess of relocation PAGs; and control access to evacuated and restricted areas. OROs will make decisions for relocating members of the evacuated public who lived in areas that now have residual radiation levels in excess of the PAGs. Determination of areas to be restricted must be based on factors such as the mix of radionuclides in deposited materials, calculated exposure rates versus the PAGs, and analyses of vegetation and soil field samples.

Reentry: Decisions must be made on location of control points and policies regarding access and exposure control for emergency workers and members of the general public who need to temporarily enter the evacuated area to perform specific tasks or missions.

Examples of control procedures are the assignment of, or checking for, direct-reading and permanent record dosimetry for emergency workers; questions regarding an individual's objectives, locations expected to be visited, and associated timeframes; availability of maps and plots of radiation exposure rates; and advice on areas to avoid. Control procedures also include monitoring of individuals, vehicles, and equipment; the implementation of decision criteria regarding decontamination; and proper disposition of emergency worker dosimetry and maintenance of emergency worker radiation exposure records.

Responsible OROs must demonstrate the capability to develop a strategy for authorized reentry of individuals into the restricted zone(s), based on established decision criteria. OROs must demonstrate the capability to modify those policies for security purposes (e.g., police patrols), maintenance of essential services (e.g., fire protection and utilities), and other critical functions. They must demonstrate the capability to use decision-making criteria in allowing access to the restricted zone by the public for various reasons, such as to maintain property (e.g., to care for farm animals or secure machinery for storage) or retrieve important possessions. Coordinated policies for access and exposure control must be developed among all agencies with roles to perform in the restricted zone(s). OROs must demonstrate the capability to establish policies for provision of dosimetry to all individuals allowed to reenter the restricted zone(s). The extent to which OROs need to develop policies on reentry will be determined by scenario events.

Return: OROs must demonstrate the capability to implement policies concerning return of members of the public to areas that were evacuated during the plume phase (i.e., permitting populations that were previously evacuated to reoccupy their homes and businesses on an unrestricted basis). OROs must base decisions on environmental data and political boundaries or physical/ geological features, which allow identification of the boundaries of areas to which members of the general public may return. Return is permitted to the boundary of the restricted area(s) that is based on the relocation PAG.

Other factors that the ORO must consider in decision-making include conditions that permit cancellation of the ECL and relaxation of associated restrictive measures. OROs must base return recommendations on measurements of radiation from ground deposition. OROs must have the capability to identify services and facilities that require restoration within a few days and to

identify the procedures and resources for their restoration. Examples of these services and facilities are medical and social services, utilities, roads, schools, and intermediate-term housing for relocated persons.

All activities must be based on the ORO's plans/procedures and completed as they would be in an actual emergency, unless noted above or otherwise specified in the Extent-of-Play Agreement.

PEMA Negotiated Extent-of-Play: *This sub-element will NOT be evaluated during this exercise. This element was demonstrated during the Post Plume Exercise conducted during the week of August 16, 2004 for SSES and on the week of March 7th, 2011 for the Commonwealth.*

EVALUATION AREA 3

Protective Action Implementation

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

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to provide for the following: distribution, use, collection, and processing of direct-reading dosimetry and permanent record dosimetry; reading of direct-reading dosimetry by emergency workers at appropriate frequencies; maintaining a radiation dose record for each emergency worker; establishing a decision chain or authorization procedure for emergency workers to incur radiation exposures in excess of the PAGs, and the capability to provide KI for emergency workers, always applying the —as low as is reasonably achievable‖ principle as appropriate.

Criterion 3.a.1: 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. OROs maintain appropriate record-keeping of the administration of KI to emergency workers. (NUREG-0654/FEMA-REP-1, J.10.e; K.3.a, b; K.4)

Assessment/Extent-of-Play
Assessment of this Demonstration Criterion may be accomplished during a full-scale, functional or tabletop exercise. Other means may include drills, seminars or training activities that would fully demonstrate technical proficiency.

OROs must demonstrate the capability to provide emergency workers (including supplemental resources) with the appropriate direct-reading and permanent record dosimetry, dosimeter chargers, KI, and instructions on the use of these items. For evaluation purposes, appropriate direct-reading dosimetry is defined as dosimetry that allows an individual(s) to read the

administrative reporting limits that are pre-established at a level low enough to consider subsequent calculation of TEDE and maximum exposure limits, for those emergency workers involved in lifesaving activities, contained in the ORO's plans/procedures.

Each emergency worker must have basic knowledge of radiation exposure limits as specified in the ORO's plans/procedures. If supplemental resources are used, they must be provided with just-in-time training to ensure basic knowledge of radiation exposure control. Emergency workers must demonstrate procedures to monitor and record dosimeter readings and manage radiological exposure control.

During a plume phase exercise, emergency workers must demonstrate the procedures to be followed when administrative exposure limits and turn-back values are reached. The emergency worker must report accumulated exposures during the exercise as indicated in the plans/procedures. OROs must demonstrate the actions described in the plans/procedures by determining whether to replace the worker, authorize the worker to incur additional exposures, or take other actions. If exercise play does not require emergency workers to seek authorizations for additional exposure, evaluators must interview at least two workers to determine their knowledge of whom to contact in case authorization is needed, and at what exposure levels. Workers may use any available resources (e.g., written procedures and/or coworkers) in providing responses.

Although it is desirable for all emergency workers to each have a direct-reading dosimeter, there may be situations where team members will be in close proximity to each other during the entire mission. In such cases, adequate control of exposure can be achieved for all team members using one direct-reading dosimeter worn by the team leader. Emergency workers assigned to low-exposure rate fixed facilities (e.g., EOCs and communications center within the EPZ, reception centers, and counting laboratories) may have individual direct-reading dosimeters or they may be monitored using group dosimetry (i.e., direct-reading dosimeters strategically placed in the work area). Each team member must still have his or her own permanent record dosimetry. Individuals authorized by the ORO to reenter an evacuated area during the plume (emergency) phase, must be limited to the lowest radiological exposure commensurate with completing their missions.

OROs may have administrative limits lower than EPA-400-R-92-001 dose limits for emergency workers performing various services (e.g., life saving, protection of valuable property, all activities). OROs must ensure that the process used to seek authorization for exceeding dose limits does not negatively impact the capability to respond to an incident where life saving and/or protection of valuable property may require an urgent response.

OROs must demonstrate the capability to accomplish distribution of KI to emergency workers consistent with decisions made. OROs must have the capability to develop and maintain lists of emergency workers who have ingested KI, including documentation of the date(s) and time(s) they did so. Ingestion of KI recommended by the designated ORO health official is voluntary. For evaluation purposes, the actual ingestion of KI shall not be performed. OROs must demonstrate the capability to formulate and disseminate instructions on using KI for those

advised to take it. Emergency workers must demonstrate basic knowledge of procedures for using KI whether or not the scenario drives the implementation of KI use. This can be accomplished by an interview with the evaluator.

All activities must be based on the ORO's plans/procedures and completed as they would be in an actual emergency, unless noted above or otherwise specified in the Extent-of-Play Agreement.

PEMA Negotiated Extent-of-Play:

Radiological briefings will be provided to address exposure limits, procedures to replace personnel approaching limits, and how permission to exceed limits is obtained from the municipality and county. Emergency workers will also be briefed on when to take KI and on whose authority. Distribution of KI will be simulated.

OROs should also demonstrate the use of all applicable dosimetry forms. The completion of a "Dosimetry-KI Report Form" will be demonstrated.

At any time, players may ask other players or supervisors to clarify radiological information.

In Pennsylvania, emergency workers outside of the EPZ do not have turn back values.

Emergency workers who are assigned to low exposure rate areas, e.g., at counting laboratories, emergency operations centers, and communications centers, may have individual permanent record dosimeters or they may be monitored by dosimeters strategically placed in the work area. In Pennsylvania this will be accomplished through the use of an area kit. The area kit process is explained in State, County and Municipal Plans.

Standard issue of dosimetry and potassium iodide for each category of emergency worker is as follows:

Category A: 1 PRD, 1 DRD, and 1 unit of KI
Category B: 1 PRD and 1 unit of KI (Area Kit includes 2 DRDs)
Category C: 1 PRD

All locations that have dosimetry equipment indicated within their Radiological Emergency Response Plan (RERP), will make the dosimetry equipment (and KI) available for inspection by the Federal Evaluator. In order to demonstrate an understanding of the use of the dosimetry equipment, KI and associated forms; the location need only remove and distribute / issue a maximum of six (6) units of dosimetry from their inventory. Simulation PRDs with mock serial numbers may be used.

Sub-element 3.b – Implementation of KI Decision for Institutionalized Individuals and the General Public

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to provide KI for institutionalized individuals, and, if in the plans/procedures, to the general public for whom immediate evacuation may not be feasible, very difficult, or significantly delayed. While it is necessary for OROs to have the capability to provide KI to institutionalized individuals, providing KI to the general public is an ORO option and must be reflected as such in ORO plans/procedures. Provisions must include the availability of adequate quantities, storage, and means of distributing KI.

Criterion 3.b.1: KI and appropriate instructions are available if a decision to recommend use of KI is made. Appropriate record-keeping of the administration of KI for institutionalized individuals and the general public is maintained. (NUREG-0654/FEMA-REP-1, J.10.e, f)

Assessment/Extent-of-Play
Assessment of this Demonstration Criterion may be accomplished during a full-scale, functional or tabletop exercise. Other means may include drills, seminars or training activities that would fully demonstrate technical proficiency.

OROs must demonstrate the capability to make KI available to institutionalized individuals, and, where provided for in their plans/procedures, to members of the general public. OROs must demonstrate the capability to accomplish distribution of KI consistent with decisions made. OROs must have the capability to develop and maintain lists of institutionalized individuals who have ingested KI, including documentation of the date(s) and time(s) they were instructed to ingest KI. Ingestion of KI recommended by the designated ORO health official is voluntary. For evaluation purposes, the actual ingestion of KI shall not be performed. OROs must demonstrate the capability to formulate and disseminate instructions on using KI for those advised to take it.

If a recommendation is made for the general public to take KI, appropriate information must be provided to the public by the means of notification specified in the ORO's plans/procedures.

All activities must be based on the ORO's plans/procedures and completed as they would be in an actual emergency, unless noted above or otherwise specified in the Extent-of-Play Agreement.

PEMA Negotiated Extent-of-Play:

Within Pennsylvania, the Pennsylvania Department of Health is responsible for distribution of KI to the general public located within the EPZ. Pre-distribution is accomplished on an annual basis. Pennsylvania does not distribute KI at reception centers.

Evaluation of emergency worker KI quantities will be verified using inventory sheets. KI will not be removed from storage locations and boxes will not be opened. KI questions will be addressed through interviews.

Personnel assigned to operate Monitoring / Decontamination centers and stations are not issued DRDs or KI since the centers/stations are located outside the EPZ. Simulated PRDs with mock serial numbers may be issued.

Sub-element 3.c – Implementation of Protective Actions for Persons with Disabilities and Access/Functional Needs

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to implement PADs, including evacuation and/or sheltering, for all persons with disabilities and access/functional needs. The focus is on those persons with disabilities and access/functional needs that are (or potentially will be) affected by a radiological release from an NPP.

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

Assessment/Extent-of-Play
Assessment of this Demonstration Criterion may be accomplished during a full-scale or functional exercise, an actual event, or by means of drills conducted at any time.

Applicable OROs must demonstrate the capability to alert and notify (i.e., provide PARs and emergency information and instructions to) persons with disabilities and access/functional needs, including hospitals/medical facilities, nursing homes, correctional facilities, and mobility-impaired and transportation-dependent individuals. OROs must demonstrate the capability to provide for persons with disabilities and access/functional needs in accordance with plans/procedures.

Contact with persons with disabilities and access/functional needs and reception facilities may be actual or simulated, as agreed to in the Extent-of-Play. Some contacts with transportation providers must be actual, as negotiated in the Extent-of-Play. All actual and simulated contacts must be logged.

All activities must be based on the ORO's plans/procedures and completed as they would be in an actual emergency, unless noted above or otherwise specified in the Extent-of-Play Agreement.

PEMA Negotiated Extent-of-Play:

Lists of Persons with Disabilities and Access/Functional Needs including name, address, contact information, and description of need shall be maintained at their respective municipal EOC (based upon residential jurisdiction). Copies of these lists will not be provided to the evaluators; however, evaluators will be allowed to inspect the lists during the exercise.

Initial contact, by the County, with special populations (hospitals, nursing homes and county correctional facilities) will be actual. All subsequent calls will be simulated. Actual contacts (up to two per Risk County) will be made with transportation providers per the county. All actual and simulated contacts should be logged.

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

Assessment/Extent-of-Play
Assessment of this Demonstration Criterion may be accomplished during a full-scale, functional, or tabletop exercise, an actual event, or by means of drills conducted at any time.
Public school systems/districts must demonstrate the ability to implement PADs for students. The demonstration must be made as follows: Each school system/district within the 10 mile EPZ must demonstrate implementation of protective actions. At least one school per affected system/district must participate in the demonstration. Canceling the school day, dismissing early, or sheltering in place must be simulated by describing to evaluators the procedures that would be followed. If evacuation is the implemented protective action, all activities to coordinate and complete the evacuation of students to reception centers, congregate care centers, or host schools may actually be demonstrated or accomplished through an interview process.

If accomplished through an interview, appropriate school personnel including decision-making officials (e.g., schools' superintendent/principals and transportation director/bus dispatchers), and at least one bus driver (and the bus driver's escort, if applicable) must be available to demonstrate knowledge of their role(s) in the evacuation of school children. Communications capabilities between school officials and the buses, if required by the plans/procedures, must be verified.

Officials of the school system(s) must demonstrate the capability to develop and provide timely information to OROs for use in messages to parents, the general public, and the media on the status of protective actions for schools.

The provisions of this criterion also apply to any private schools, private kindergartens, and licensed daycare centers that participate in REP exercises pursuant to the ORO's plans/procedures as negotiated in the Extent-of-Play Agreement.

All activities must be based on the ORO's plans/procedures and completed as they would be in an actual emergency, unless noted above or otherwise specified in the Extent-of-Play Agreement.

PEMA Negotiated Extent-of-Play:

School Students will not be involved during the exercise. Actions and activities associated with the demonstration of Criterion 3.c.2 will be limited to the School District Administration key personnel and the County. Evacuation of students will be conducted through an interview process with School District personnel or the building principal.

Although a bus driver should be available for interview the role of the bus driver may be conducted through an interview with school or transportation officials (or designee) if a bus driver is not available. Actual demonstration of the bus route is not required and will not be demonstrated. Maps or route descriptions will be available for illustration purposes.

Risk County school plans do not require communications between the school and vehicles. Bus drivers are not considered emergency workers and therefore do not require dosimetry.

Private schools, private kindergartens, and day care centers do not participate in REP exercises. However, OROs will be prepared to show evaluators lists of these facilities that they will contact in the event of an emergency in accordance with plans and procedures. Any simulated contacts will be logged.

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

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to implement protective action plans/procedures, including relocation and restriction of access to evacuated/sheltered areas. This Sub-element focuses on selecting, establishing, and staffing of traffic and access control points, and removal of impediments to the flow of evacuation traffic.

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, A.3; C.1,4; J.10.g, j)

Assessment/Extent-of-Play
Assessment of this Demonstration Criterion may be accomplished during a full-scale or functional exercise, an actual event, or by means of drills conducted at any time.

OROs must demonstrate the capability to select, establish, and staff appropriate traffic and access control points consistent with current conditions and PADs (e.g., evacuating, sheltering, and relocation) in a timely manner. OROs must demonstrate the capability to provide instructions to traffic and access control staff on actions to take when modifications in protective action strategies necessitate changes in evacuation patterns or in the area(s) where access is controlled. Traffic and access control staff must demonstrate accurate knowledge of their roles

and responsibilities, including verifying emergency worker identification and access authorization to the affected areas, as per the Extent-of-Play Agreement. These capabilities may be demonstrated by actual deployment or by interview, in accordance with the Extent-of-Play Agreement.

In instances where OROs lack authority necessary to control access by certain types of traffic (e.g., rail, water, and air traffic), they must demonstrate the capability to contact the state or Federal agencies that have the needed authority, as agreed upon in the Extent-of-Play Agreement.

All activities must be based on the ORO's plans/procedures and completed as they would be in an actual emergency, unless noted above or otherwise specified in the Extent-of-Play Agreement.

PEMA Negotiated Extent-of-Play:

Municipal Traffic and Access control will be demonstrated by interview at the applicable EOC of jurisdiction. The traffic / access control personnel will not be deployed to the traffic / access control point(s). If the designated assignment is a location within the EPZ, a radiological briefing will be provided to the assigned individuals.

Reception Centers shall provide a traffic control plan for the location being evaluated.

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

Assessment/Extent-of-Play
Assessment of this Demonstration Criterion may be accomplished during a full-scale or functional exercise, an actual event, or by means of drills conducted at any time.

OROs must demonstrate the capability, as required by the scenario, to identify and take appropriate actions concerning impediments to evacuation. Actual dispatch of resources to deal with impediments, such as wreckers, need not be demonstrated; however, all contacts, actual or simulated, must be logged. 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.

All activities must be based on the ORO's plans/procedures and completed as they would be in an actual emergency, unless noted above or otherwise specified in the Extent-of-Play Agreement.

***PEMA Negotiated Extent-of-Play*:**

ORO's should demonstrate the capability, as required by the scenario, to identify and take appropriate actions concerning impediments to evacuation. Actual dispatch of resources to deal

with impediments, such as tow trucks, need not be demonstrated; however, simulated contacts will be logged. (Risk counties only)

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

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to implement protective actions, based on criteria recommended by current FDA guidance, for the ingestion exposure pathway EPZ (i.e., the area within an approximate 50-mile radius of the NPP). This Sub-element focuses on those actions required for implementation of protective actions.

Criterion 3.e.1: The ORO demonstrates the availability and appropriate use of adequate information regarding water, food supplies, milk, and agricultural production within the ingestion exposure pathway emergency planning zone for implementation of protective actions. NUREG-0654/FEMA-REP-1, A.3; C.1, 4; J.11)

Assessment/Extent-of-Play
Assessment of this Demonstration Criterion may be accomplished during a full-scale or functional exercise, an actual event, or by means of drills conducted at any time.

Applicable OROs must demonstrate the capability to secure and use current information on the locations of dairy farms, meat and poultry producers, fisheries, fruit growers, vegetable growers, grain producers, food processing plants, and water supply intake points to implement protective actions within the EPZ. OROs use Federal resources as identified in the NRF Nuclear/Radiological Incident Annex, and other resources (e.g., compacts, nuclear insurers), if available. Evaluation of this criterion will take into consideration the level of Federal and other resources participating in the exercise.

All activities must be based on the ORO's plans/procedures and completed as they would be in an actual emergency, unless noted above or otherwise specified in the Extent-of-Play Agreement.

PEMA Negotiated Extent-of-Play: *Not demonstrated during this exercise. This element was demonstrated during the SSES Post Plume Exercise conducted during the week of August 16, 2004 for SSES and on the week of March 7th, 2011 for the Commonwealth.*

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, G.1, J.9, 11)

Assessment/Extent-of-Play
Assessment of this Demonstration Criterion may be accomplished during a full-scale or functional exercise, an actual event, or by means of drills conducted at any time.

OROs must demonstrate the development of measures and strategies for implementation of ingestion exposure pathway EPZ protective actions by formulating protective action information for the general public and food producers and processors. Demonstration of this criterion includes either pre-distributed public information material in the ingestion exposure pathway EPZ or the capability for rapid reproduction and distribution of appropriate reproduction-ready information and instructions to pre-determined individuals and businesses.

OROs must also demonstrate the capability to control, restrict, or prevent distribution of contaminated food by commercial sectors. Exercise play must include demonstration of communications and coordination among organizations to implement protective actions. Field play of implementation activities may be simulated. For example, communications and coordination with agencies responsible for enforcing food controls within the ingestion exposure pathway EPZ must be demonstrated, but actual communications with food producers and processors may be simulated.

All activities must be based on the ORO's plans/procedures and completed as they would be in an actual emergency, unless noted above or otherwise specified in the Extent-of-Play Agreement.

PEMA Negotiated Extent-of-Play: *Not demonstrated during this exercise. This element was demonstrated during the SSES Post Plume Exercise conducted during the week of August 16, 2004 and on the week of March 7th, 2011 for the Commonwealth.*

Sub-element 3.f – Implementation of Post-Plume Phase Relocation, Reentry, and Return Decisions

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to implement plans, procedures, and decisions for post-plume phase *relocation*, *reentry*, and *return*. Implementation of these decisions is essential for protecting the public from direct long-term exposure to deposited radioactive materials from a severe incident at a commercial NPP.

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

Assessment/Extent-of-Play
Assessment of this Demonstration Criterion may be accomplished during a full-scale, functional, or tabletop exercise, an actual event, or by means of drills conducted at any time.

Relocation: OROs must demonstrate the capability to coordinate and implement decisions concerning relocation of individuals located in radiologically contaminated areas who were not previously evacuated. Such individuals must be relocated to an area(s) where radiological contamination will not expose the general public to doses that exceed the relocation PAGs. OROs must also demonstrate the capability to provide for short- or long-term relocation of evacuees who lived in an area(s) that has residual radiation levels above the (first-, second-, and 50-year) PAGs.

Areas of consideration must include the capability of OROs to communicate with other OROs regarding timing of actions, notification of the population of procedures for relocation, and notification of, and advice for, evacuated individuals who will be converted to relocation status in situations where they will not be able to return to their homes due to high levels of contamination. OROs must also demonstrate the capability to communicate instructions to the public regarding relocation decisions and intermediate-term housing for relocated persons.

Reentry: OROs must demonstrate the capability to control reentry and exit of individuals who are authorized by the ORO to temporarily reenter the restricted area during the post-plume (i.e., intermediate or late) phase to protect them from unnecessary radiation exposure. OROs must also demonstrate the capability to control exit of vehicles and other equipment to control the spread of contamination outside the restricted area(s). Individuals without specific radiological response missions, such as farmers for animal care, essential utility service personnel, or other members of the public who must reenter an evacuated area during the post-emergency phase must be limited to the lowest radiological exposure commensurate with completing their missions. Monitoring and decontamination facilities will be established as appropriate.

Examples of control procedures are: (1) assignment of, or checking for, direct-reading and permanent record dosimetry for emergency workers; (2) questions regarding the individuals' objective(s), location(s) expected to be visited, and associated timeframes; (3) maps and plots of radiation exposure rates; (4) advice on areas to avoid; (5) procedures for exit, including monitoring of individuals, vehicles, and equipment; (6) decision criteria regarding contamination; (7) proper disposition of emergency worker dosimetry, and (8) maintenance of emergency worker radiation exposure records.

Return: OROs must demonstrate the capability to implement policies concerning return of members of the public to areas that were evacuated during the plume phase. OROs must demonstrate the capability to identify and prioritize services and facilities that require restoration within a few days, and to identify procedures and resources for their restoration. Examples of these services and facilities are medical and social services, utilities, roads, and schools.

Communication among OROs for relocation, reentry, and return may be simulated. All simulated or actual contacts must be documented. These discussions may be accomplished in a group setting.

OROs must use Federal resources as identified in the NRF Nuclear/Radiological Incident Annex, and other resources (e.g., compacts or nuclear insurers), if available. Evaluation of this criterion will take into consideration the level of Federal and other resources participating in the exercise.

All activities must be based on the ORO's plans/procedures and completed as they would be in an actual emergency, unless noted above or otherwise specified in the Extent-of-Play Agreement.

PEMA Negotiated Extent-of-Play: *This sub-element will NOT be demonstrated during this exercise. This element was demonstrated during the SSES Post Plume Exercise conducted during the week of August 16, 2004 and on the week of March 7th, 2011 for the Commonwealth.*

EVALUATION AREA 4

Field Measurement and Analysis

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

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to deploy FMTs with the equipment, methods, and expertise necessary to determine the location of airborne radiation and particulate deposition on the ground from an airborne plume. In addition, NUREG-0654/FEMA-REP-1 indicates that OROs must have the capability to use FMTs within the plume exposure pathway EPZ to detect airborne radioiodine in the presence of noble gases and radioactive particulate material in the airborne plume. In an incident at an NPP, the possible release of radioactive material may pose a risk to the nearby population and environment. Although incident assessment methods are available to project the extent and magnitude of a release, these methods are subject to large uncertainties. During an incident, it is important to collect field radiological data to help characterize any radiological release. Adequate equipment and procedures are essential to such field measurement efforts.

Criterion 4.a.1: [RESERVED]

Criterion 4.a.2: Field teams (2 or more) are managed to obtain sufficient information to help characterize the release and to control radiation exposure. (NUREG-0654/FEMA-REP-1, C.1; H.12; I.7, 8, 11; J.10.a)

Assessment/Extent-of-Play
Assessment of this Demonstration Criterion may be accomplished during a full-scale, functional, or tabletop exercise. Other means may include drills, seminars or training activities that would fully demonstrate technical proficiency.

Responsible OROs must demonstrate the capability to brief FMTs on predicted plume location and direction, plume travel speed, and exposure control procedures before deployment. During an HAB incident, the Field Team management must keep the incident command informed of field monitoring teams' activities and location. Coordination with FMTs and field monitoring may be demonstrated as out-of-sequence demonstrations, as negotiated in the Extent-of-Play Agreement.

Field measurements are needed to help characterize the release and support the adequacy of implemented protective actions, or to be a factor in modifying protective actions. Teams must be directed to take measurements at such locations and times as necessary to provide sufficient information to characterize the plume and its impacts.

If the responsibility for obtaining peak measurements in the plume has been accepted by licensee field monitoring teams, with concurrence from OROs, there is no requirement for these measurements to be repeated by ORO monitoring teams. If the licensee FMTs do not obtain peak measurements in the plume, it is the ORO's decision as to whether peak measurements are necessary to sufficiently characterize the plume. The sharing and coordination of plume measurement information among all FMTs (licensee, Federal, and ORO) is essential. Coordination concerning transfer of samples, including a chain-of-custody form(s), to a radiological laboratory (ies) must be demonstrated.

OROs must use Federal resources as identified in the NRF Nuclear/Radiological Incident Annex and other resources (e.g., compacts or the licensee). Evaluation of this criterion will take into consideration the level of Federal and other resources participating in the exercise.

All activities must be based on the ORO's plans/procedures and completed as they would be in an actual emergency, unless noted above or otherwise specified in the Extent-of-Play Agreement.

PEMA Negotiated Extent-of-Play: *Field Team Control will be performed near the 10 mile EPZ using the DEP Radiological Rapid Response Vehicle (R3V). Field Team control is expected to initially be out of sequence with the plume timeline. During the exercise the field teams will be directed to take measurements in locations to provide information sufficient to characterize the plume and impacts. In addition to field team measurements, remote detectors will be deployed by the field teams near the expected plume pathway. These detectors will automatically transmit data to the R3V. These detectors will be used to keep field teams dose ALARA. A FEMA Evaluator(s) will meet the R3V and Field Teams at the Emergency Operations Facility for initial evaluation at 1:30 PM on October 23, 2012.*

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, C.1; H.12: I.8, 9; J.10.a)

Assessment/Extent-of-Play
Assessment of this Demonstration Criterion may be accomplished during a full-scale, functional, or tabletop exercise. Other means may include drills, seminars or training activities that would fully demonstrate technical proficiency.

Two or more FMTs must demonstrate the capability to make and report measurements of ambient radiation to the field team coordinator, dose assessment team, or other appropriate authority. FMTs must also demonstrate the capability to obtain an air sample for measurement of airborne radioiodine and particulates, and to provide the appropriate authority with field data pertaining to measurement. If samples have radioactivity significantly above background, the authority must consider the need for expedited laboratory analyses of these samples.

OROs must share data in a timely manner with all other appropriate OROs. All methodology, including contamination control, instrumentation, preparation of samples, and a chain-of-custody form(s) for transfer to a laboratory(ies), will be in accordance with the ORO's plans/procedures.

OROs must use Federal resources as identified in the NRF Nuclear/Radiological Incident Annex and other resources (e.g., compacts or the licensee). Evaluation of this criterion will take into consideration the level of Federal and other resources participating in the exercise.

PEMA Negotiated Extent-of-Play: *Measurements will be made by the Department of Environmental Protection (DEP), Bureau of Radiation Protection (BRP), in accordance with the BRP Standard Implementing Procedures (IPs). Two mobile monitoring teams from BRP will demonstrate ambient radiation monitoring and radioiodine and particulate sampling. Field Teams will be equipped with appropriate dosimetry and KI. Both teams will be evaluated by FEMA. Each team will be directed to monitoring location and perform actual radiation measurements at each location. Measurements may consist of truck installed radiation monitor or hand-held radiation instruments. An actual air sample will be taken at the first location that meets the requirements for taking an air sample (1 mR/hr or greater) as directed. Teams will then take additional simulated air samples as directed at additional locations, if conditions are appropriate for radioiodine sampling and relay information to the Radiological Rapid Response Vehicle (R3V). In place of silver zeolite cartridges, charcoal cartridges will be used for the exercise. All measurements will be forwarded to the R3V immediately upon obtaining data. Evaluators will meet the field teams at Emergency Operations Facility at 1:30 PM on October 23, 2012.*

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

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to assess the actual or potential magnitude and locations of radiological hazards to determine the ingestion exposure pathway EPZ and to support relocation, reentry, and return decisions. This Sub-element focuses on collecting environmental samples for laboratory analyses that are essential for decisions on protecting the public from contaminated food and water and direct radiation from deposited materials.

Criterion 4.b.1: The field teams (2 or more) demonstrate the capability to make appropriate measurements and to collect appropriate samples (e.g., food crops, milk, water, vegetation, and soil) to support adequate assessments and protective action decision making. (NUREG-0654/FEMA-REP-1, C.1; I.8; J.11)

Assessment/Extent-of-Play
Assessment of this Demonstration Criterion may be accomplished during a full-scale, functional, or tabletop exercise. Other means may include drills, seminars or training activities that would fully demonstrate technical proficiency.

The ORO's FMTs must demonstrate the capability to take measurements and samples, at such times and locations as directed, to enable an adequate assessment of the ingestion pathway and to support reentry, relocation, and return decisions. When resources are available, use of aerial surveys and in-situ gamma measurement is appropriate. All methodology, including contamination control, instrumentation, preparation of samples, and chain-of-custody form(s) for transfer to a laboratory (ies), will be in accordance with the ORO's plans/procedures.

The FMTs and/or other sampling personnel must secure ingestion pathway samples from agricultural products and water. Samples in support of relocation and return must be secured from soil, vegetation, and other surfaces in areas that received radioactive ground deposition.

OROs must use Federal resources as identified in the NRF Nuclear/Radiological Incident Annex and other resources (e.g., compacts, the licensee, or nuclear insurers). Evaluation of this criterion will take into consideration the level of Federal and other resources participating in the exercise.

All activities must be based on the ORO's plans/procedures and completed as they would be in an actual emergency, unless noted above or otherwise specified in the Extent-of-Play Agreement.

PEMA Negotiated Extent-of-Play: *This sub-element will NOT be demonstrated during this exercise. This element was demonstrated during the SSES Post Plume Exercise conducted during the week of August 16, 2004 and on the week of March 7th, 2011 for the Commonwealth.*

Sub-element 4.c - Laboratory Operations

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to perform laboratory analyses of radioactivity in air, liquid, and environmental samples to support protective action decision making.

Criterion 4.c.1: The laboratory is capable of performing required radiological analyses to support protective action decisions. (NUREG-0654/FEMA-REP-1, C.1, 3; J.11)

Assessment/Extent-of-Play
Assessment of this Demonstration Criterion may be accomplished during a full-scale, functional, or tabletop exercise. Other means may include drills, seminars or training activities that would fully demonstrate technical proficiency.

The laboratory staff must demonstrate the capability to follow appropriate procedures for receiving samples, including logging information, preventing contamination of the laboratory(ies), preventing buildup of background radiation due to stored samples, preventing cross contamination of samples, preserving samples that may spoil (e.g., milk), and keeping track of sample identity. In addition, the laboratory staff must demonstrate the capability to prepare samples for conducting measurements. The laboratory(ies) must be appropriately equipped to provide, upon request, timely analyses of media of sufficient quality and sensitivity to support assessments and decisions anticipated in the ORO's plans/procedures. The laboratory instrument calibrations must be traceable to standards provided by the National Institute of Standards and Technology. Laboratory methods used to analyze typical radionuclides released in a reactor incident must be as described in the plans/procedures. New or revised methods may be used to analyze atypical radionuclide releases (e.g., transuranics or as a result of a terrorist incident) or if warranted by incident circumstances. Analysis may require resources beyond those of the ORO.

The laboratory staff must be qualified in radioanalytical techniques and contamination control procedures.

OROs must use Federal resources as identified in the NRF Nuclear/Radiological Incident Annex and other resources (e.g., compacts, the licensee, or nuclear insurers). Evaluation of this criterion will take into consideration the level of Federal and other resources participating in the exercise.

All activities must be based on the ORO's plans/procedures and completed as they would be in an actual emergency, unless noted above or otherwise specified in the Extent-of-Play Agreement.

PEMA Negotiated Extent-of-Play: *This sub-element will NOT be demonstrated during this exercise. This element was demonstrated during the SSES Post Plume Exercise conducted during the week of August 16, 2004 and on the week of March 7th, 2011 for the Commonwealth.*

EVALUATION AREA 5

Emergency Notification and Public Information

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

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to provide prompt instructions to the public within the plume exposure pathway EPZ. Specific provisions addressed in this Sub-element are derived from the *Guide for the Evaluation of Alert and Notification Systems for Nuclear Power Plants*, FEMA-REP-10 (November 1985).

Criterion 5.a.1: Activities associated with primary alerting and notification of the public are completed in a timely manner following the initial decision by authorized 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 REP guidance. (NUREG-0654/FEMA-REP-1, E.5, 6, 7)

Assessment/Extent-of-Play
Assessment of this Demonstration Criterion may be accomplished during a full-scale or functional exercise, drills, or operational testing of equipment that would fully demonstrate capability.

Responsible OROs must demonstrate the capability to sequentially provide an alert signal followed by an initial instructional message to populated areas (permanent resident and transient) throughout the 10-mile plume EPZ. Following the decision to activate the alert and notification system, OROs must complete system activation for primary alert/notification and disseminate the information/instructions in a timely manner. For exercise purposes, timely is defined as —with a sense of urgency and without undue delay. If message dissemination is identified as not having been accomplished in a timely manner, the evaluator(s) will document a specific delay or cause as to why a message was not considered timely.

Procedures to broadcast the message must be fully demonstrated as they would in an actual emergency up to the point of transmission. Broadcast of the message(s) or test message(s) is not required. The procedures must be demonstrated up to the point of actual activation. The alert signal activation should be simulated, not performed. Evaluations of EAS broadcast stations may also be accomplished through SAVs.

The capability of the primary notification system to broadcast an instructional message on a 24-hour basis must be verified during an interview with appropriate personnel from the primary notification system, including verification of provisions for backup power or an alternate station.

The initial message must include at a minimum the following elements:

☐ Identification of the ORO responsible and the official with authority for providing the alert signal and instructional message;
☐ Identification of the commercial NPP and astatement that an emergency exists there;
☐ Reference to REP-specific emergency information (e.g., brochures, calendars, and/or information in telephone books) for use by the general public during an emergency; and
☐ A closing statement asking that theaffected and potentially affected population stay tuned for additional information, or that the population tune to another station for additional information.

If route alerting is demonstrated as a primary method of alert and notification, it must be done in accordance with the ORO's plans/procedures and the Extent-of-Play Agreement. OROs must demonstrate the capability to accomplish the primary route alerting in a timely manner (not subject to specific time requirements). At least one route needs to be demonstrated and evaluated. The selected route(s) must vary from exercise to exercise. However, the most difficult route(s) must be demonstrated no less than once every 8 years. All alert and notification activities along the route(s) must be simulated (that is, the message that would actually be used is read for the evaluator, but not actually broadcast) as negotiated in the Extent-of-Play. Actual testing of the mobile public address system will be conducted at an agreed-upon location.

OROs may demonstrate any means of primary alert and notification included in their plans/procedures as negotiated in the Extent-of-Play Agreement.

All activities must be based on the ORO's plans/procedures and completed as they would be in an actual emergency, unless noted above or otherwise specified in the Extent-of-Play Agreement.

PEMA Negotiated Extent-of-Play:

The Commonwealth of Pennsylvania has implemented a Statewide EAS Control system in cooperation with the Pennsylvania Association of Broadcasters per the State Emergency Communications Committee and Pennsylvania Emergency Alert System State EAS Plan (September 23, 2010 and revised on November 2, 2011). The State EOC (PEMA) is the initiating point for the activation of the EAS. Risk Counties have the control equipment for activation of sirens. Coordination will occur between the State EOC and the affected counties with respect to the Alert and Notification System (ANS) process as to when the sirens and EAS messages will occur. Sirens will be coordinated and the sounding simulated at the appropriate time with the simulated activation of EAS taking place approximately 3 minutes following the simulated activation of the sirens. Regular Broadcasting will not be interrupted on the EAS Stations. All subsequent actions to broadcast stations will be simulated. Broadcast of the message(s) or test message(s) is ***NOT*** *required and* ***NOT*** *requested. Counties may elect to provide Subsequent News Bulletins or County Specific EAS messages to their EAS stations.*

*Following the decision to activate the alert and notification system, in accordance with the ORO's plan and/or procedures, ANS activation should be accomplished in a timely manner for primary alerting/notification. This action will **NOT** be subject to specific time requirements.*

All actions to broadcast stations will be simulated. Systems that use automatic sending technology may be demonstrated by explanation during an interview.

Criterion 5.a.2: [RESERVED]

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

Assessment/Extent-of-Play
Offsite Response Organizations (ORO) with FEMA-approved exception areas (identified in the approved Alert and Notification System Design Report) 5–10 miles from the nuclear power plant should demonstrate the capability to accomplish primary alerting and notification of the exception area(s) within 45 minutes following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. The 45minute clock will begin when the OROs make the decision to activate the alert and notification system for the first time for a specific emergency situation. The initial message should, at a minimum, include: a statement that an emergency exists at the plant and where to obtain additional information.

For exception area alerting, at least one route needs to be demonstrated and evaluated. The selected route(s) should vary from exercise to exercise. However, the most difficult route should be demonstrated at least once every six years. All alert and notification activities along the route should be simulated (that is, the message that would actually be used is read for the evaluator, but not actually broadcast) as agreed upon in the Extent-of-Play. Actual testing of the mobile public address system will be conducted at some agreed-upon location.

Backup alert and notification of the public should be completed within 45 minutes following the detection by the ORO of a failure of the primary alert and notification system. Backup route alerting only needs to be demonstrated and evaluated, in accordance with the ORO's plan and/or procedures and the Extent-of-Play agreement, if the exercise scenario calls for failure of any portion of the primary system(s), or if any portion of the primary system(s) actually fails to function. If demonstrated, only one route needs to be selected and demonstrated. All alert and notification activities along the route should be simulated (that is, the message that would actually be used is read for the evaluator, but not actually broadcast) as agreed upon in the Extent-of-Play. Actual testing of the mobile public address system will be conducted at some agreed-upon location.

PEMA Negotiated Extent-of-Play:

Plans specify that route alerting is used as a back up to the sirens. Each risk county will demonstrate contacting one municipal EOC in regards to a failed siren in that municipality. The municipal EOC will then dispatch one route alert team to cover one route alert sector affected by the failed siren. All routes should be established with the goal that the route can be covered within 45 minutes from the point at which a siren failure is detected. All other routes will be simulated. The plans do provide flexibility for municipalities to choose to send out route alert teams after each activation of the sirens if deemed necessary. This capability will be demonstrated through interview.

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

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to disseminate appropriate emergency information and instructions, including any recommended protective actions, to the public. In addition, NUREG-0654/FEMA-REP-1 requires OROs to ensure that the capability exists for providing information to the media. This includes the availability of a physical location for use by the media during an emergency. NUREG-0654/FEMA-REP-1 also provides that a system must be available for dealing with rumors. This system will hereafter be known as the public inquiry hotline.

Criterion 5.b.1: OROs provide accurate subsequent 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.a, c)

Assessment/Extent-of-Play
Assessment of this Demonstration Criterion may be accomplished during a full-scale or functional exercise, or drills.

The responsible ORO personnel/representatives must demonstrate actions to provide emergency information and instructions to the public and media in a timely manner following the initial alert and notification (not subject to specific time requirements). For exercise purposes, timely is defined as —with a sense of urgency and without undue delay. If message dissemination is identified as not having been accomplished in a timely manner, the evaluator(s) will document a specific delay or cause as to why a message was not considered timely.

Message elements: The ORO must ensure that emergency information and instructions are consistent with PADs made by appropriate officials. The emergency information must contain all necessary and applicable instructions (e.g., evacuation instructions, evacuation routes, reception center locations, what to take when evacuating, shelter-in-place instructions, information

concerning protective actions for schools and persons with disabilities and access/functional needs, and public inquiry hotline telephone number) to assist the public in carrying out the PADs provided. The ORO must also be prepared to disclose and explain the ECL of the incident. At a minimum, this information must be included in media briefings and/or media releases. OROs must demonstrate the capability to use language that is clear and understandable to the public within both the plume and ingestion exposure pathway EPZs. This includes demonstration of the capability to use familiar landmarks and boundaries to describe protective action areas.

The emergency information must be all-inclusive by including the four items specified under exercise Demonstration Criterion 5.a.1 and previously identified protective action areas that are still valid, as well as new areas. The OROs must demonstrate the capability to ensure that emergency information that is no longer valid is rescinded and not repeated by broadcast media. In addition, the OROs must demonstrate the capability to ensure that current emergency information is repeated at pre-established intervals in accordance with the plans/procedures. OROs must demonstrate the capability to develop emergency information in a non-English language when required by the plans/procedures.

If ingestion pathway measures are exercised, OROs must demonstrate that a system exists for rapid dissemination of ingestion pathway information to pre-determined individuals and businesses in accordance with the ORO's plans/procedures.

Media information: OROs must demonstrate the capability to provide timely, accurate, concise, and coordinated information to the news media for subsequent dissemination to the public. This would include demonstration of the capability to conduct timely and pertinent media briefings and distribute media releases as the incident warrants. The OROs must demonstrate the capability to respond appropriately to inquiries from the news media. All information presented in media briefings and releases must be consistent with PADs and other emergency information provided to the public. Copies of pertinent emergency information (e.g., EAS messages and media releases) and media information kits must be available for dissemination to the media.

Public inquiry: OROs must demonstrate that an effective system is in place for dealing with calls received via the public inquiry hotline. Hotline staff must demonstrate the capability to provide or obtain accurate information for callers or refer them to an appropriate information source. Information from the hotline staff, including information that corrects false or inaccurate information when trends are noted, must be included, as appropriate, in emergency information provided to the public, media briefings, and/or media releases.

HAB considerations: The dissemination of information dealing with specific aspects of NPP security capabilities, actual or perceived adversarial (terrorist) force or threat, and tactical law enforcement response must be coordinated/communicated with appropriate security authorities, e.g., law enforcement and NPP security agencies, in accordance with ORO plans/procedures.

All activities must be based on the ORO's plans/procedures and completed as they would be in an actual emergency, unless noted above or otherwise specified in the Extent-of-Play Agreement.

PEMA Negotiated Extent-of-Play:

Subsequent emergency information and instructions should be provided to the public and the media in a timely manner. This will NOT be subject to specific time requirements.
One media briefing will be demonstrated in each risk county.

Risk and Support Counties will receive and handle "Public Inquiry" messages via their individual "Public Inquiry" processes (In compliance with NIMS terminology, Rumor Control is now considered to be "Public Inquiry"). Counties will receive approximately ten (10) public inquiry calls from the State Exercise cell assigned this responsibility. Counties will be expected to receive and log the calls, identify any trends and take appropriate actions to include follow-up message development, distributions and/or briefings.

EVALUATION AREA 6

Support Operation/Facilities

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

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to implement radiological monitoring and decontamination of evacuees, while minimizing contamination of the facility. OROs must also have the capability to identify and register evacuees at reception centers.

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

Assessment/Extent-of-Play
Assessment of this Demonstration Criterion may be accomplished during a full-scale or functional exercise, drills, or SAV.

Radiological monitoring, decontamination, and registration facilities for evacuees must be set up and demonstrated as they would be in an actual emergency or as indicated in the Extent-of-Play Agreement. OROs conducting this demonstration must have one-third of the resources (e.g., monitoring teams/instrumentation/portal monitors) available at the facility(ies) as necessary to monitor 20 percent of the population within a 12-hour period. This would include adequate space for evacuees' vehicles. Availability of resources can be demonstrated with valid documentation (e.g., MOU/LOA, etc.) reflecting how necessary equipment would be procured for the location. Plans/procedures must indicate provisions for service animals.

Before using monitoring instrument(s), the monitor(s) must demonstrate the process of checking the instrument(s) for proper operation. Staff responsible for the radiological monitoring of

evacuees must demonstrate the capability to attain and sustain, within about 12 hours, a monitoring productivity rate per hour needed to monitor the 20 percent EPZ population planning base. The monitoring productivity rate per hour is the number of evacuees that can be monitored, per hour, by the total complement of monitors using an appropriate procedure. For demonstration of monitoring, decontamination, and registration capabilities, a minimum of six evacuees must be monitored per station using equipment and procedures specified in the plans/procedures. The monitoring sequences for the first six simulated evacuees per monitoring team will be timed by the evaluators to determine whether the 12-hour requirement can be met.

OROs must demonstrate the capability to register evacuees upon completion of the monitoring and decontamination activities. The activities for recording radiological monitoring and, if necessary, decontamination must include establishing a registration record consisting of the evacuee's name, address, results of monitoring, and time of decontamination (if any), or as otherwise designated in the plan and/or procedures. Audio recorders, camcorders, or written records are all acceptable means for registration.

Monitoring activities shall not be simulated. Monitoring personnel must explain use of trigger/action levels for determining the need for decontamination. They must also explain the procedures for referring any evacuees who cannot be adequately decontaminated for assessment and follow-up in accordance with the ORO's plans/procedures. Contamination of the evacuee(s) will be determined by controller inject and not simulated with any low-level radiation source. All activities must be based on the ORO's plans/procedures and completed as they would be in an actual emergency, unless noted above or otherwise specified in the Extent-of-Play Agreement.

Decontamination of evacuees may be simulated and conducted by interview. Provisions for separate showering and same-sex monitoring must be demonstrated or explained. The staff must demonstrate provisions for limiting the spread of contamination. Provisions could include floor coverings, signs, and appropriate means (e.g., partitions, roped-off areas) to separate uncontaminated from potentially contaminated areas. Provisions must also exist to separate contaminated and uncontaminated evacuees, provide changes of clothing for those with contaminated clothing; and store contaminated clothing and personal belongings to prevent further contamination of evacuees or facilities. In addition, for any evacuee found to be contaminated, procedures must be discussed concerning handling of potential contamination of vehicles and personal belongings. Waste water from decontamination operations does not need to be collected.

Individuals who have completed monitoring (and decontamination, if needed) must have means (e.g., hand stamp, sticker, bracelet, form, etc) indicating that they, and their service animals and vehicles, where applicable, have been monitored, cleared, and found to have no contamination or contamination below the trigger/action level.

In accordance with plans/procedures, individuals found to be clean after monitoring do not need to have their vehicle monitored. These individuals do not require confirmation that their vehicle is free from contamination prior to entering the congregate care areas.

However, those individuals who are found to be contaminated and are then decontaminated will have their vehicles monitored and decontaminated (if applicable) and do require confirmation that their vehicle is free from contamination prior to entering the congregate care areas.

PEMA Negotiated Extent-of-Play:

Radiological monitoring demonstration sites should possess a roster of the monitoring personnel as well as providing a means by which the mass care reception center or others could verify that the person has been monitored and has been deemed uncontaminated. The Radiological Monitoring station(s) should be prepared to monitor 20% of the risk population within a 12 hour period as allocated to that location.

Water from decontamination activities may go directly to a storm drain or other sewer or drain system or area normally designated for wastewater that has been used for bathing or washing of vehicles and or equipment.

At each reception center**, a minimum of three volunteer evacuees will be processed, briefed, issued the appropriate strip map or directions, and instructed to proceed to a mass care center designated for demonstration of monitoring, decontamination, and registration. A sample of the appropriate strip maps or directions will be made available for the demonstration. **As negotiated with FEMA, this criterion will be demonstrated but not be evaluated because registration is not done at the reception center.

*One mass care center and one mass care monitoring/decontamination center will be demonstrated per support county during the out-of-sequence window county (**Exception** – Montour County does not operate any mass care centers). The support counties will provide space at designated mass care centers or reception centers for operation of monitoring/ decontamination centers. Schematics of these monitoring /decontamination centers will be available to show the organization within the facility and space management for monitoring and decontamination. Procedures will be demonstrated to evidence the separation of contaminated and non-contaminated (clean) individuals.*

At the evacuee monitoring/decontamination center**, a minimum of six (6) volunteer evacuees will be monitored (or one volunteer evacuee may be monitored six times). Suitable radiological monitoring instruments will be issued to and demonstrated by the initial monitoring team(s). A monitoring team consists of one monitor and one recorder equipped with one survey instrument. Those individuals found to be free of "contamination", based upon scenario injects, will be directed to the mass care registration point for further processing. **Note:** Actual radiological sources will not be attached to or hidden upon the volunteer evacuees. **Note: If portal monitors are used, the Portal Monitor Extent-of-Play described below shall be used

One of the simulated evacuees, based upon controller injects, will not be able to be decontaminated. Discussions concerning the processing of contaminated personnel will include

capabilities and written procedures for showering females separate from males. Showering will be simulated, water will not be used. ***Note: If portal monitors are used, the Portal Monitor Extent-of-Play described below shall be used.***

Portal Monitor Use: *Risk and Support counties may, during this exercise, utilize portal monitors to monitor simulated evacuees and / or emergency workers. The monitoring / decontamination team requirements will be based on the portal monitor capabilities as applicable based on the procedure / guidelines, and the recommendations of the manufacturer.* ***Note:*** *PEMA guidance shall apply.*

Monitoring/decontamination centers are not issued DRDs or KI since the centers and stations are outside the EPZ. Category "C" Dosimetry applies. Personal Record Dosimeters (PRD's) may be simulated.

Radiation readings / contamination data for the evacuees and vehicle will be provided by the controller as appropriate based upon information contained in the scenario package. Set-up of the facility will be performed the same as for an actual emergency with all route markings and contamination control measures in place including step-off pads. Long runs of plastic covered with paper will not be demonstrated, but the materials shall be available and explained. Positioning of a fire apparatus on-site may be simulated if otherwise required.

Sub-element 6.b – Monitoring and Decontamination of Emergency Workers and their Equipment and Vehicles

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to implement radiological monitoring and decontamination of emergency workers and their equipment, inclusive of vehicles.

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

Assessment/Extent-of-Play
Assessment of this Demonstration Criterion may be accomplished during a full-scale or functional exercise, drills, or SAV.

The monitoring staff must demonstrate the capability to monitor emergency worker personnel and their equipment and vehicles for contamination in accordance with the ORO's plans/procedures.

Specific attention must be given to equipment, including any vehicles that were in contact with contamination. The monitoring staff must demonstrate the capability to make decisions on the

need for decontamination of personnel, equipment, and vehicles based on trigger/action levels and procedures stated in the ORO plans/procedures. Monitoring of emergency workers does not have to meet the 12-hour requirement. However, appropriate monitoring procedures must be demonstrated for a minimum of two emergency workers and their equipment and vehicles. Before using monitoring instrument(s), the monitor(s) must demonstrate the process of checking the instrument(s) for proper operation.

The area to be used for monitoring and decontamination must be set up as it would be in an actual emergency, with all route markings, instrumentation, record keeping, and contamination control measures in place. Monitoring procedures must be demonstrated for a minimum of one vehicle. It is generally not necessary to monitor the entire surface of vehicles. However, the capability to monitor areas such as radiator grills, bumpers, wheel wells, tires, and door handles must be demonstrated. Interior surfaces of vehicles that were in contact with contaminated individuals must also be checked.

Decontamination of emergency workers may be simulated and conducted via interview. Provisions for separate showering and same-sex monitoring must be demonstrated or explained. The staff must demonstrate provisions for limiting the spread of contamination. Provisions could include floor coverings, signs, and appropriate means (e.g., partitions, roped-off areas) to separate uncontaminated from potentially contaminated areas. Provisions must also exist to separate contaminated and uncontaminated individuals where applicable; provide changes of clothing for those with contaminated clothing; and store contaminated clothing and personal belongings to prevent further contamination of emergency workers or facilities.

Monitoring activities shall not be simulated. Monitoring personnel must explain use of trigger/action levels for determining the need for decontamination. They must also explain the procedures for referring any emergency workers who cannot be adequately decontaminated for assessment and follow-up in accordance with the ORO's plans/procedures. Contamination of the individual(s) will be determined by controller inject and not simulated with any low-level radiation source.

Decontamination capabilities and provisions for vehicles and equipment that cannot be successfully decontaminated may be simulated and conducted by interview. Waste water from decontamination operations does not need to be collected.

All activities must be based on the ORO's plans/procedures and completed as they would be in an actual emergency, unless noted above or otherwise specified in the Extent-of-Play Agreement.

PEMA Negotiated Extent-of-Play:

At the emergency worker monitoring/decontamination stations schematics of these monitoring/decontamination stations will be available to show organization and space management. One emergency worker will be monitored. Discussions concerning processing of contaminated personnel will include capabilities and written procedures for showering females

separate from males. Showering will be simulated, water will not be used. Suitable radiological monitoring instruments will be issued to the initial monitoring team. Note: If portal monitors are used, the Portal Monitor Extent-of-Play described below shall be used.

Emergency worker station personnel will consist of a minimum of one monitor and one recorder and sufficient personnel to demonstrate monitoring of at least one vehicle. The evaluator will request that vehicle decontamination procedures be explained after the vehicle (with simulated contamination) has been monitored. One radiological survey meter, will be issued to each vehicle monitoring/decontamination team. One vehicle and/or piece of equipment will not be able to be decontaminated. Simulated radiation contamination data will be included in the scenario package, and injected by a controller. Set-up of the facility will be performed as closely as possible to that for an actual emergency with all route markings in place.

Decontamination capabilities and provisions for vehicles and/or equipment that cannot be decontaminated will be simulated and conducted by interview. Water will NOT be used.

Radiation readings / contamination data for the evacuees and vehicle will be provided by the controller as appropriate based upon information contained in the scenario package. Set-up of the facility will be performed the same as for an actual emergency with all route markings and contamination control measures in place including step-off pads. Long runs of plastic covered with paper will not be demonstrated, but the materials shall be available and explained. Positioning of a fire apparatus on-site may be simulated if otherwise required.

***Portal Monitor Use:** Risk and Support counties may, during this exercise, utilize portal monitors to monitor simulated emergency workers. The monitoring / decontamination team requirements will be based on the portal monitor capabilities as applicable based on the procedure / guidelines, and the recommendations of the manufacturer. **Note:** PEMA guidance shall apply.*

Emergency Worker monitoring and decontamination station personnel are not issued DRDs or KI since the centers and stations are outside the EPZ. Category "C" Dosimetry applies. Personal Record Dosimeters (PRD's) may be simulated.

Water from decontamination activities may go directly to a storm drain or other sewer or drain system or area normally designated for wastewater that has been used for bathing or washing of vehicles and or equipment.

Sub-element 6.c - Temporary Care of Evacuees

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires OROs to have the capability to establish relocation centers in host/support jurisdictions. The American Red Cross normally provides congregate care in support of OROs under existing letters of agreement.

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)

Assessment/Extent-of-Play
Assessment of this Demonstration Criterion may be accomplished during a full-scale or functional exercise, drills, or SAV.

The evaluator must conduct a walk-through of the center to determine, through observation and inquiries, that the services and accommodations are consistent with applicable guidance.

For planning purposes, OROs must plan for a sufficient number of congregate care centers in host/support jurisdictions to accommodate a minimum of 20 percent of the EPZ population. In this simulation, it is not necessary to set up operations as they would be in an actual emergency. Alternatively, capabilities may be demonstrated by setting up stations for various services and providing those services to simulated evacuees. Given the substantial differences between demonstration and simulation of this criterion, exercise demonstration expectations must be clearly specified in Extent-of-Play Agreements.

Congregate care staff must also demonstrate the capability to ensure that evacuees, service animals, and vehicles have been monitored for contamination, decontaminated as appropriate, and registered before entering the facility.

Individuals arriving at congregate care facilities must have means (e.g., hand stamp, sticker, bracelet, form, etc.) indicating that they, and their service animals and vehicles, where applicable, have been monitored, cleared, and found to have no contamination or contamination below the trigger/action level.

In accordance with plans/procedures, individuals found to be clean after monitoring do not need to have their vehicle monitored. These individuals do not need confirmation that their vehicle is free from contamination prior to entering the congregate care areas.

However, those individuals who are found to be contaminated and are then decontaminated will have their vehicles monitored and decontaminated (if applicable) and does need confirmation that their vehicle is free from contamination prior to entering the congregate care areas. This capability may be determined through an interview process.

If operations at the center are demonstrated, material that would be difficult or expensive to transport (e.g., cots, blankets, sundries, and large-scale food supplies) need not be physically available at the facility (ies). However, availability of such items must be verified by providing the evaluator a list of sources with locations and estimates of quantities.

All activities must be based on the ORO's plans/procedures and completed as they would be in an actual emergency, unless noted above or otherwise specified in the Extent-of-Play Agreement.

PEMA Negotiated Extent-of-Play:

Each of the support counties (Exception – Montour County) will demonstrate the operation of one mass care center during the out-of-sequence window. Floor plans with flow diagrams of the mass care centers will be available to show organization within the facility and space management during a real emergency. Mass care center locations are listed in the demonstration tables "Demonstration of Mass Care Centers (Attachment A, Section I.B.2)".

Personnel, at a minimum, will consist of one manager and one assistant for each mass care center opened during the out-of-sequence window. The evaluator will expect to see sources and quantities of equipment and supplies as well as a staffing chart by job title for 24 hour staffing. Schematics of these mass care centers will be available, during the demonstration window, to show organization within the facility and space allocation for the registration and sheltering the evacuating public. Necessary signs, directional arrows and forms will be available and used to demonstrate registration, at a minimum, of three evacuees requiring emergency housing. Evacuees will be shown the location where they would be housed in an actual situation. Bedding, cots, food, etc. normally associated with mass care will not be moved to the site, but the sources of those items should be explained to FEMA evaluators. This out-of-sequence demonstration window will be from 7:00 PM – 9:30 PM on October 24, 2012.

American Red Cross support county chapters:

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North Central PA Chapter (Lycoming, Clinton, and Tioga Counties)
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Sub-element 6.d - Transportation and Treatment of Contaminated Injured Individuals

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to transport contaminated injured individuals to medical facilities with the capability to provide medical services. See also Part III.D, REP Program Exercise Guidance: Evaluation of Emergency Medical Services Drills.

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

Assessment/Extent-of-Play
Assessment of this Demonstration Criterion may be accomplished during a full-scale or functional exercise, or drills.

Monitoring, decontamination, and contamination control efforts must not delay urgent medical care for the victim.

OROs must demonstrate the capability to transport contaminated injured individuals to medical facilities.

An ambulance must be used for response to the victim. However, to avoid taking an ambulance out of service for an extended time, OROs may use any vehicle (e.g., car, truck, or van) to transport the victim to the medical facility. Normal communications between the ambulance/dispatcher and the receiving medical facility must be demonstrated. If a substitute vehicle is used for transport to the medical facility, this communication must occur before releasing the ambulance from the drill. This communication would include reporting radiation monitoring results, if available. In addition, the ambulance crew must demonstrate, by interview, knowledge of where the ambulance and crew would be monitored and decontaminated, if required, or whom to contact for such information.

Monitoring of the victim may be performed before transport or en route, or may be deferred to the medical facility. Before using monitoring instruments, the monitor(s) must demonstrate the process of checking the instrument(s) for proper operation. All monitoring activities must be completed as they would be in an actual emergency. Appropriate contamination control measures must be demonstrated before and during transport and at the receiving medical facility.

The medical facility must demonstrate the capability to activate and set up a radiological emergency area for treatment. Equipment and supplies must be available for treatment of contaminated injured individuals.

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

All activities must be based on the ORO's plans/procedures and completed as they would be in an actual emergency, unless noted above or otherwise specified in the Extent-of-Play Agreement.

PEMA Negotiated Extent-of-Play:

NOTE: This sub-element was evaluated at Bloomsburg Hospital MS-1 on April 6, 2011

ATTACHMENT A

Susquehanna Steam Electric Station 2012
Extent-of-Play Demonstration Tables

I. PLUME PHASE EXERCISE –

A. Activities –October 23, 2012

1. Risk Public School Districts with schools located within the EPZ and those districts situated outside the EPZ, but with students living within the EPZ, will participate and be evaluated by the Federal Emergency Management Agency. Each identified District Administration Office will be evaluated. When a school system is comprised of multiple buildings (High School, Middle School, Elementary School), the affected buildings (those with students from the EPZ) will be evaluated on a rotational basis to coincide with the six-year exercise cycle.

   Time: Out of Sequence – 9:00 – 11:00 AM

COUNTY	SCHOOL DISTRICT	SCHOOL(s) participating in the 2012 Exercise
Columbia	Berwick Area School District	Berwick High School, Berwick Middle School, and Orange Street Elementary School
Columbia	Benton Area School District	L. R. Appleman Elementary School
Columbia	Bloomsburg Area School District	Beaver Main Elementary
Columbia	Central Columbia School District	Central Columbia Elementary School
Columbia	Columbia Montour AVTS (Vo-Tech)	Columbia Montour AVTS
Luzerne	Crestwood Area School District	Crestwood Area Middle School, Crestwood Area High School, and
Luzerne	Greater Nanticoke Area School District	Greater Nanticoke Elementary Center, J F Kennedy Elementary School, and Greater Nanticoke Area Sr. High School (John S. Fine)
Luzerne	Hazleton Area School District	Hazelton Area Career Center, Ninth Grade Center, and Valley Elementary/ Middle School.
Luzerne	Northwest Area School District	Hunlock Creek Elementary School and Northwest Middle/High School
Luzerne	West Side Career & Technology Center	West Side C&TC
Luzerne	Wilkes-Barre Career & Technology Center	Wilkes-Barre C&TC

NOTE: Montour County EOC will be evaluated during this phase.

2. County Emergency Operations Centers (EOC's)
Time: Per Scenario

DEMONSTRATION FOR EOC MOBILIZATION FOR COUNTIES (Plume Phase Exercise)		
COUNTY	**DATE**	**Time**
Columbia	October 23/12	04:00 p.m. – 10:30 p.m.
Luzerne	October 23/12	04:00 p.m. – 10:30 p.m.
Lackawanna	October 23/12	04:00 p.m. – 10:30 p.m.
Lycoming	October 23/12	04:00 p.m. – 10:30 p.m.
***Montour**	October 23/12	***09:00 a.m. – 11:00 a.m.***
Northumberland	October 23/12	04:00 p.m. – 10:30 p.m.
Schuylkill	October 23/12	04:00 p.m. – 10:30 p.m.
Union	October 23/12	04:00 p.m. – 10:30 p.m.
Wyoming	October 23/12	04:00 p.m. – 10:30 p.m.

* NOTE: Montour County EOC will be evaluated during the schools exercise on October 23, 2012

3. Municipal Emergency Operations Centers (EOC)
Time: October 23, 2012 from 4 p.m. – 10:30 p.m.
NOTE: Only the agencies in BOLD will be federally evaluated for this exercise

DEMONSTRATION FOR EOC MOBILIZATION FOR MUNICIPALITIES (Plume Phase Exercise)		
RISK COUNTY	**MUNICIPALITY**	**DATE**
Columbia	Beaver Township	October 23, 2012
	Berwick Borough/ Briar Creek Borough*^	October 23, 2012
	Briar Creek Township	October 23, 2012
	Fishing Creek Township	October 23, 2012
	Mifflin Township	October 23, 2012
	North Centre Township	October 23, 2012
	South Centre Township	October 23, 2012
Luzerne	**Black Creek Township**	October 23, 2012
	Butler Township/ Conyngham Borough*	October 23, 2012
	Conyngham Township	October 23, 2012
	Dorrance Township	October 23, 2012
	Hollenback Township	October 23, 2012
	Hunlock Township	October 23, 2012
	Huntington Township/ New Columbus Borough*	October 23, 2012
	Nanticoke City	October 23, 2012
	Nescopeck Borough	October 23, 2012
	Nescopeck Township	October 23, 2012
	Newport Township	October 23, 2012
	Nuangola Borough	October 23, 2012
	Salem Township	October 23, 2012
	Shickshinny Borough^	October 23, 2012
	Slocum Township	October 23, 2012
	Sugarloaf Township	October 23, 2012
	Union Township	October 23, 2012

* Joint EOC's
^ New Facility

4. Route alerting will be demonstrated by one municipality in each risk county during scenario exercise.

Columbia	**Briar Creek Township**	October 23, 2012
Luzerne	**Newport Township**	October 23, 2012

5. Traffic and Access Control Points

a. The Pennsylvania State Police will brief at the PSP **Bloomsburg Barracks**, Those attending the briefing will not actually deploy to the TCP/ACPs.

b. The PSP briefing will be performed out of sequence in a demonstration window of **10:00 a.m. to 12:00 noon on Wednesday, October 24, 2012**.

c. Evaluated municipalities with a TCP assigned in its plan will demonstrate all preparation duties including TCP responsibilities and radiological briefing during the county/municipal plume exercise on the evening of October 23, 2012. Dispatch of persons to the TCP site will not occur during the exercise. **For this exercise Mifflin Township in Columbia County and Nescopeck Borough in Luzerne County will be evaluated.**

d. Municipal and county staffs will be prepared to brief the FEMA evaluator on actions to be taken should there be an impediment to evacuation on a designated route. Risk counties should anticipate major impediments to evacuation and demonstrate the ability to reroute traffic and communicate the change to affected OROs and the general public.

B. October 24, 2012

1. Reception Centers (Out of Sequence)
Time: October 24, 2012 from 7 p.m. – 9:30 p.m.

COUNTY	Reception Center Location
Lackawanna	Big Lots, Dunmore
Lycoming	Lycoming Mall, Pennsdale
Northumberland	Shikellamy High School, Sunbury
Schuylkill	Mahanoy High School, Mahanoy City
Union	Montandon Elementary School, Montandon
Wyoming	Tunkhannock High School, Tunkhannock

2. Mass Care Centers and Monitoring / Decontamination Centers (Out of Sequence)
Time: October 24, 2012 from 7 p.m. – 9:30 p.m. (Walk-downs at 5 p.m.)

COUNTY	Mass Care Center Locations	
		Quantity
Lackawanna	Mid Valley Elementary Center, Penn State University^, Dunmore High School^	3
Lycoming	Hughesville High School**	1
Northumberland	Shikellamy High School, Sunbury	1
Schuylkill	Mahanoy Jr./Sr. High School, North Schuylkill Jr/Sr. High School^	2
Union	Lewisburg High School	1
Wyoming	Tunkhannock High School	1

** Hughesville High School was undergoing remodeling during the last drill.
^ Facilities to be evaluated by Out of Sequence Walk down on October 24, 2012 at 5 p.m.

3. Emergency Worker Monitoring / Decontamination Stations (Out of Sequence)
Time: October 24, 2012 from 7 p.m. – 9:30 p.m.

Columbia	Columbia Montour Vo-Tech
Luzerne	Sweet Valley Fire Dept.

II. POST PLUME EXERCISE

Not Applicable for this Exercise. The Post-Plume Exercise was conducted in conjunction with the SSES 2004 exercise.

Attachment B
Listing of Prior Issues (Pennsylvania)

Reference #	FACILITY EVALUATED	CRITERIA	Current Status
	Areas Requiring Corrective Action		
A-01	South Centre Township EOC and Traffic/Access Control Points	**3a1**	Open
	Planning Issues		
	None		

Areas Requiring Corrective Action

Reference A-01

Issue Number: 63-10-3.a.1-A-01

Condition: Emergency workers at the South Centre Township EOC and South Centre Township Traffic and Access Control Points did not read their dosimetry every 30 minutes or record exposure information during the exercise.

Possible Cause: The Radiological Officer (RO) did not request 30 minute reading or record them.

References: NUREG-0654/FEMA-REP-1, K.3.b
South Centre Township Radiological Response Plan

Effect: Emergency workers in the 10-mile Emergency Planning Zone could have been exposed to excessive radiation.

Corrective Action Description: After discussion with county and utility leaders and after careful consideration concerning the matter, the Commonwealth of Pennsylvania believes that the root cause of the matter rests either in a failure of education of the Radiological Officers and field personnel or a failure of the Radiological Officers and field personnel to follow the procedures given. The first priority would be to strengthen training to emphasis the need to do 30 minute dosimetry readings once the equipment is issued. Secondary priority would be a training emphasis for the EOC Radiological Officer to be more cognizant of the need for 30 minute dosimetry checks and to consider methods they could utilize to remind personnel at the appropriate times such as the use of timers/alarms.

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