U.S. Department of Homeland Security
Region III
One Independence Mall, Sixth Floor
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Philadelphia, PA 19106-4404

FEMA

FEB 13 2012

NRC Headquarters' Document Control Desk
Nuclear Regulatory Commission
Washington, D.C. 20555-0001

To Whom It May Concern:

Enclosed is the After Action Report/Improvement Plan for the November 15, 2011, Limerick Generating Station (LGS) Radiological Emergency Preparedness Exercise.

No deficiencies were identified during the exercise. Eight (8) Areas Requiring Corrective Action (ARCAs) were identified and successfully re-demonstrated. Seven (7) planning issues were identified with five (5) remaining open.

Based on the results of the exercise and a review of the offsite radiological emergency response plans and procedures submitted, FEMA Region III has determined they are adequate and there is reasonable assurance they can be implemented, as demonstrated during this exercise.

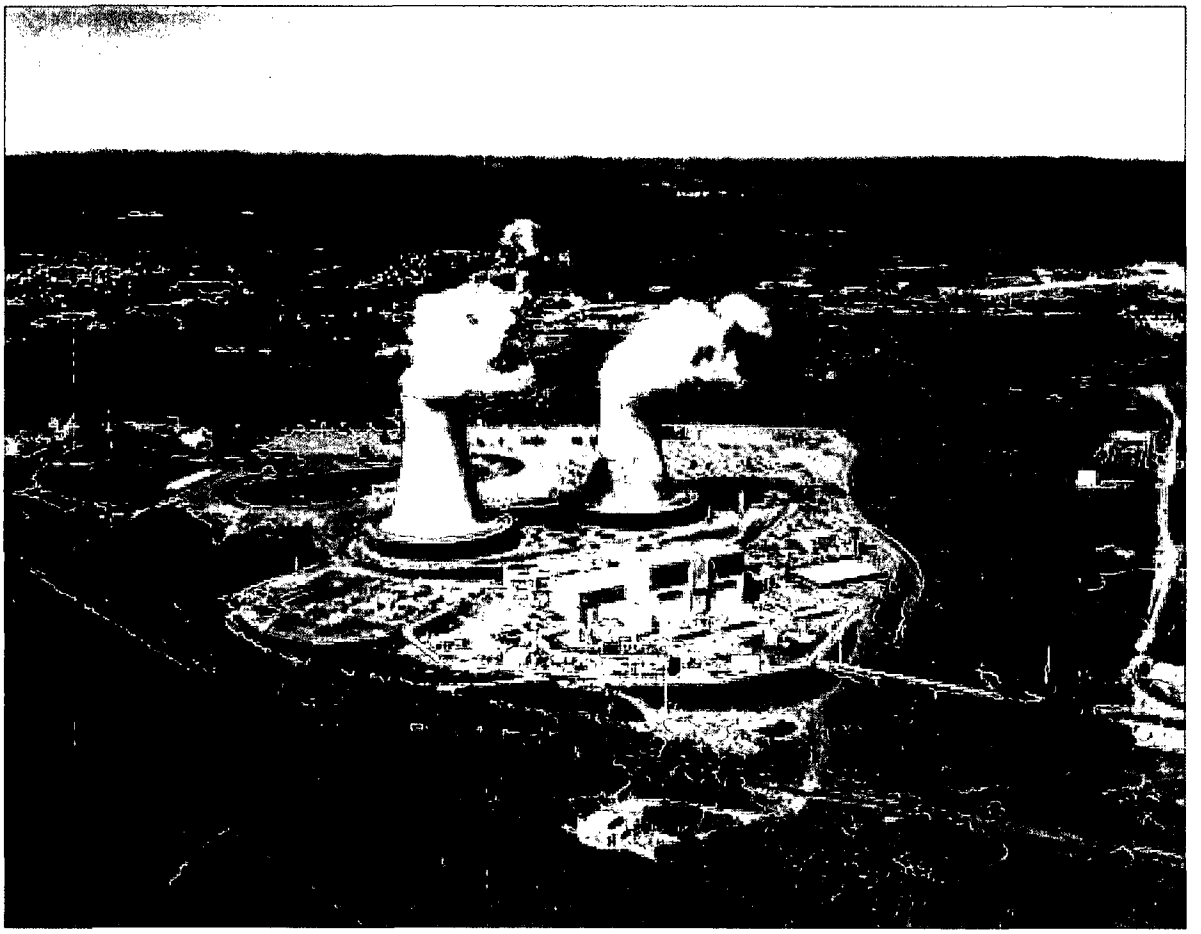
If you have any further questions, please contact me or the Limerick Nuclear Generating Station Project Officer, Dan Lerch, at (215) 931-5603.

Sincerely,

MaryAnn Tierney
Regional Administrator

Attachment

IX49
NRR



Limerick Generating Station

After Action Report/ Improvement Plan

Exercise Date - November 15, 2011

Radiological Emergency Preparedness (REP) Program

FEMA

Published

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Limerick Generating Station
After Action Report/Improvement Plan

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EXECUTIVE SUMMARY

During the week of November 15, 2011, a full-scale evaluated plume exercise was conducted in the 10-mile plume exposure pathway, Emergency Planning Zone (EPZ) around the Limerick Generating Station (LGS) by the Federal Emergency Management Agency (FEMA), Region III. Out-of-sequence Mass Care demonstrations were conducted the 3rd of November 2011. A Medical Services (MS-1) drill was also evaluated September 21, 2011. The purpose of the exercise and the out-of-sequence demonstrations was to assess the State and local offsite response organization's preparedness in responding to a radiological emergency. The exercise and out-of-sequence demonstrations were held in accordance with FEMA's policies and guidance concerning the exercise of State and local radiological emergency response plans (RERP) and procedures.

The most recent prior full-scale exercise at this site was conducted on November 17, 2009.

FEMA wishes to acknowledge the efforts of the many individuals in the Commonwealth of Pennsylvania; the risk jurisdictions of Berks, Chester, and Montgomery Counties; the support jurisdictions of Bucks and Lehigh Counties; and 16 participating municipalities who were evaluated during this exercise.

Protecting the public health and safety is the full-time job of some of the exercise participants and an additional assigned responsibility for others. Still others have willingly sought this responsibility as volunteers providing vital emergency services twenty four (24) hours to the communities of which they live. Cooperation and teamwork of all the participants was observed during this exercise.

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

• Mass Care evaluations were conducted on November 3, 2011 in Bucks, and Lehigh Counties.

• Mass Care evaluations were also conducted as part of the out-of-sequence activities November 16, 2011 in Berks, Chester and Montgomery Counties.

• Emergency Workers, Equipment and Vehicles – Monitoring and Decontamination were

conducted on November 16, 2011 in Berks, Chester, and Montgomery Counties.

• School Interviews were conducted on November 15, 2011 in Berks, Chester, Montgomery, and Berks Counties.

• Traffic/Access Control interviews with the Pennsylvania State Police Skippack Barracks 2047C, Bridge Road, Schwenksville, Montgomery County were conducted on November 16, 2011.

The Commonwealth of Pennsylvania and local organizations, except where noted in this report, demonstrated knowledge of their emergency response plans and procedures and adequately implemented them. There were no Deficiencies. Eight (8) Areas Requiring Corrective Action (ARCAs) were identified as a result of this exercise. Four (4) of the ARCAs were successfully re-demonstrated during the exercise and the remaining four (4) were re-demonstrated in December 2011. There was one (1) ARCA remaining from the previous exercise which was demonstrated during this exercise. Seven (7) new planning issues were identified with (2) being successfully re-demonstrated. Six (6) planning issues from a previous exercise were successfully demonstrated. (see Appendix A for all planning issues).

SECTION 1: EXERCISE OVERVIEW

1.1 Exercise Details

Exercise Name
Limerick Generating Station

Type of Exercise
Plume

Exercise Date
November 15, 2011

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 Limerick Generating Station exercise:

State Jurisdictions

Pennsylvania Army National Guard
Pennsylvania Bureau of Aviation
Pennsylvania Department of Aging
Pennsylvania Department of Agriculture
Pennsylvania Department of Environmental Protection
Pennsylvania Department of Environmental Protection- Bureau of Radiation Protection
Pennsylvania Department of General Service
Pennsylvania Department of Health
Pennsylvania Department of Military and Veterans Affairs (DMVA)
Pennsylvania Department of Public Welfare (DPW)
Pennsylvania Department of Transportation (PENNDOT)
Pennsylvania Emergency Management Agency
Pennsylvania FIsh and Boat Commission
Pennsylvania Game Commission
Pennsylvania Public Utility Commission
Pennsylvania State Police
Pennsylvania Turnpike Commission

Risk Jurisdictions
Berks County
Berks Count Department of Emergency Services
Berks County Communications (911)
Berks County Geographic Information Systems
Berks County Planning Commission
Berks County Intermediate Unit
Berks County Human Services
Berks County Purchasing Office
Berks County Agricultural Extension Office
Berks County Sheriff's Office
Birdsboro/Union Fire Department
Exeter Township Emergency Management
Boyertown Borough/Colebrookdale Township
Boyertown Borough/Colebrookdale Township EOC
Friendship H & L Fire Compnay

Earl Township
Earl Township Board of Supervisors
Earl Township Fire Company
Boyertown Area School District
Earl Elementary School
Daniel Boone School District
Birdsboro Elementary School
Chester County
Chester County Department of Community Information Services
Chester County Department of Emergency Services
Chester County Department of Health
Chester County Geographic Information Systems Department
Chester County HAZMAT Team
Chester County Sheriff's Office
Chester County Amateur Radio
East Pikeland Township
East Pikeland Township EMA
East Vincent Fire/EMS
East Pikeland Township Police Department
Kimberton Fire Company
East Vincent Township
East Vincent Emergency Management
East Vincent Police
Phoenixville Borough
Phoenixville EOC
Phoenixville EMS
Phoenixville Fire Department
Phoenixville Borough Council
Phoenixville Police Department
Uwchlan Township
Uwchlan Township Ambulance
Uwchlan Township Department of Public Works
Uwchlan Township Emergency Management
Uwchlan Township Fire Department

Uwchlan Township Police Department
Uwchlan Township Radiological Officer
Downington Area School District
Lionville Elementary School
Great Valley School District
Owen J. Roberts School District
French Creek Elementary School
West Vincent Elementary School
Phoenixville Area School District
East Pikeland Elementary School
Montgomery County
Montgomery County Office of Emergency Management
Montgomery County Animal Response Team/VOAD
Montgomery County Public Information Officer
Montgomery County Public Works Association
Montgomery County Sheriff
Montgomery County Department of Public Safety
Montgomery County HAZMAT Team
Montgomery County ARES/RACES
Montgomery County CISM Team
Cheltanham Township EMA
Plymouth Fire Company
Harleysville Fire Rescue Squad
Telford Dive Company
Green Lane Borough/Marborough Township
Green Lane Borough/Marborough Township Emergency Management
Green Lane Borough Fire Department
Marlborough Township Police Department
Green Lane Borough Emergency Medical Service
Green Lane Borough/Marlborough Township Police Department
Limerick Township
Limerick Fire Department
Limerick Township Emergency Management
Limerick Township Police Department

Lower Frederick Township
Lower Frederick Fire Department
Lower Frederick Township Administration
Lower Frederick Township Police Department
Lower Frederick Ambulance Service
Lower Frederick Public Works
Lower Pottsgrove Township
Lower Pottsgrove Township Fire Marshall
Lower Pottsgrove Township Police Department
Lower Pottsgrove Township Emergency Management
Lower Pottsgrove Township Public Works
Sanatoga Fire Company
Ringing Hill Fire Company
New Hanover Township
New Hanover Township Department of Public Works
Standard Transportation of America
New Hanover Township Emergency Management
New Hanover Township Police Department
New Hanover Fire Company
Perkiomen Township
Perkiomen Township Fire Company
Collegeville Borough Police
Perkiomen Township Code of Enforcement
Schwenksville Borough
Schwenksville Volunteer Fire Company
Trappe Borough
Trappe Fire Company
Trappe Borough Management
Trappe Borough Council
Trappe Borough Emergency Management
Methacton Area School District
Woodland Elementary School
Worcester Elemenatry School
Perkiomen Valley School District

Perkiomen Valley Middle School East
Pottsgrove School District
Pottsgrove Highschool
Pottstown School District
Pottstown Highschool
Souderton Area School District
Salford Hills Elementary School
Spring-Ford Area School District
Spring-Ford Area School District- 7th Grade Center
Spring-Ford Area School Distric- 8th Grade Center
Upper Perkiomen School District
Upper Perkiomen Middle School
West Center for Technical Studies

Support Jurisdictions
Bucks County
Bucks County Emergency Management Agency
Bucks County 911
Bucks County Department of Agriculture
Bucks County Department of Health
Bucks County Fire Services
Bucks County Public Works
Bucks County Radiological Officer
Bucks County Sheriff's Office
Souderton Fire Company
Souderton Police Department
Lehigh County
Lehigh County Department of Public Health
Lehigh County Department of Public Safety
Lehigh County Department of Transportation
Lehigh County Emergency Management
Lehigh County Fire Department
Lehigh County Sheriff's Department
Lehigh County Special Operations Team
Emmaus Fire Department

Emmaus EMS

Private Organizations

Amateur Radio Emergency Services (ARES)

American Red Cross

St. Joseph's Hospital

Reading Hospital

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 Tribal, 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:

A. 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;

B. 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;

C. 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

D. 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 FEMA Region III Radiological Assistance Committee (RAC), which is chaired by FEMA.

A REP exercise was conducted on Novewmber 15, 2011, 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 Limerick Generating Station (LGS). 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:

A. 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;

B. FEMA Guidance Memoranda MS-1, "Medical Services," November 1986;

C. FEMA-REP-14, "Radiological Emergency Preparedness Exercise Manual," September 1991;

D. 66 FR 47546, "FEMA Radiological Emergency Preparedness: Alert and Notification,"

September 12, 2001; and

E. 67 FR 20580, "FEMA Radiological Emergency Preparedness: Exercise Evaluation Methodology," April 25, 2002.

Section III of this report, entitled "Exercise Overview," presents basic information and data relevant to the exercise. This section of the report contains a description of the plume pathway emergency planning zone (EPZ), a listing of all participating jurisdictions and functional entities that were evaluated, and a tabular presentation of the time of actual occurrence of key exercise events and activities.

Section IV of this report, entitled "Exercise Evaluation and Results," presents detailed information on the demonstration of applicable exercise evaluation areas at each jurisdiction or functional entity evaluated in a jurisdiction-based, issues-only format. This section also contains: (1) descriptions of all Deficiencies and Areas Requiring Corrective Action (ARCAs) assessed during this exercise, recommended corrective actions, and the Tribal, State, and local governments' schedule of corrective actions for each identified exercise issue and (2) descriptions of ARCAs assessed during previous exercises and resolved at this exercise, including the corrective action demonstrated, as well as ARCAs assessed during previous exercises and scheduled for demonstration at this exercise which remain unresolved.

The final section of the report is comprised of the appendices, which present the following supplementary information: acronyms and abbreviations, exercise evaluators and team leaders, exercise evaluation area criteria and extent of play agreement, and the exercise scenario. It also presents information on planning issues (both new planning issues identified during this exercise and resolved planning issues identified during previous exercises).

Emergency Planning Zone Description:

LGS is located in southeastern Pennsylvania on the Schuylkill River about 1.7 miles southeast of Pottstown Borough. The river passes through the site, separating the western portion, which is in East Coventry Township in Chester County, from the eastern portion, which is in Limerick and Lower Pottsgrove Townships in Montgomery County. The plant is owned and operated by Exelon Nuclear. Two boiling water reactors each generate an electrical output of 1,050 megawatts (MW). Unit 1 was issued a full-power license in August 1985; commercial operations

began in February 1986. Unit 2 was issued a full-power license in August 1989 with commercial operations beginning in January 1990.

The site encompasses 595 acres and is divided into three (3) parts. The principal portion, where the major operating equipment and buildings are located, is on the east bank of the Schuylkill River. This portion is separated from the second segment, where the cooling water intake is located, near the main line of the Reading Railroad. The third portion lies on the west bank of the river, adjacent to Conrail railroad tracks. The site coordinates are approximately 40°13'27"N and 75°35'15"W.

The minimum exclusion distance for the LGS is 2,500 feet from the center of each reactor. The utility owns all the land within the exclusion area. No private residences are located within the exclusion area; however, some farming may be permitted.

There are 165 sirens installed to cover the 10-mile plume exposure pathway EPZ. These sirens are activated three (3) minutes before the Emergency Alert System (EAS) messages issued by the Commonwealth of Pennsylvania are broadcast.

Soils in this area are of the Reaville-Penn-Klinesville Association and are characteristic of rolling uplands. They are underlain by sedimentary rocks of the Brunswick Formation, consisting mostly of red shale with some fine-grained sandstone interbedding.

The normal pool elevation of the Schuylkill River in this area is 200 feet above mean sea level (msl). The topography of the area is hilly, with elevations ranging from 100-300 feet above msl within five (5) miles of the site. The plant is approximately 217 feet above msl.

The climate in this area is dominated by prevailing westerly winds that produce humid, continental-type weather characterized by warm summers and moderately cold winters. Montgomery County is the warmest part of Pennsylvania, with an average annual temperature of 57°F. Annual precipitation is approximately 42 inches.

The area in the immediate vicinity of the plant is made up mostly of agricultural and other open land. The Pottstown Borough in Montgomery County is the nearest community and has a population of 21,859 based on the 2000 Census. The nearest major population center (more than 25,000 people) is Philadelphia that lies 25 miles to the southeast of the site.

Two major industries employ a total of 850 persons within two (2) miles of the plant. Two small airfields are also located nearby. A small private airfield is about one (1) mile to the northeast, but its runway is oriented so that the flight path does not pass over the plant. The Pottstown Municipal Airport is 4.3 miles northwest of the site. The LGS does not lie in the approach pattern for this airport.

No major thoroughfares are located in the immediate vicinity of the plant. The main line of the Reading Railroad runs along the north bank of the Schuylkill River and traverses the site about 500 feet from the plant.

2.2 Exercise Objectives, Capabilities and Activities

Exercise objectives and identified Capabilities/REP Criteria selected to be exercised are discussed in Appendix D "Exercise Plan".

2.3 Scenario Summary

There are two nuclear units at the Limerick Generating Station (LGS), Pennsylvania. Both are Boiling Water Reactors. Limerick Unit 1 is participating in the exercise.

At 1600 on November 15, 2011, the exercise starts in the LGS Training Simulator control room. LGS Unit 1 is operating at 100 percent power. The A Standby Gas Treatment filter system fan is out of service. This system is one of two banks of particulate and charcoal filters used to reduce radioactive releases from the Reactor Building (secondary containment) in the event of an accident. The weather is sunny with winds at 8 miles per hour (mph) from the South (S) into the North (N). The atmospheric stability class is D. Thunderstorms are expected to be in the area.

Between 1608 and 1612 the Control Room receives visual reports from on-site personnel of a Tornado striking and damaging equipment in the Protected Area of the plant.

On or before 1627, the Shift Manager declares an Alert based on Emergency Action Level (EAL) HA-5 (damage by the Tornado to plant equipment important to safety). The wind speed is 8 mph and the wind direction is from 165 degrees. The Unit continues to operate at 100

percent power. At 1645 owing to an equipment problem reducing the flow of coolant to the reactor, the reactor power is reduced to 77 percent.

At 1705 the loss of one of the Motor Control Centers (electrical problem) results in the loss of the ability to operate some of the equipment (such as valves and pumps) that could be needed if there was an accident at the plant. At 1710 the wind direction is from 175 degrees.

At 1735 an alarm is received in the Simulator Control Room indicating that there is a leak of reactor coolant into the Drywell (primary containment). The leak rate is determined to be large enough to warrant a reactor shutdown. However, a transient condition occurs that causes the reactor protection system to initiate a shutdown automatically. Several control rods do not insert and the reactor power stays at about 15 percent. The Drywell radiation monitor reads about 9 R/hr.

On or before 1754 a Site Area Emergency should be declared in accordance with Emergency Action Level MS-3, (Reactor shutdown was not successful and reactor power remains greater than 4 percent).

At 1835 the operators are able to successfully insert the remaining control rods and the reactor is shut down. The wind direction is from 187 degrees and the wind speed is 8 mph. The Drywell radiation monitors are reading 190 R/hr as a result of the leakage of reactor coolant. This indicates that the transient condition caused some damage to the reactor fuel clad.

At 1900, there is report of steam in a section of the Reactor Building near the Main Steam Isolation Valves. The North Stack monitor indicates a radioactive release of about 1 e+5 micro curies per second and increasing. This is indication that reactor coolant is leaking into the Reactor Building (secondary containment). The radioactive steam in the Reactor Building is being processed by the remaining operating bank of filters in the Standby Gas Treatment System and released through the North Stack. Also at this time the Drywell radiation monitors are reading 250 R/hr indicating further damage to the reactor fuel clad.

On or before 1915 a General Emergency will be declared based on Emergency Action Level FG-1 (loss of all three fission product barriers). The LGS protective action recommendation will be to evacuate the 5 mile ring and 10 miles downwind in sectors NNW, N, NNE and NE. KI will be recommended for the public in the evacuated areas. The wind speed is 8 mph and the wind

direction is from 187 degrees. It is anticipated that based on the General Emergency declaration and with a radiation release in progress that the State and Counties will make the decision to evacuate the 10 mile ring and administer KI to the public.

At 1930 the Standby Gas Treatment System fails owing to degradation by the moisture from the steam. The North Stack reading will increase to 1E+6 micro curies per second and remain at or near this level through the end of the exercise.

At 2000 the wind speed is 8 mph and the wind direction is from 191 degrees (South to North).

On or after 2100 the LGS 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 presented 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:

(M) Met: status of a REP exercise Evaluation Area Criterion indicating that the participating Offsite Response Organization (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.

(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.

(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.

(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 two -year or six-year interval required in the FEMA REP Program Manual.

3.2 Summary Results of Exercise Evaluation

Contained in this section are the results and findings of the evaluation of all jurisdictions and locations that participated in the November 15, 2011, biennial Radiological Emergency Preparedness (REP) exercise. The exercise was held to test the offsite emergency response capabilities of local governments in the 10-mile Emergency Planning Zone (EPZ) surrounding the Limerick Generating Station (LGS).

Each jurisdiction and functional entity was evaluated on the basis of its demonstration of the exercise evaluation area criteria contained in the REP Exercise Evaluation Methodology. Detailed information on the exercise evaluation area criteria and the extent-of-play agreement used in this exercise are found in Appendix D of this report. All activities were based on the plans and procedures and completed as they would have been in an actual emergency except as noted in the extent of play agreement.

Table 3.1 - Summary of Exercise Evaluation (9 pages)

DATE: 2011-11-15 SITE: Limerick Generating Station, PA M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated		PA EOC	PA JIC	PA AAC SEOC-BRP	BRP R3V	SFMT A SER	SFMT B SER	EJIC	PA TACP SPBSkpk	BrCo EOC	BrCo EWMDS DBC	BrCo ExtrTwp RC
Emergency Operations Management												
Mobilization	1a1	N	N	N	M			M		M		
Facilities	1b1											M
Direction and Control	1c1	N		N	M					M		
Communications Equipment	1d1	N	N	N	M	M	M	M	M	M		
Equip & 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		N						M		
Rad Assessment and PARs for the Plume Phase Emergency	2b1			N								
PADs for the General Public for the Plume Phase Emergency	2b2	N										
Protective Action Decisions for protection of special populations	2c1	N								M		
Rad Assessment and Decision making for the Ingestion Exposure Pathway	2d1											
Rad Assessment and Decision making concerning Relocation/Reentry/Return	2e1											
Protective Action Implementation												
Implementation of emergency worker exposure control	3a1	N			M	M	M		M	M	M	
Implementation of KI decision	3b1				M	M	M		M	M		
Implementation of protective actions for special populations	3c1									M		
Implementation of protective actions for Schools	3c2									M		
Implementation of traffic and access control	3d1	N							M	M		
Impediments to evacuation	3d2								M	M		
Implementation of ingestion pathway decisions - availability/use of info	3e1											
Materials for Ingestion Pathway PADs are available	3e2											
Implementation of relocation, re-entry, and return decisions.	3f1											
Field Measurement and Analysis												
Adequate Equipment for Plume Phase Field Measurements	4a1					M	M					
Field Teams obtain sufficient information	4a2			N	M							
Field Teams Manage Sample Collection Appropriately	4a3					M	M					
Post plume phase field measurements and sampling	4b1											
Laboratory operations	4c1											
Emergency Notification and Public Info												
Activation of the prompt alert and notification system	5a1	N	N							M		
Activation of the prompt alert and notification system - Fast Breaker	5a2											
Backup Route Alerting	5a3											
Alert and Notificatiion	5a4											
Emergency information and instructions for the public and the media	5b1	N	N					M		M		
Support Operations/Facilities												
Monitoring, decontamination, and registration of evacuees	6a1										M	
Montoring and decontaminatiion of emergency workers and their equipment	6b1										N	
Temporary care of evacuees	6c1											
Transportation and treatment of contaminated injured individuals	6d1											

Table 3.1 - Summary of Exercise Evaluation (Continued. page 2/9)

DATE: 2011-11-15 SITE: Limerick Generating Station, PA M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated		BrCo MDC HJSHS	BrCo MCC HJSHS	BrCoByrCbrkEOC	BrCoByrCbrkTACP	BrCo ErlTwp EOC	BrCoErlTwpBuRA	CC EOC	CC EWMDS LMS	CC EWMDS TVFD	CC RC WWTwp	CCEPklnTwpEOC
Emergency Operations Management												
Mobilization	1a1					M	M	M				M
Facilities	1b1									M		
Direction and Control	1c1					M		M				M
Communications Equipment	1d1					M	M	M			M	M
Equip & Supplies to support operations	1e1	M				M	M	M	M	M	M	M
Protective Action Decision Making												
Emergency Worker Exposure Control	2a1			M				M				
Rad Assessment and PARs for the Plume Phase Emergency	2b1											
PADs for the General Public for the Plume Phase Emergency	2b2											
Protective Action Decisions for protection of special populations	2c1					M		M				M
Rad Assessment and Decision making for the Ingestion Exposure Pathway	2d1											
Rad Assessment and Decision making concerning Relocation/Reentry/Return	2e1											
Protective Action Implementation												
Implementation of emergency worker exposure control	3a1	M				M	M	M	M	M	M	M
Implementation of KI decision	3b1					M	M	M				M
Implementation of protective actions for special populations	3c1					M		M				M
Implementation of protective actions for Schools	3c2					M		M				M
Implementation of traffic and access control	3d1					M		M				M
Impediments to evacuation	3d2					M		M				M
Implementation of ingestion pathway decisions - availability/use of info	3e1											
Materials for Ingestion Pathway PADs are available	3e2											
Implementation of relocation, re-entry, and return decisions.	3f1											
Field Measurement and Analysis												
Adequate Equipment for Plume Phase Field Measurements	4a1											
Field Teams obtain sufficient information	4a2											
Field Teams Manage Sample Collection Appropriately	4a3											
Post plume phase field measurements and sampling	4b1											
Laboratory operations	4c1											
Emergency Notification and Public Info												
Activation of the prompt alert and notification system	5a1					M		M				M
Activation of the prompt alert and notification system - Fast Breaker	5a2											
Backup Route Alerting	5a3						M					
Alert and Notificatiion	5a4											
Emergency information and instructions for the public and the media	5b1							M				
Support Operations/Facilities												
Monitoring, decontamination, and registration of evacuees	6a1	M							M	M	M	
Montoring and decontaminatiion of emergency workers and their equipment	6b1								M	M		
Temporary care of evacuees	6c1		M									
Transportation and treatment of contaminated injured individuals	6d1											

Table 3.1 - Summary of Exercise Evaluation (Continued. page 3/9)

DATE: 2011-11-15 SITE: Limerick Generating Station, PA M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated		CCEPklndTwpBuRA	CCEVcntTwpEOC	CCEVcntTwpTACP	CC PhxvlBr EOC	CC Phxville TACP	CC UclanTwp EOC	CC UTwp TACP	MC EOC	MC EWMDS IVMS	MC RC Mtrplx	MC MCC AJHS
Emergency Operations Management												
Mobilization	1a1		M		M		M		M			
Facilities	1b1											
Direction and Control	1c1		M		M		M		M			
Communications Equipment	1d1	M	M	M	M	M	M	M	M		M	
Equip & Supplies to support operations	1e1	M	M	M	M	M	M	M	M	M	M	
Protective Action Decision Making												
Emergency Worker Exposure Control	2a1							M	M			
Rad Assessment and PARs for the Plume Phase Emergency	2b1											
PADs for the General Public for the Plume Phase Emergency	2b2											
Protective Action Decisions for protection of special populations	2c1		M		M		M		M			
Rad Assessment and Decision making for the Ingestion Exposure Pathway	2d1											
Rad Assessment and Decision making concerning Relocation/Reentry/Return	2e1											
Protective Action Implementation												
Implementation of emergency worker exposure control	3a1	M	M	M	M	M	M	M	M	M	M	
Implementation of KI decision	3b1	M	M	M	M	M	M	M	M			
Implementation of protective actions for special populations	3c1		M		M		M		M			
Implementation of protective actions for Schools	3c2		M		M		M		M			
Implementation of traffic and access control	3d1		M	M	M	M	M	M	M			
Impediments to evacuation	3d2		M	M	M	M	M	M	M			
Implementation of ingestion pathway decisions - availability/use of info	3e1											
Materials for Ingestion Pathway PADs are available	3e2											
Implementation of relocation, re-entry, and return decisions.	3f1											
Field Measurement and Analysis												
Adequate Equipment for Plume Phase Field Measurements	4a1											
Field Teams obtain sufficient information	4a2											
Field Teams Manage Sample Collection Appropriately	4a3											
Post plume phase field measurements and sampling	4b1											
Laboratory operations	4c1											
Emergency Notification and Public Info												
Activation of the prompt alert and notification system	5a1		M		M		M		M			
Activation of the prompt alert and notification system - Fast Breaker	5a2											
Backup Route Alerting	5a3	M										
Alert and Notificatiion	5a4											
Emergency information and instructions for the public and the media	5b1								M			
Support Operations/Facilities												
Monitoring, decontamination, and registration of evacuees	6a1									M	M	
Montoring and decontaminatiion of emergency workers and their equipment	6b1									M		
Temporary care of evacuees	6c1											M
Transportation and treatment of contaminated injured individuals	6d1											

Table 3.1 - Summary of Exercise Evaluation (Continued. page 4/9)

DATE: 2011-11-15 SITE: Limerick Generating Station, PA M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated		MC MCC ASHS	MC MCC CBMS	MC MCC CHS	MC MCC SRMS	MC MCC UDSHS	MC MCC UMHS	MC MCC UMMS	MC GLBr TACP	MCGLMrlbrTwpEOC	MC LmrkTwp EOC	MC LmkTwp TACP
Emergency Operations Management												
Mobilization	1a1									M	M	M
Facilities	1b1										M	
Direction and Control	1c1									M	M	
Communications Equipment	1d1								M	M	M	M
Equip & Supplies to support operations	1e1								M	M	M	M
Protective Action Decision Making												
Emergency Worker Exposure Control	2a1											
Rad Assessment and PARs for the Plume Phase Emergency	2b1											
PADs for the General Public for the Plume Phase Emergency	2b2											
Protective Action Decisions for protection of special populations	2c1									M	M	
Rad Assessment and Decision making for the Ingestion Exposure Pathway	2d1											
Rad Assessment and Decision making concerning Relocation/Reentry/Return	2e1											
Protective Action Implementation												
Implementation of emergency worker exposure control	3a1								M	M	M	M
Implementation of KI decision	3b1								M	M	M	M
Implementation of protective actions for special populations	3c1									M	M	
Implementation of protective actions for Schools	3c2									M	M	
Implementation of traffic and access control	3d1								M	M	M	M
Impediments to evacuation	3d2								M	M	M	M
Implementation of ingestion pathway decisions - availability/use of info	3e1											
Materials for Ingestion Pathway PADs are available	3e2											
Implementation of relocation, re-entry, and return decisions.	3f1											
Field Measurement and Analysis												
Adequate Equipment for Plume Phase Field Measurements	4a1											
Field Teams obtain sufficient information	4a2											
Field Teams Manage Sample Collection Appropriately	4a3											
Post plume phase field measurements and sampling	4b1											
Laboratory operations	4c1											
Emergency Notification and Public Info												
Activation of the prompt alert and notification system	5a1									M	M	
Activation of the prompt alert and notification system - Fast Breaker	5a2											
Backup Route Alerting	5a3											
Alert and Notificatiion	5a4											
Emergency information and instructions for the public and the media	5b1											
Support Operations/Facilities												
Monitoring, decontamination, and registration of evacuees	6a1											
Montoring and decontaminatiion of emergency workers and their equipment	6b1											
Temporary care of evacuees	6c1	M	M	M	P	M	M	M				
Transportation and treatment of contaminated injured individuals	6d1											

Table 3.1 - Summary of Exercise Evaluation (Continued. page 5/9)

DATE: 2011-11-15 SITE: Limerick Generating Station, PA M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated		MC LFTWP EOC	MCLrPgrvTwpEOC	MCLrPgrvTwpBuRa	MCNHvrTwpEOC	MCNHvrTwpTACP	MCPrkmnTwp EOC	MCSwksvlBrEOC	MCSwksvlBrTACP	MC TrpBr EOC	BkCo EOC (S)	BkCo RC CoLnPlza
Emergency Operations Management												
Mobilization	1a1	M	M	M	M		M	M		M	M	
Facilities	1b1							M		M		
Direction and Control	1c1	M	M		M		M	M		M	M	
Communications Equipment	1d1	M	M	M	M	M	M	M	M	M	M	M
Equip & Supplies to support operations	1e1	M	M	M	M	M	M	M	M	M	M	M
Protective Action Decision Making												
Emergency Worker Exposure Control	2a1											
Rad Assessment and PARs for the Plume Phase Emergency	2b1											
PADs for the General Public for the Plume Phase Emergency	2b2											
Protective Action Decisions for protection of special populations	2c1	M	M		M		M	M		M		
Rad Assessment and Decision making for the Ingestion Exposure Pathway	2d1											
Rad Assessment and Decision making concerning Relocation/Reentry/Return	2e1											
Protective Action Implementation												
Implementation of emergency worker exposure control	3a1	M	M	M	M	M	M	M	M	M		M
Implementation of KI decision	3b1	M	M	M	M	M	M	M	M	M		
Implementation of protective actions for special populations	3c1	M	M		M		M	M		M		
Implementation of protective actions for Schools	3c2	M	M		M		M	M		M		
Implementation of traffic and access control	3d1	M	M		M	M	M	M	M	M		
Impediments to evacuation	3d2	M	M		M	M	M	M	M	M		
Implementation of ingestion pathway decisions - availability/use of info	3e1											
Materials for Ingestion Pathway PADs are available	3e2											
Implementation of relocation, re-entry, and return decisions.	3f1											
Field Measurement and Analysis												
Adequate Equipment for Plume Phase Field Measurements	4a1											
Field Teams obtain sufficient information	4a2											
Field Teams Manage Sample Collection Appropriately	4a3											
Post plume phase field measurements and sampling	4b1											
Laboratory operations	4c1											
Emergency Notification and Public Info												
Activation of the prompt alert and notification system	5a1	M	M		M		M	M		M		
Activation of the prompt alert and notification system - Fast Breaker	5a2											
Backup Route Alerting	5a3			M								
Alert and Notificatiion	5a4											
Emergency information and instructions for the public and the media	5b1										M	
Support Operations/Facilities												
Monitoring, decontamination, and registration of evacuees	6a1											M
Montoring and decontaminatiion of emergency workers and their equipment	6b1											
Temporary care of evacuees	6c1											
Transportation and treatment of contaminated injured individuals	6d1											

Table 3.1 - Summary of Exercise Evaluation (Continued. page 6/9)

DATE: 2011-11-15 SITE: Limerick Generating Station, PA M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated		BkCo MCC BBHS	BkCo MCC CRJSHS	BkCo MCC CBHS	BkCo MCC KJHS	BkCo MCC LCJHS	BkCo MCC MPMS	BkCo MCC PSH	BkCo MCC PMS	BkCo MCC WTC	LhCo EOC (S)	LhCo RC EHS
Emergency Operations Management												
Mobilization	1a1										M	
Facilities	1b1											
Direction and Control	1c1										M	
Communications Equipment	1d1										M	M
Equip & Supplies to support operations	1e1										M	M
Protective Action Decision Making												
Emergency Worker Exposure Control	2a1											
Rad Assessment and PARs for the Plume Phase Emergency	2b1											
PADs for the General Public for the Plume Phase Emergency	2b2											
Protective Action Decisions for protection of special populations	2c1											
Rad Assessment and Decision making for the Ingestion Exposure Pathway	2d1											
Rad Assessment and Decision making concerning Relocation/Reentry/Return	2e1											
Protective Action Implementation												
Implementation of emergency worker exposure control	3a1											M
Implementation of KI decision	3b1											
Implementation of protective actions for special populations	3c1											
Implementation of protective actions for Schools	3c2											
Implementation of traffic and access control	3d1											
Impediments to evacuation	3d2											
Implementation of ingestion pathway decisions - availability/use of info	3e1											
Materials for Ingestion Pathway PADs are available	3e2											
Implementation of relocation, re-entry, and return decisions.	3f1											
Field Measurement and Analysis												
Adequate Equipment for Plume Phase Field Measurements	4a1											
Field Teams obtain sufficient information	4a2											
Field Teams Manage Sample Collection Appropriately	4a3											
Post plume phase field measurements and sampling	4b1											
Laboratory operations	4c1											
Emergency Notification and Public Info												
Activation of the prompt alert and notification system	5a1											
Activation of the prompt alert and notification system - Fast Breaker	5a2											
Backup Route Alerting	5a3											
Alert and Notificatiion	5a4											
Emergency information and instructions for the public and the media	5b1										M	
Support Operations/Facilities												
Monitoring, decontamination, and registration of evacuees	6a1											M
Montoring and decontaminatiion of emergency workers and their equipment	6b1											
Temporary care of evacuees	6c1	M	P	M	P	P	P	M	M	M		
Transportation and treatment of contaminated injured individuals	6d1											

Table 3.1 - Summary of Exercise Evaluation (Continued. page 7/9)

DATE: 2011-11-15 SITE: Limerick Generating Station, PA M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated		LhCo MCC EHS	LhCo MCC SHS	BrCo BASD	BrCo BASD EES	BrCo DBASD	BrCoDBASDBdsbrES	CC DASD	CC DASD LES	CC GVSD	CCOJRSD	CCOJRSDFCES
Emergency Operations Management												
Mobilization	1a1											
Facilities	1b1											
Direction and Control	1c1											
Communications Equipment	1d1											
Equip & Supplies to support operations	1e1	M										
Protective Action Decision Making												
Emergency Worker Exposure Control	2a1											
Rad Assessment and PARs for the Plume Phase Emergency	2b1											
PADs for the General Public for the Plume Phase Emergency	2b2											
Protective Action Decisions for protection of special populations	2c1											
Rad Assessment and Decision making for the Ingestion Exposure Pathway	2d1											
Rad Assessment and Decision making concerning Relocation/Reentry/Return	2e1											
Protective Action Implementation												
Implementation of emergency worker exposure control	3a1											
Implementation of KI decision	3b1											
Implementation of protective actions for special populations	3c1											
Implementation of protective actions for Schools	3c2			M	M	M	M	M	M	M	M	M
Implementation of traffic and access control	3d1											
Impediments to evacuation	3d2											
Implementation of ingestion pathway decisions - availability/use of info	3e1											
Materials for Ingestion Pathway PADs are available	3e2											
Implementation of relocation, re-entry, and return decisions.	3f1											
Field Measurement and Analysis												
Adequate Equipment for Plume Phase Field Measurements	4a1											
Field Teams obtain sufficient information	4a2											
Field Teams Manage Sample Collection Appropriately	4a3											
Post plume phase field measurements and sampling	4b1											
Laboratory operations	4c1											
Emergency Notification and Public Info												
Activation of the prompt alert and notification system	5a1											
Activation of the prompt alert and notification system - Fast Breaker	5a2											
Backup Route Alerting	5a3											
Alert and Notificatiion	5a4											
Emergency information and instructions for the public and the media	5b1											
Support Operations/Facilities												
Monitoring, decontamination, and registration of evacuees	6a1											
Montoring and decontaminatiion of emergency workers and their equipment	6b1											
Temporary care of evacuees	6c1	M	M									
Transportation and treatment of contaminated injured individuals	6d1											

Table 3.1 - Summary of Exercise Evaluation (Continued. page 8/9)

DATE: 2011-11-15 SITE: Limerick Generating Station, PA M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated		CCOJRSDWVES	CC PASD	CC PASD EPES	MC MSD	MC MSD WES	MCMSDWrcstES	MC PVSD	MCPVSDPVMSE	MC PSD	MCPSDPgrvHS
Emergency Operations Management											
Mobilization	1a1										
Facilities	1b1										
Direction and Control	1c1										
Communications Equipment	1d1										
Equip & Supplies to support operations	1e1										
Protective Action Decision Making											
Emergency Worker Exposure Control	2a1										
Rad Assessment and PARs for the Plume Phase Emergency	2b1										
PADs for the General Public for the Plume Phase Emergency	2b2										
Protective Action Decisions for protection of special populations	2c1										
Rad Assessment and Decision making for the Ingestion Exposure Pathway	2d1										
Rad Assessment and Decision making concerning Relocation/Reentry/Return	2e1										
Protective Action Implementation											
Implementation of emergency worker exposure control	3a1										
Implementation of KI decision	3b1										
Implementation of protective actions for special populations	3c1										
Implementation of protective actions for Schools	3c2	M	M	M	M	M	M	M	M	M	M
Implementation of traffic and access control	3d1										
Impediments to evacuation	3d2										
Implementation of ingestion pathway decisions - availability/use of info	3e1										
Materials for Ingestion Pathway PADs are available	3e2										
Implementation of relocation, re-entry, and return decisions.	3f1										
Field Measurement and Analysis											
Adequate Equipment for Plume Phase Field Measurements	4a1										
Field Teams obtain sufficient information	4a2										
Field Teams Manage Sample Collection Appropriately	4a3										
Post plume phase field measurements and sampling	4b1										
Laboratory operations	4c1										
Emergency Notification and Public Info											
Activation of the prompt alert and notification system	5a1										
Activation of the prompt alert and notification system - Fast Breaker	5a2										
Backup Route Alerting	5a3										
Alert and Notificatiion	5a4										
Emergency information and instructions for the public and the media	5b1										
Support Operations/Facilities											
Monitoring, decontamination, and registration of evacuees	6a1										
Montoring and decontaminatiion of emergency workers and their equipment	6b1										
Temporary care of evacuees	6c1										
Transportation and treatment of contaminated injured individuals	6d1										

Table 3.1 - Summary of Exercise Evaluation (Continued. page 9/9)

DATE: 2011-11-15 SITE: Limerick Generating Station, PA M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated		MC PASD	MCPASDPHS	MCSASDSHES	MC SASD	MC SFASD	MCSFASD7GC	MCSFASDWCTS	MCSFASD8GC	MC UPSD	MCUPSDUPMS
Emergency Operations Management											
Mobilization	1a1										
Facilities	1b1										
Direction and Control	1c1										
Communications Equipment	1d1										
Equip & Supplies to support operations	1e1										
Protective Action Decision Making											
Emergency Worker Exposure Control	2a1										
Rad Assessment and PARs for the Plume Phase Emergency	2b1										
PADs for the General Public for the Plume Phase Emergency	2b2										
Protective Action Decisions for protection of special populations	2c1										
Rad Assessment and Decision making for the Ingestion Exposure Pathway	2d1										
Rad Assessment and Decision making concerning Relocation/Reentry/Return	2e1										
Protective Action Implementation											
Implementation of emergency worker exposure control	3a1										
Implementation of KI decision	3b1										
Implementation of protective actions for special populations	3c1										
Implementation of protective actions for Schools	3c2	M	M	M	M	M	M	M	M	M	M
Implementation of traffic and access control	3d1										
Impediments to evacuation	3d2										
Implementation of ingestion pathway decisions - availability/use of info	3e1										
Materials for Ingestion Pathway PADs are available	3e2										
Implementation of relocation, re-entry, and return decisions.	3f1										
Field Measurement and Analysis											
Adequate Equipment for Plume Phase Field Measurements	4a1										
Field Teams obtain sufficient information	4a2										
Field Teams Manage Sample Collection Appropriately	4a3										
Post plume phase field measurements and sampling	4b1										
Laboratory operations	4c1										
Emergency Notification and Public Info											
Activation of the prompt alert and notification system	5a1										
Activation of the prompt alert and notification system - Fast Breaker	5a2										
Backup Route Alerting	5a3										
Alert and Notificatiion	5a4										
Emergency information and instructions for the public and the media	5b1										
Support Operations/Facilities											
Monitoring, decontamination, and registration of evacuees	6a1										
Montoring and decontaminatiion of emergency workers and their equipment	6b1										
Temporary care of evacuees	6c1										
Transportation and 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.a.1, 2.b.2, 2.c.1, 3.a.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

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.a.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.a.1, 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.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 4.a.2.
b. AREAS REQUIRING CORRECTIVE ACTION: None
c. DEFICIENCY: None
d. PLAN ISSUES: None
e. NOT DEMONSTRATED: None
f. PRIOR ISSUES - RESOLVED: 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.d.1, 1.e.1, 3.a.1, 3.b.1, 4.a.1, 4.a.3.
b. AREAS REQUIRING CORRECTIVE ACTION: 4.a.1.

ISSUE NO.: 35-11-4a1-A-01

CRITERION: Field teams are equipped to perform field measurements of direct radiation exposure (cloud and ground shine) and to sample airborne radioiodine and particulates.

CONDITION: One of the four PDT-100 Satellite Probes(Matrix Probes) deployed by Field Monitoring Team Alpha was out of calibration.

POSSIBLE CAUSE: The State of Pennsylvania was under the impression that the vendor was going to recommend a two year calibration frequency but had not documented this specification. After the start of the exercise and deployment of the matrix probes, the vendor, ThermoFisher Scientific provided a letter to the Bureau of Radiation Protection dated November 15, 2011 in which the vendor declined to support the two year calibration frequency.

REFERENCE: Nureg-0654 H.10; I.7, 8, 9

EFFECT: There is no assurance that the equipment was providing accurate information on the exposure rates being reported.

CORRECTIVE ACTION DEMONSTRATED: By letter from BRP dated December 16, 2011 all previous matrix probes that were out of calibration have been corrected. In addition, BRP has committed to a one year cycle on calibration of the Matrix ESP-1 probes.

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

ISSUE NO.: 35-11-4a1-A-02

CRITERION: Field teams are equipped to perform field measurements of direct radiation exposure (cloud and ground shine) and to sample airborne radioiodine and particulates.

CONDITION: One of the four PDT-100 Satellite Probes(Matrix Probes) deployed by Field Monitoring Team Bravo was out of calibration.

POSSIBLE CAUSE: The State of Pennsylvania was under the impression that the vendor was going to recommend a two year calibration frequency but had not documented this specification. After the start of the exercise and deployment of the matrix probes, the vendor, ThermoFisher Scientific provided a letter to the Bureau of

Radiation Protection dated November 15, 2011 in which the vendor declined to support the two year calibration frequency.

REFERENCE: H.10; I.7,8,9

EFFECT: There is no assurance that radiation detectors are measuring valid radiation levels when the detectors are outside of the calibration date.

CORRECTIVE ACTION DEMONSTRATED: By letter from BRP dated December 16, 2011 all previous matrix probes that were out of calibration have been corrected. In addition, BRP has committed to a one year cycle on calibration of the Matrix ESP-1 probes.

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 Skippack

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.b.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 Berks County Emergency Operation Center

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

a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.c.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.a.1, 5.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 Berks County Emergency Worker Monitoring and Decontamination Station, Daniel Boone Complex

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.: 35-11-6a1-A-03

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

CONDITION: The emergency Worker Monitoring and Decontamination facility at the Daniel Boone High School was not demonstrated.

POSSIBLE CAUSE: The personnel provided for the demonstration were not adequately trained.

REFERENCE: NUREG-0654, J.10.h., K.5.b

EFFECT: Contaminated emergency workers would not have been effectively

decontaminated and there is a risk of cross-contamination.

CORRECTIVE ACTION DEMONSTRATED: SOG #7 was updated. Extensive training on all aspects of a monitoring and decontamination station, set up and operation was provided. This criterion was successfully re-demonstrated on the evening of December 12, 2011 at the Daniel Boone Jr/Sr High School . The facility and resources were more than adequate for the tasks required. Showers in the school were easily accessible from the rear entrance of the school and the large parking lot area accommodated the emergency response vehicles with additional space for cordoning off vehicles if necessary. All procedures including the map identifying the lay-out for processing personnel were up-to-date. The demonstration included the assembly of the portal monitor and hand-held meter operability checks. The Bicron TPM-903 Portal Monitor passed preoperational checks and a source response check conducted using a 1 uci Cesium -137 source held at three different heights along the centerline of the monitor. The Ludlum 2241-2 with a 44-9 pancake probe passed preoperational checks, a source response check and was valid calibration wise.

Per the Extent-of-Play Agreement the team correctly monitored team members and vehicles. Emergency workers that alarmed the portal monitor were re-screened again through the portal. If the portal monitor alarmed a second time he/she was screened using the hand-held survey meter. When initial attempts to decontaminate were unsuccessful (per the utility controller's injects), the worker was directed over a paper walkway into the shower area and appropriate procedures were applied to perform a decontamination there. HAZMAT team members accurately described additional decontamination techniques and that emergency workers would be transported to a hospital if procedures were unsuccessful. The recorder correctly completed the report form and addressed any nuclear medicine use concerns prior to portal monitor entry.

All activities were based on the plans and procedures and completed as they would have been in an actual event, except as noted in the Extent-of- Play Agreement.

c. DEFICIENCY: None
d. PLAN ISSUES: 6.a.1.

ISSUE NO.: 35-11-6a1-P-01

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

CONDITION: Berks County Radiological Emergency Response Plan SOG #7 layout of the monitoring and decontamination station does not match the actual floor plan of the school.

POSSIBLE CAUSE: The school was remodeled and Berks County Radiological Emergency Respnse Plan Standard Operating Guide #7 is out of date and inaccurate.

REFERENCE: NUREG-0654 j.10.h, J.12, K.5.a, K.5.b.

EFFECT: Since the school does not match the plan layout there was confusion about how to set up the facility. The facility could not be set up as planned.

CORRECTIVE ACTION DEMONSTRATED: SOG # 7 was updated to include the proper layouts, personnel were re-trained and successfully redemonstrated this criteria on December 13, 2011.

ISSUE NO.: 35-11-6a1-P-02

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

CONDITION: Berks County Radiological Emergency Response lan SOG #7 states that the count rate used to determine if personnel or equipment is 300 cpm using the CDV 700. A Ludlum 2241-2 is now used. The count rate should be 300 cpm above background.

POSSIBLE CAUSE: Berks County Radiological Emergency Response Plan SOG #7 has not been updated to reflect the equipment being used.

REFERENCE: NUREG-0654, J.10.h., K.5.b

EFFECT: Monitoring of personnel and equipment can not be performed in accordance with the Berks County Radiological Emergency Response Plan, Standard Operating Guied #7.

CORRECTIVE ACTION DEMONSTRATED: Berks County Radiological Emergency Response Plan SOG #7 was revised and updated.

e. NOT DEMONSTRATED: 6.b.1.
f. PRIOR ISSUES - RESOLVED: None
g. PRIOR ISSUES - UNRESOLVED: None

3.3.2.3 Berks County, Exeter Township Reception Center, Exerter Township Building

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

a. MET: 1.b.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

3.3.2.4 Berks County Monitoring and Decontamination Center, Hamburg 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: 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 Berks County Mass Care Center, Hamburg Jr/Sr High School

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

a. MET: 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

3.3.2.6 Berks County, Boyertown Borough/Colebrookdale Township Emergency Operations Center

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

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

ISSUE NO.: 35-09-2a1-A-04

ISSUE: The Colebrookdale Radiological Officer (RO) authorized KI for emergency workers without authorization from the State Health Officer.

CORRECTIVE ACTION DEMONSTRATED: The Colebrookdale Radiological Officer (RO) demonstrated through discussion that the municipality does not have the authority to make the decision to direct the ingestion of Potassium Iodide (KI).

The RO stated that the decision to advise KI is made by the State Health Officer.

This corrective action was based on the Colebrookdale Radiological Emergency

Response plans and procedures and was successfully demonstrated.

g. PRIOR ISSUES - UNRESOLVED: None

3.3.2.7 Berks County, Boyertown Borough/Colebrookdale Township Traffic and Access Control

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

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

3.3.2.9 Berks County, Earl Township Backup 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, 3.b.1, 5.a.3.
b. AREAS REQUIRING CORRECTIVE ACTION: 5.a.3.

ISSUE NO.: 35-11-5a3-A-04

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

CONDITION: Backup Route Alerting was not completed in prescribed 45 minutes.

POSSIBLE CAUSE: The Negotiated Extent of Play required the Backup Route Alert Team to complete Route 19B for Siren #7. Instructions from the County EOC

directed the Township to conduct Route Alerting of Routes 19A and 19B. The Township requested clarification of their instructions and delayed dispatch of the Route Alert Team.

REFERENCE: NUREG-0645, E.6., Appendix 3.B.2.c

EFFECT: The public could be delayed in evacuating if the required time for alerting was not met and could receive additional radiation exposure.

CORRECTIVE ACTION DEMONSTRATED: The County and the Township were provided the opportunity to re-demonstrate the criterion. A new siren failure message was sent from the County to the Township EOC and the Route Alert Team was dispatched to drive Route 19B only. Route Alerting was successfully demonstrated in 24 minutes.

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

3.3.2.10 Chester County Emergency Operations Center

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

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

ISSUE NO.: 35-07-5a1-P-01

ISSUE: A press release containing inaccurate information was prepared and distributed by the Chester County Emergency Operations Center. Specifically, the

following inaccuracies were in the initial press release:

Peach Bottom Atomic Power Station was the identified site; and the press release directed Emergency Workers, Special Populations, and General Public to take Potassium Iodide (KI) and "for only those people who are not allergic to iodine to take KI."

Additionally, press releases were issued at 1942, seven minutes prior to the Pennsylvania Department of Health issuing a message for emergency workers, special populations, and the general public to take potassium iodide.

CORRECTIVE ACTION DEMONSTRATED: This criterion was successfully demonstrated in this exercise. Press releases containing accurate information were prepared and distributed by the Chester County EOC in accordance with plans and procedures concerning KI for all appropiate populations.

g. PRIOR ISSUES - UNRESOLVED: None

3.3.2.11 Chester County Emergency Worker Monitoring and Decontamination Station, Lionville 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, 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

3.3.2.12 Chester County, Emergency Worker Monitoring and Decontamination Station Twin Valley Fire Department

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

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

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

ISSUE NO.: 35-11-6a1-A-05

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

CONDITION: Monitoring personnel did not demonstrate appropriate monitoring techniques and contamination controls.

POSSIBLE CAUSE: Lack of proper training on contamination controls and monitoring techniques.

REFERENCE: NUREG 0654, K.5.a

EFFECT: The emergency worker may have ingested contamination and contaminated himself without it being discovered. Additionally monitoring techniques used may not have identified all of the contamination.

CORRECTIVE ACTION DEMONSTRATED: The Controller conducted additional training on monitoring techniques with the monitor and emergency worker. The controller also covered public health and safety concerns regarding drinking, smoking, chewing of gum or other products, or eating inside a potential contaminated area. After retraining, the monitor re-demonstrated appropriate contamination controls and monitoring of the emergency worker.

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 Chester County Reception Center, West Whiteland Township

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

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

3.3.2.15 Chester County, East Pikeland Township Route Alerting

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

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

3.3.2.17 Chester County, East Vincent Township Traffic and Access Control

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.b.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

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

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

3.3.2.20 Chester County, Uwchlan Township Traffic and Access Control

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

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

3.3.2.21 Montgomery County Emergency Operations Center

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

a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.c.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.a.1, 5.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 Montgomery County Emergency Worker Monitoring and Decontamination Station, Indian Valley 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, 6.b.1.
b. AREAS REQUIRING CORRECTIVE ACTION: 6.a.1.

ISSUE NO.: 35-11-6a1-A-06

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

CONDITION: Monitoring staff was not aware of the required action level for decontamination. Staff also did not follow their procedure to cover the instrument probes.

POSSIBLE CAUSE: Monitoring staff was not familiar with their standard operating procedures and did not have a good understanding of basic radiation principles.

REFERENCE: NUREG-0654 K.5.a, K.5.b

EFFECT: If monitoring staff are not aware of the decontamination action level, contaminated individuals may not be decontaminated. During monitoring, the instrument probe came in contact with the emergency worker's clothing several times. Because the instrument probe was not covered with a protective layer of plastic, there was potential for the probe to become contaminated.

CORRECTIVE ACTION DEMONSTRATED: The monitoring staff received additional on-the-spot training during the exercise from the controller. Training covered proper survey technique, use of instrument probe covers, and an explanation of the action level for determining the need for decontamination. The team re-demonstrated monitoring with the survey meter and performed well, in accordance with their standard operating procedure.

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

3.3.2.23 Montgomery County Reception Center, Metroplex

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

3.3.2.24 Montgomery County Mass Care Center, Abington Jr High School

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

a. MET: 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

3.3.2.25 Montgomery County Mass Care Center, Abington Sr High School

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

a. MET: 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

3.3.2.26 Montgomery County Mass Care Center, Cedarbrook Middle School

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

a. MET: 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

3.3.2.27 Montgomery County Mass Care Center, Cheltenham High School

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

a. MET: 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

3.3.2.28 Montgomery County Mass Care Center, Sandy Run Middle 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: 6.c.1.

ISSUE NO.: 35-11-6c1-P-03

CRITERION: Managers of congregate care facilities demonstrate that the centers have resources to provide services and accommodations consistent with American Red Cross planning guidelines (American Red Cross Disaster Services Program Guidance, Sheltering Handbook, May 2008). 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.

CONDITION: The Sandy Run Middle School is not capable of receiving 500 evacuees in any of their facilities..

POSSIBLE CAUSE: Over estimation by planners as to the space available at the Sandy Run Middle School and it's on site auxiliary facility.

REFERENCE: NUREG-0654, J.10.h., 12

EFFECT: Evacuees may have been turned away due to the lack of facility space.

RECOMMENDATION: The Upper Darby High School Principal, the State of Pennsylvania, the American Red Cross and the County of Montgomery have agreed that all evacuees that were procedurally listed to be sent to the Sandy Run Middle School will now be sent to the Upper Dary High School. The County of Montgomery has agreed to modify and submit to the State and FEMA plans that reflect the above listed changes.

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

3.3.2.29 Montgomery County Mass Care Center, Upper Dublin Sr. High School

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

a. MET: 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

3.3.2.30 Montgomery County Mass Care Center, Upper Moreland High School

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

a. MET: 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

3.3.2.31 Montgomery County Mass Care Center, Upper Moreland Middle School

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

a. MET: 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

3.3.2.32 Montgomery County, Green Lane Borough Traffic and Access Control

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.b.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

3.3.2.33 Montgomery County, Green Lane Borough/Marlboro 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, 2.c.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.a.1.
b. AREAS REQUIRING CORRECTIVE ACTION: None
c. DEFICIENCY: None
d. PLAN ISSUES: None
e. NOT DEMONSTRATED: None
f. PRIOR ISSUES - RESOLVED: None
g. PRIOR ISSUES - UNRESOLVED: None

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

3.3.2.35 Montgomery County, Limerick Township 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.b.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

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

3.3.2.37 Montgomery County, Lower Pottsgrove 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, 2.c.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.a.1.
b. AREAS REQUIRING CORRECTIVE ACTION: 3.a.1, 3.b.1.

ISSUE NO.: 35-11-3a1-A-07

CRITERION: OROs issue appropriate dosimetry and procedures, and manage radiological exposure to emergency workers IAW plans and procedures. Emergency workers periodically and at the end of each mission read and record dosimeter reading.

CONDITION: Dosimetry was not utilized in the Emergency Operations Center (EOC).

POSSIBLE CAUSE: EOC personnel were unaware of the need for dosimetry at this location.

REFERENCE: NUREG 0654/FEMA REP-1 K.3.a

EFFECT: The EOC is about two miles from the nuclear plant. The EOC is not a sealed building and staff could be receiving dose that was not recorded. This could

result in personnel receiving dose over the recommended limits.

CORRECTIVE ACTION DEMONSTRATED: The Lower Pottsgrove Township Emergency Operations Center (EOC) successfully re-demonstrated appropriate issuance of dosimetry and potassium iodide (KI), related procedures, and the management of radiological exposure for emergency response staff members the evening of December 20, 2011.

The HAZMAT Officer followed his checklist for each Emergency Classification Level (ECL). He prepared the Control Permanent Record Dosimeter (CPRD) Form for pick-up by a county police officer. He informed this evaluator that this was necessary to allow measurements from a baseline of radiation that the PRD was exposed to prior to the issuance of the other PRDs. Any unmet radiological equipment needs would be reported to the Chester County EOC by the EMC.

The HAZMAT Officer demonstrated his responsibility for inventory, preparation for distribution and the distribution of KI, while maintaining all Dosimetry/KI Record Forms for the Emergency Workers. The Dosimetry and KI were correctly distributed to the Emergency Workers by the HAZMAT Officer. The HAZMAT Officer briefed the EOC staff and Emergency Workers on the use of dosimetry, exposure limits, the importance for those leaving the facility to check the Direct Read Dosimeter (DRDs) frequently, how and where to record the DRD readings on the dosimetry/KI Record Forms, where and to whom dosimeters, forms, and unused KI were to be returned at the end of the emergency, and the use and potential side effects of KI ingestion.

The HAZMAT Officer checked his area DRD every 30 minutes and announced this to the staff. The staff exhibited a thorough understanding of their radiation exposure limits and were aware of the turn back value of 5 Rem and what they were supposed to do upon reaching this limit including the authorization process for radiation exposures in excess of the established administrative limits or the protective action guides.

The Pottsgrove Township EOC had adequate numbers of 0-20 Roentgen (R) and 0-200 R Direct Reading Dosimeters (DRDs), dosimeter chargers, and Permanent

Record Dosimeters (PRDs), control PRDs an units of KI. The dosimeters had leakage test dates within required time limits. The dosimetry was shown to have been inspected for leakage at least annually and was replaced, if necessary. An Area Kit consisted of one PRD, two 0-20 R DRDs, with access to a DRD dosimeter charger, and a Dosimetry/KI Report Form. The HAZMAT Officer demonstrated "zeroing" of the DRDs utilizing the dosimeter charger. The HAZMAT Officer was aware that the decision to ingest KI is made by the Secretary of the Pennsylvania Department of Health.

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

ISSUE NO.: 35-11-3b1-A-08

CRITERION: KI and appropriate instructions are available should a decision to recommend use of KI be made. Appropriate record keeping of the administration of KI for emergency workers and institutionalized individuals is maintained.

CONDITION: Potassium Iodide (KI) briefing was incomplete.

POSSIBLE CAUSE: Personnel delivering briefing did not use checklist or briefing video and therefore did not mention all required aspects of the briefing.

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

EFFECT: Persons taking KI may have had adverse effects.

CORRECTIVE ACTION DEMONSTRATED: The Radiation Officer has the list of briefing information from the plan and, during interview, stated that he would read the information directly from this sheet. He also stated that he would be creating a briefing card that will be kept with the KI.

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 Montgomery County, Lower Pottsgrove Township Backup 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, 3.b.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

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

3.3.2.40 Montgomery County, New Hanover Township Traffic and Access Control

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.b.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

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

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

3.3.2.43 Montgomery County, Schwenksville Borough Traffic and Access Control

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.b.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

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

3.3.2.45 Berks County, Boyertown 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

3.3.2.46 Berks County, Boyertown Area School District, Earl 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

3.3.2.47 Berks County, Daniel Boone 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

3.3.2.48 Berks County, Daniel Boone Area School District, Birdsboro Elementary

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

3.3.2.49 Chester County, Downingtown 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

3.3.2.50 Chester County, Downingtown Area School District, Lionville 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

3.3.2.51 Chester County, Owen J. Roberts 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

3.3.2.52 Chester County, Owen J. Roberts School District, French Creek Elementary Shool

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

3.3.2.53 Chester County, Owen J. Roberts School District, West Vincent 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

3.3.2.54 Chester County, Phoenixville 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

3.3.2.55 Chester County, Phoenixville Area School District, East Pikeland 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

3.3.2.56 Montgomery County, Methacton 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

3.3.2.57 Montgomery County, Methacton School District, Woodland 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

3.3.2.58 Montgomery County, Methacton School District, Worcester 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

3.3.2.59 Montgomery County, Perkiomen Valley 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

3.3.2.60 Montgomery County, Perkiomen Valley School District, Perkiomen Middle School East

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

3.3.2.61 Montgomery County, Pottsgrove 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: 3.c.2.

ISSUE NO.: 35-09-3c2-P-15

ISSUE: The Western Montgomery County Area Vocational/Technical School, which

is located within the Spring-Ford Area School District, serves students from the Spring-Ford, Upper Perkiomen, and Pottsgrove School Districts. Questions were raised regarding whether or not Spring-Ford relocated all the Vocational/Technical School students, or whether each district handled the relocation of their own student population attending the school.

CORRECTIVE ACTION DEMONSTRATED: In accordance with Pottsgrove School District Radiological Emergency Response Plan for Incidents at the Limerick Generating Station, Revision 4, September 30, 2011, the Superintendent was aware that students attending the Western Center for Technical Studies from Pottsgrove School District would be bussed to Upper Perkiomen High School in the event of a Limerick prompted evacuation.

g. PRIOR ISSUES - UNRESOLVED: None

3.3.2.62 Montgomery County, Pottsgrove School District, Pottsgrove 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

3.3.2.63 Montgomery County, Pottstown 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

3.3.2.64 Montgomery County, Pottstown Area School District, Pottstown 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: 3.c.2.

ISSUE NO.: 35-05-3c2-A-09

ISSUE: The primary and secondary communications systems between the County Emergency Operations Center and the Pottstown School District Administration Center were inoperable.

CORRECTIVE ACTION DEMONSTRATED: All communication equipment in working condition. School District staff and the High School Principal demonstrated the capability to communicate via radio, telephone and e-mail.

g. PRIOR ISSUES - UNRESOLVED: None

3.3.2.65 Montgomery County, Souderton Area School District, Salford Hills 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

3.3.2.66 Montgomery County, Souderton 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

3.3.2.67 Montgomery County, Spring-Ford 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: 3.c.2.

ISSUE NO.: 35-09-3c2-P-16

ISSUE: The County Plan contained a map showing the route to be taken from Spring-Ford School District to the Montgomery County Community College; however there were no directions regarding where on the college campus the students from each school would be sheltered. Without clear plan guidance, management of the relocation activities, and pick-up of evacuated students on the college campus would be difficult.

CORRECTIVE ACTION DEMONSTRATED: The Spring-Ford Area School District Superintendent had the most recent version of the Emergency Plan documents that indicate the SFASD students will be evacuated to the Montgomery County County College (MCCC) Physical Education (PE) bldg. Maps showing the bus route, including the drop-off area to MCCC PE facility are dispensed at the transportation contractors facility from which the buses are dispatched, and are

available at the schools where the students are picked up.

ISSUE NO.: 35-09-3c2-P-17

ISSUE: The Western Montgomery County Area Vocational/Technical School, which is located within the Spring-Ford Area School District, serves students from the Spring-Ford, Upper Perkiomen, and Pottsgrove School Districts. Questions were raised regarding whether or not Spring-Ford relocated all the Vocational/Technical School students, or whether each district handled the relocation of their own student population attending the school.

CORRECTIVE ACTION DEMONSTRATED: The Spring-Ford Area School District (SFASD) Superintendent had the most recent version of the Emergency Plan documents that indicate the SFASD students will be evacuated to the Montgomery County County College (MCCC) Physical Education (PE) bldg. Maps showing the bus route, including the drop-off area, to MCCC PE facility are dispensed at the transportation contractors facility from which the buses are dispatched, and are available at the schools where the students are picked up.

In accordance with Spring-Ford Area School District Radiological Emergency Response Plan for Incidents at the Limerick Generating Station, the Superintendent was aware that students attending the Western Center for Technical Studies from Spring-Ford school district would be bussed to Upper Perkiomen High School in the event of a Limerick prompted evacuation.

g. PRIOR ISSUES - UNRESOLVED: None

3.3.2.68 Montgomery County, Spring-Ford Area School District, 7th 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

3.3.2.69 Montgomery County, Spring-Ford Area School District, West Center for Tech Studies

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

3.3.2.70 Montgomery County, Spring-Ford Area School District, 8th Grade Center (Old 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

3.3.2.71 Montgomery County, Upper Perkiomen 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: 3.c.2.

ISSUE NO.: 35-09-3c2-P-18

ISSUE: The Western Montgomery County Area Vocational/Technical School, which is located within the Spring-Ford Area School District, serves students from the Spring-Ford, Upper Perkiomen, and Pottsgrove School Districts. Questions were raised regarding whether or not Spring-Ford relocated all the Vocational/Technical School students, or whether each district handled the relocation of their own student population attending the school.

CORRECTIVE ACTION DEMONSTRATED: The plan issue was corrected for the out of sequence exercise, on November 15, 2011. The plan now designates Upper Perkiomen High School as a host school for students from Western Center Technical Studies. The plan change is documented on page iviiv revision 12 Revision 3 of the Upper Perkiomen School District Plans and Procedures.

g. PRIOR ISSUES - UNRESOLVED: None

3.3.2.72 Montogemery County, Upper Perkimen School District, Upper Perkiomen 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

3.3.3 Support Jurisdictions

3.3.3.1 Chester County, Phoenixville Traffic and Access Control

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.b.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

3.3.3.2 Bucks 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

3.3.3.3 Bucks County Reception Center, County Line Plaza

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

3.3.3.4 Bucks County Mass Care Center, Bristol Borough High School

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

a. MET: 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

3.3.3.5 Bucks County Mass Care Center, Council Rock Jr/Sr High 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: 6.c.1.

ISSUE NO.: 35-11-6c1-P-04

CRITERION: Managers of congregate care facilities demonstrate that the centers have resources to provide services and accommodations consistent with American Red Cross planning guidelines (American Red Cross Disaster Services Program Guidance, Sheltering Handbook, May 2008). 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.

CONDITION: Managers of this congregate care facility did not successfully demonstrate that the center had resources to provide services and accommodations consistent with American Red Cross planning guidelines. This facility was not found to be capable of housing the required 600 people. The facility has adequate parking, showers, a kitchen/snack bar and other amenities that can accommodate 460 evacuees for short or long terms of stay.

POSSIBLE CAUSE: An inaccurate assessment of area requirements and

reconfiguration of school resources.

REFERENCE: 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 (American Red Cross Disaster Services Program Guidance, Sheltering Handbook, May 2008).

EFFECT: Evacuees would have no place to shelter in the event of a nuclear incident requiring evacuation.

RECOMMENDATION: Provide for the mass care needs of an additional 140 evacuees and revise plans as necessary to reflect this change.

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

3.3.3.6 Bucks County Mass Care Center, Charles Boehm High School

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

a. MET: 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 Bucks County Mass Care Center, Klinger Jr. High 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: 6.c.1.

ISSUE NO.: 35-11-6c1-P-05

CRITERION: Managers of congregate care facilities demonstrate that the centers have resources to provide services and accommodations consistent with American Red Cross planning guidelines (American Red Cross Disaster Services Program Guidance, Sheltering Handbook, May 2008). 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.

CONDITION: Managers of this congregate care facility did not successfully demonstrate that the center had resources to provide services and accommodations consistent with American Red Cross planning guidelines. This facility was not found to be capable of housing 400 people. The facility has adequate parking, showers, a kitchen/snack bar and other amenities that can accommodate 156 evacuees for short or long terms of stay.

POSSIBLE CAUSE: An inadequate assessment of mass care requirements and a reconfiguration of school resources.

REFERENCE: 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 (American Red Cross Disaster Services Program Guidance, Sheltering Handbook, May 2008).

EFFECT: 244 evacuees would not be able to attain mass care accomodations in the event of a nuclear incident requiring an evacuation.

RECOMMENDATION: Obtain mass care accomodations for an additional 244 evacuees and revise plans as necessary to reflect this change.

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

3.3.3.8 Bucks County Mass Care Center, Log College Jr. High 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: 6.c.1.

ISSUE NO.: 35-11-6c1-P-06

CRITERION: Managers of congregate care facilities demonstrate that the centers have resources to provide services and accommodations consistent with American Red Cross planning guidelines (American Red Cross Disaster Services Program Guidance, Sheltering Handbook, May 2008). 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.

CONDITION: Managers of this congregate care facility did not successfully demonstrate that the center had resources to provide services and accommodations consistent with American Red Cross planning guidelines. This facility was not found to be capable of housing 300 people. The facility has adequate parking, showers, a kitchen/snack bar and other amenities that can accommodate 156 evacuees for short or long terms of stay.

POSSIBLE CAUSE: An inadequate assessment of space requirements and reconfiguration of school resources.

REFERENCE: 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 (American Red Cross Disaster Services Program Guidance, Sheltering Handbook, May 2008).

EFFECT: Evacuees would have no place to attain mass care support in the event of a nuclear incident requiring an evacuation.

RECOMMENDATION: Locate mass care accomodations for an additional 144 potential evacuees and revise plans as necessary to reflect this change.

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

3.3.3.9 Bucks County Mass Care Center, Maple Point Middle 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: 6.c.1.

ISSUE NO.: 35-11-6c1-P-07

CRITERION: Managers of congregate care facilities demonstrate that the centers have resources to provide services and accommodations consistent with American Red Cross planning guidelines (American Red Cross Disaster Services Program Guidance, Sheltering Handbook, May 2008). 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.

CONDITION: Managers of this congregate care facility did not successfully demonstrate that the center had resources to provide services and accommodations consistent with American Red Cross planning guidelines. This facility was not found to be capable of housing 800 people. The facility has adequate parking, showers, a kitchen/snack bar and other amenities that can accommodate 600 evacuees for short or long terms of stay.

POSSIBLE CAUSE: An inadequate assessment of the mass care requirements needed and reconfiguration of school resources.

REFERENCE: 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 (American Red Cross Disaster Services Program Guidance, Sheltering Handbook, May 2008).

EFFECT: The mass care needs of 200 evacuees would not be met if a nuclear incident occurred requiring an evacuation.

RECOMMENDATION: Obtain mass care requirements for an additional 200 evacuees and revise plans as necessary to reflect this change.

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

3.3.3.10 Bucks County Mass Care Center, Palisades Sr. High

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

a. MET: 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 Bucks County Mass Care Center, Pennwood Middle School

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

a. MET: 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

3.3.3.12 Bucks County Mass Care Center, William Tennet Complex

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

a. MET: 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

3.3.3.13 Lehigh 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

3.3.3.14 Lehigh County Reception Center, Emmaus 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

3.3.3.15 Lehigh County Mass Care Center, Emmaus High School

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

a. MET: 1.e.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 Lehigh County Mass Care Center, Salisbury High School

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

a. MET: 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

3.3.3.17 Chester County, Great Valley 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

3.3.4 Private Organizations

3.3.4.1 Exelon Joint Information Center

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

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

SECTION 4: CONCLUSION

Based on the review of the offsite radiological emergency response plans and procedures submitted, FEMA Region III has determined they are adequate and there is a reasonable assurance they can be implemented, as demonstrated during this Limerick Generating Station exercise.

APPENDIX A: IMPROVEMENT PLAN

Issue Number: 35-11-6c1-P-04	Criterion: 6c1
ISSUE: Managers of this congregate care facility did not successfully demonstrate that the center had resources to provide services and accommodations consistent with American Red Cross planning guidelines. This facility was not found to be capable of housing the required 600 people. The facility has adequate parking, showers, a kitchen/snack bar and other amenities that can accommodate 460 evacuees for short or long terms of stay.	
RECOMMENDATION: Provide for the mass care needs of an additional 140 evacuees and revise plans as necessary to reflect this change.	
CORRECTIVE ACTION DESCRIPTION:	
CAPABILITY:	PRIMARY RESPONSIBLE AGENCY:
CAPABILITY ELEMENT:	START DATE:
AGENCY POC:	ESTIMATED COMPLETION DATE:

Issue Number: 35-11-6c1-P-05	Criterion: 6c1
ISSUE: Managers of this congregate care facility did not successfully demonstrate that the center had resources to provide services and accommodations consistent with American Red Cross planning guidelines. This facility was not found to be capable of housing 400 people. The facility has adequate parking, showers, a kitchen/snack bar and other amenities that can accommodate 156 evacuees for short or long terms of stay.	
RECOMMENDATION: Obtain mass care accomodations for an additional 244 evacuees and revise plans as necessary to reflect this change.	
CORRECTIVE ACTION DESCRIPTION:	
CAPABILITY:	PRIMARY RESPONSIBLE AGENCY:
CAPABILITY ELEMENT:	START DATE:
AGENCY POC:	ESTIMATED COMPLETION DATE:

Issue Number: 35-11-6c1-P-06	Criterion: 6c1
ISSUE: Managers of this congregate care facility did not successfully demonstrate that the center had resources to provide services and accommodations consistent with American Red Cross planning guidelines. This facility was not found to be capable of housing 300 people. The facility has adequate parking, showers, a kitchen/snack bar and other amenities that can accommodate 156 evacuees for short or long terms of stay.	
RECOMMENDATION: Locate mass care accomodations for an additional 144 potential evacuees and revise plans as necessary to reflect this change.	
CORRECTIVE ACTION DESCRIPTION:	
CAPABILITY:	PRIMARY RESPONSIBLE AGENCY:
CAPABILITY ELEMENT:	START DATE:
AGENCY POC:	ESTIMATED COMPLETION DATE:

Issue Number: 35-11-6c1-P-07	Criterion: 6c1
ISSUE: Managers of this congregate care facility did not successfully demonstrate that the center had resources to provide services and accommodations consistent with American Red Cross planning guidelines. This facility was not found to be capable of housing 800 people. The facility has adequate parking, showers, a kitchen/snack bar and other amenities that can accommodate 600 evacuees for short or long terms of stay.	
RECOMMENDATION: Obtain mass care requirements for an additional 200 evacuees and revise plans as necessary to reflect this change.	
CORRECTIVE ACTION DESCRIPTION:	
CAPABILITY:	PRIMARY RESPONSIBLE AGENCY:
CAPABILITY ELEMENT:	START DATE:
AGENCY POC:	ESTIMATED COMPLETION DATE:

Issue Number: 35-11-6c1-P-03	Criterion: 6c1
ISSUE: The Sandy Run Middle School is not capable of receiving 500 evacuees in any of their facilities..	
RECOMMENDATION: The Upper Darby High School Principal, the State of Pennsylvania, the American Red Cross and the County of Montgomery have agreed that all evacuees that were procedurally listed to be sent to the Sandy Run Middle School will now be sent to the Upper Dary High School. The County of Montgomery has agreed to modify and submit to the State and FEMA plans that reflect the above listed changes.	
CORRECTIVE ACTION DESCRIPTION:	
CAPABILITY:	PRIMARY RESPONSIBLE AGENCY:
CAPABILITY ELEMENT:	START DATE:
AGENCY POC:	ESTIMATED COMPLETION DATE:

APPENDIX B: EXERCISE TIMELINE

Table 1 - Exercise Timeline
DATE: 2011-11-15, SITE: Limerick Generating Station, PA

Emergency Classification Level or Event	Time Utility Declared	PA EOC	PA AAC SEOC-BRP	EJTC	BrCo EOC	BrCoByrCbrkEOC	BrCo ErlTwp EOC
Unusual Event		1630					
Alert	1620	1757	1640	1630	1630	1642	1638
Site Area Emergency	1747	1924	1758	1815	1759	1808	1809
General Emergency	1912	1917	1930	1920	1924	1935	1958
Simulated Rad. Release Started	1912		1917	1920	1912		
Simulated Rad. Release Terminated							
Facility Declared Operational		1702	1702	1805	1718	1708	1708
Governor's Declaration of State of Emergency		1915	1915	1915	1917		
Local Declaration of State of Emergency							
Exercise Terminated		2107	2107	2101	2100	2100	2103
Precautionary Action: Restrict airspace - 3mi to 3000/10mi to 10k feet		1815/2000	1815/2000	18221/2001	1829		
Precautionary Action: Restrict rail traffic - 10mi		1815	1815	1821	1829		
Precautionary Action: Restrict water traffic - 10mi		1820	1820	1823	1829		
Precautionary Action: Shelter livestock, place on stored feed		1815	1815	1821	1829		
1st A & N Decision Time/Reason: Stay Tuned		1833	1833	1843	1833		
1st Siren Activation		1853			1854		
1st EAS Message		1856					
2nd A & N Decision Time/Reason: Special populations shelter in place; 360 degree evacuation 0-10 miles		1943	1948	1957	1943	1951	1951
2nd Siren Activation		1955			1955		
2nd EAS Message		1958					
KI Administration Decision: Emergency Workers advised to take KI		1943	1956	1957	1943	2001	2001
KI Administration Decision: General Public advised to take KI		1943	1956	2001	1943	2001	2001

Table 1 - Exercise Timeline
DATE: 2011-11-15, SITE: Limerick Generating Station, PA

Emergency Classification Level or Event	Time Utility Declared	CC EOC	CCEVcntTwpEOC	CC PhxvlBr EOC	CC UclanTwp EOC	MC EOC	MCGLMrlbrTwpEOC
Unusual Event							
Alert	1620	1630	1705	1645	1635	1630	1640
Site Area Emergency	1747	1757	1826	1809	1801	1802	1809
General Emergency	1912	1923	1943	1931	1930	1930	1936
Simulated Rad. Release Started	1912	1923				1915	
Simulated Rad. Release Terminated							
Facility Declared Operational		1651	1830	1657	1715	1700	1731
Governor's Declaration of State of Emergency		1917					
Local Declaration of State of Emergency		1805					
Exercise Terminated		2102	2103	2103	2103	2057	2056
Precautionary Action: Restrict airspace - 3mi to 3000/10mi to 10k feet		1827				1835	
Precautionary Action: Restrict rail traffic - 10mi		1827				1835	
Precautionary Action: Restrict water traffic - 10mi		1827				1835	
Precautionary Action: Shelter livestock, place on stored feed		1827				1835	
1st A & N Decision Time/Reason: Stay Tuned		1844	1957		1958	1833	1851
1st Siren Activation		1853				1853	
1st EAS Message							
2nd A & N Decision Time/Reason: Special populations shelter in place; 360 degree evacuation 0-10 miles		1944					
2nd Siren Activation		1955				1955	
2nd EAS Message							
KI Administration Decision: Emergency Workers advised to take KI		1943	2005	2001	1958	1943	1953
KI Administration Decision: General Public advised to take KI		1943	2005	2001	1958	1943	1953

Table 1 - Exercise Timeline
DATE: 2011-11-15, SITE: Limerick Generating Station, PA

Emergency Classification Level or Event	Time Utility Declared	MC LmrkTwp EOC	MC LFTWP EOC	MCLrPgrvTwpEOC	MCNHvrTwpEOC	MCPrkmnTwp EOC	MCSwksvlBrEOC
Unusual Event							
Alert	1620	1649	1637	1627	1641	1641	1640
Site Area Emergency	1747	1805	1807	1754	1805	1803	1807
General Emergency	1912	1935	1935	1936	1935	1934	1935
Simulated Rad. Release Started	1912		1928				
Simulated Rad. Release Terminated							
Facility Declared Operational		1735	1756	1700	1735	1703	1723
Governor's Declaration of State of Emergency							
Local Declaration of State of Emergency							
Exercise Terminated		2044		2101	2010	2056	2055
Precautionary Action: Restrict airspace - 3mi to 3000/10mi to 10k feet							
Precautionary Action: Restrict rail traffic - 10mi							
Precautionary Action: Restrict water traffic - 10mi							
Precautionary Action: Shelter livestock, place on stored feed							
1st A & N Decision Time/Reason: Stay Tuned		1855	1847	1846	1846	1851	
1st Siren Activation			1850				
1st EAS Message							
2nd A & N Decision Time/Reason: Special populations shelter in place; 360 degree evacuation 0-10 miles		1953	1945	1946			1950
2nd Siren Activation			1955				
2nd EAS Message							
KI Administration Decision: Emergency Workers advised to take KI		1951	1950	1946	1946	1949	1947
KI Administration Decision: General Public advised to take KI		1954		1946			

Table 1 - Exercise Timeline
DATE: 2011-11-15, SITE: Limerick Generating Station, PA

Emergency Classification Level or Event	Time Utility Declared	MC TrpBr EOC	BkCo EOC (S)	LhCo EOC (S)
Unusual Event				
Alert	1620	1631	1658	1646
Site Area Emergency	1747	1805	1800	1806
General Emergency	1912	1935	1930	1939
Simulated Rad. Release Started	1912		1945	1938
Simulated Rad. Release Terminated				
Facility Declared Operational		1746	1715	1742
Governor's Declaration of State of Emergency			1946	1946
Local Declaration of State of Emergency			1940	1940
Exercise Terminated		2023	2100	2100
Precautionary Action: Restrict airspace - 3mi to 3000/10mi to 10k feet				
Precautionary Action: Restrict rail traffic - 10mi				
Precautionary Action: Restrict water traffic - 10mi				
Precautionary Action: Shelter livestock, place on stored feed				
1st A & N Decision Time/Reason: Stay Tuned		1850		
1st Siren Activation			1850	1850
1st EAS Message				
2nd A & N Decision Time/Reason: Special populations shelter in place; 360 degree evacuation 0-10 miles			1940	1941
2nd Siren Activation			1955	1955
2nd EAS Message				
KI Administration Decision: Emergency Workers advised to take KI		1951	1955	1956
KI Administration Decision: General Public advised to take KI			1955	1956

APPENDIX C: EXERCISE EVALUATORS AND TEAM LEADERS

This Appendix lists the Evaluators and Team Leaders for the Limerick Generating Station 2011 Plume Exercise evaluated on November 15, 2011. The exercise required 11 evaluators from Region III supported by 4 evaluators from Region I, 2 evaluators from Region IX, 2 evaluators from Region X, 2 evaluators from FEMA Headquarters, and 43 contractors from ICF.

The following constitutes the management staff for the Exercise Evaluation:

Darrell Hammons, DHS, Radiological Assistance Committee Chairman
Daniel Lerch, DHS, Exercise Evaluation Program Manager and Site Specialist
Team Leader, Mass Care Centers and Schools Out of Sequence Evaluations
Tina Lai Thomas, DHS, Team Leader, Pennsylvania Emergency Management Agency
Martin Vyenielo, DHS, Team Leader, Technical Evaluations
Barton Freeman, DHS, Team Leader, Berks County Emergency Operations Center
Robert Neff, DHS, Berks County Emergency Operations Center and Mass Care Out of Sequence Evaluations
John Price, DHS, Team Leader, Chester County Emergency Operations Center
Matthew Wiedemer, DHS, Chester County Emergency Operations Center Evaluation
Richard Kinard, DHS, Team Leader, Montgomery County Emergency Operations Center
Lee Torres, DHS, Montgomery County Emergency Operations Center Evaluation
Joseph Suders, DHS, Team Leader, Bucks County Emergency Operations Center
Helen Malone, DHS, REP Exercise Administrative Support
Marcy Campbell, ICF, Regional Coordinator
Denise Solomon, ICF, Exercise Administrative Support

DATE: 2011-11-15, SITE: Limerick Generating Station, PA

LOCATION	EVALUATOR	AGENCY
Pennsylvania Emergency Operations Center	Elena Joyner *Tina Lai-Thomas	FEMA RIX FEMA RIII
Pennsylvania Joint Information Center	Marcy Campbell	ICFI
Pennsylvania Accident Assessment Center, State Emergency Operations Center-Bureau of Radiation Protection	Reggie Rodgers	ICFI
Pennsylvania Bureau of Radiation Protection, Radiological Rapid Response Vehicle	*Martin Vyenielo	FEMA RIII
PA State Field Monitoring Team A, South East Region	Joseph Keller	ICFI
PA State Field Monitoring Team B, South East Region	Daryl Thome	ICFI
Pennsylvania State Traffic and Access Control Points, State Police Barracks Skippack	Kent Tosch	ICFI
Berks County Emergency Operation Center	Jon Christiansen *Barton Freeman Robert Neff Wes Ryals	ICFI FEMA RIII FEMA RIII ICF
Berks County Emergency Worker Monitoring and Decontamination Station, Daniel Boone Complex	Richard Grundstrom	ICFI
Berks County, Exeter Township Reception Center, Exerter Township Building	Roger Jobe	ICFI
Berks County Monitoring and Decontamination Center, Hamburg Jr/Sr High School	Paul Ward	FEMA HQ
Berks County Mass Care Center, Hamburg Jr/Sr High School	Paul Ward	FEMA HQ
Berks County, Boyertown Borough/Colebrookdale Township Emergency Operations Center	Helen LaForge	FEMA RI
Berks County, Boyertown Borough/Colebrookdale Township Traffic and Access Control		
Berks County, Earl Township Emergency Operations Center	Earl Shollenberger Lynn Steffensen	ICFI ICF
Berks County, Earl Township Backup Route Alerting	Meg Swearingen	ICFI
Chester County Emergency Operations Center	Don Carlton *John Price Michael Shuler Bill Webb Matthew Wiedemer	FEMA RI FEMA RIII FEMA RIII FEMA RX FEMA RIII
Chester County Emergency Worker Monitoring and Decontamination Station, Lionville Middle School	Michael Howe	FEMA HQ
Chester County, Emergency Worker Monitoring and Decontamination Station Twin Valley Fire Department	Johanna Berkey	FEMA RX
Chester County Reception Center, West Whiteland Township	Danny Loomis	ICFI
Chester County, East Pikeland Township Emergency Operations Center	James Greer	ICFI
Chester County, East Pikeland Township Route Alerting	John Arszulowicz	FEMA HQ
Chester County, East Vincent Township Emergency Operations Center	Janet Hlavaty-LaPosa Richard Smith	FEMA RX ICF
Chester County, East Vincent Township Traffic and Access Control	Janet Hlavaty-LaPosa	FEMA RX
Chester County, Phoenixville Borough Emergency Operations Center	Frank Cordaro Paul Cormier	ICFI ICFI
Chester County, Uwchlan Township Emergency Operations Center	Lenora Borchardt Samuel Nelson	ICFI ICFI
Chester County, Uwchlan Township Traffic and Access Control	Lenora Borchardt	ICFI

Montgomery County Emergency Operations Center	Nicholas DePierro Clark Duffy Brian Kennedy *Richard Kinard John Rice Lee Torres	ICFI ICFI FEMA FEMA RIII FEMA RI FEMA RIII
Montgomery County Emergency Worker Monitoring and Decontamination Station, Indian Valley Middle School	Deborah Blunt	ICFI
Montgomery County Reception Center, Metroplex	Patrick Taylor	ICFI
Montgomery County Mass Care Center, Abington Jr High School	Robert Neff	FEMA RIII
Montgomery County Mass Care Center, Abington Sr High School	Robert Neff	FEMA RIII
Montgomery County Mass Care Center, Cedarbrook Middle School	Robert Neff	FEMA RIII
Montgomery County Mass Care Center, Cheltenham High School	Robert Neff	FEMA RIII
Montgomery County Mass Care Center, Sandy Run Middle School	Robert Neff	FEMA RIII
Montgomery County Mass Care Center, Upper Dublin Sr. High School	Robert Neff	FEMA RIII
Montgomery County Mass Care Center, Upper Moreland High School	Robert Neff	FEMA RIII
Montgomery County Mass Care Center, Upper Moreland Middle School	Robert Neff	FEMA RIII
Montgomery County, Green Lane Borough Traffic and Access Control	Bruce Swiren	ICFI
Montgomery County, Green Lane Borough/Marlboro Township Emergency Operations Center	Robert Duggleby Bruce Swiren	ICFI ICFI
Montgomery County, Limerick Township Emergency Operations Center	Richard Fournier Thomas Gahan	ICFI ICFI
Montgomery County, Limerick Township Traffic and Access Control	Thomas Gahan	ICFI
Montgomery County, Lower Frederick Township Emergency Operations Center	Michael Burns David Jacobson	ICFI ICFI
Montgomery County, Lower Pottsgrove Township Emergency Operations Center	Bridget Ahlgrim Michael Petullo	FEMA HQ ICFI
Montgomery County, Lower Pottsgrove Township Backup Route Alerting	Michael Petullo	ICFI
Montgomery County, New Hanover Township Emergency Operations Center	Bernis Hannah Carl Wentzell	ICFI ICFI
Montgomery County, New Hanover Township Traffic and Access Control	Carl Wentzell	ICFI
Montgomery County, Perkiomen Township Emergency Operations Center	Michael Burriss	ICFI
Montgomery County, Schwenksville Borough Emergency Operations Center	Michael Henry Richard McPeak	ICFI ICFI
Montgomery County, Schwenksville Borough Traffic and Access Control	Richard McPeak	ICFI
Montgomery County, Trappe Borough Emergency Operations Center	Eric Carter	ICFI
Berks County, Boyertown Area School District	Roger Jobe	ICFI
Berks County, Boyertown Area School District, Earl Elementary School	Deborah Blunt	ICFI
Berks County, Daniel Boone Area School District	Lee Torres	FEMA RIII
Berks County, Daniel Boone Area School District, Birdsboro Elementary	Michael Henry	ICFI
Chester County, Downingtown Area School District	Larry Harrington	ICFI
Chester County, Downingtown Area School District, Lionville Elementary School	Paul Nied	ICFI

Chester County, Owen J. Roberts School District	Lenora Borchardt	ICFI
Chester County, Owen J. Roberts School District, French Creek Elementary Shool	Michael Petullo	ICFI
Chester County, Owen J. Roberts School District, West Vincent Elementary School	Richard McPeak	ICFI
Chester County, Phoenixville Area School District	Danny Loomis	ICFI
Chester County, Phoenixville Area School District, East Pikeland Elementary School	Earl Shollenberger	ICFI
Montgomery County, Methacton School District,	Wes Ryals	ICF
Montgomery County, Methacton School District, Woodland Elementary School	Jon Christiansen	ICFI
Montgomery County, Methacton School District, Worcester Elementary School	Lynn Steffensen	ICF
Montgomery County, Perkiomen Valley School District	Meg Swearingen	ICFI
Montgomery County, Perkiomen Valley School District, Perkiomen Middle School East	Bruce Swiren	ICFI
Montgomery County, Pottsgrove School District	Daryl Thome	ICFI
Montgomery County, Pottsgrove School District, Pottsgrove High School	Patrick Taylor	ICFI
Montgomery County, Pottstown Area School District	Michael Burns	ICFI
Montgomery County, Pottstown Area School District, Pottstown High School	Eric Carter	ICFI
Montgomery County, Souderton Area School District, Salford Hills Elementary School	Don Carlton	FEMA RI
Montgomery County, Souderton Area School District	Carl Wentzell	ICFI
Montgomery County, Spring-Ford Area School District	Paul Ward	FEMA HQ
Montgomery County, Spring-Ford Area School District, 7th Grade Center	Richard Grundstrom	ICFI
Montgomery County, Spring-Ford Area School District, West Center for Tech Studies	Richard Fournier	ICFI
Montgomery County, Spring-Ford Area School District, 8th Grade Center (Old Middle School)	Michael Howe	FEMA HQ
Montgomery County, Upper Perkiomen School District	Johanna Berkey	FEMA RX
Montogemery County, Upper Perkimen School District, Upper Perkiomen Middle School	Helen LaForge	FEMA RI
Chester County, Phoenixville Traffic and Access Control	Paul Cormier	ICFI
Bucks County Emergency Operations Center	*Joseph Suders	FEMA RIII
Bucks County Reception Center, County Line Plaza	Larry Harrington	ICFI
Bucks County Mass Care Center, Bristol Borough High School	*Daniel Lerch	FEMA RIII
Bucks County Mass Care Center, Council Rock Jr/Sr High School	*Daniel Lerch	FEMA RIII
Bucks County Mass Care Center, Charles Boehm High School	*Daniel Lerch	FEMA RIII
Bucks County Mass Care Center, Klinger Jr. High School	*Daniel Lerch	FEMA RIII
Bucks County Mass Care Center, Log College Jr. High School	*Daniel Lerch	FEMA RIII
Bucks County Mass Care Center, Maple Point Middle School	*Daniel Lerch	FEMA RIII
Bucks County Mass Care Center, Palisades Sr. High	*Daniel Lerch	FEMA RIII
Bucks County Mass Care Center, Pennwood Middle School	*Daniel Lerch	FEMA RIII
Bucks County Mass Care Center, William Tennet Complex	*Daniel Lerch	FEMA RIII
Lehigh County Emergency Operations Center	Barbara Thomas	FEMA RI
Lehigh County Reception Center, Emmaus High School	Paul Nied	ICFI
Lehigh County Mass Care Center, Emmaus High School	Paul Nied	ICFI

Lehigh County Mass Care Center, Salisbury High School	*Daniel Lerch	FEMA RIII
Chester County, Great Valley School District	Samuel Nelson	ICFI
Exelon Joint Information Center	David Jeremy	FEMA HQ
* Team Leader		

APPENDIX D: ACRONYMS AND ABBREVIATIONS

Acronym	Meaning
AA	Administrative Assistant
ACP	Access Control Points
ALARA	As Low As Reasonably Achievable
ARC	American Red Cross
ARCA	Area Requiring Corrective Action
ARES	Amateur Radio Emergency Services
BCEOC	Berks County Emergency Operations Center
BCRO	Berks County Radiological Officer
BEC	Birdsboro Elementary Center
CAD	Computer Assisted Dispatch
CDE	Cumulative Dose Equivalent
CED	Corporate Emergency Director
DASD	Downingtown Area School District
DEMD	Deputy Emergency Management Director
DRD	Direct Reading Dosimeter
DRO	Deputy Radiological Officer
DVD	Digital Video Disc
EAL	Emergency Action Level
EAS	Emergency Alert System
ECL	Emergency Classification Level
ED	Emergency Director
EMA	Emergency Management Agency
EMC	Emergency Management Coordinator
EMD	Emergency Management Director
EMS	Emergency Medical Service
EOC	Emergency Operations Center
EOF	Emergency Operation Facility
EPE	East Pikeland Elementary
EPZ	Emergency Planning Zone
ERT	Emergency Response Team
ESF	Emergency Support Function
EW	Emergency Workers
EWDC	Emergency Worker Decontamination Center
FC	Fire Coordinator

FEMA	Federal Emergency Management Agency
FMT	Field Monitoring Teams
FTC	Field Team Coordinator
GE	GENERAL EMERGENCY
HSC	Hospital Services Coordinator
IC	Incident Commander
IPZ	Ingestion Planning Zone
JIC	Joint Information Center
KC	Knowledge Center
LES	Lionville Elementary School
LGS	Limerick Generation Station
MC	Montgomery County
MCCC	Montgomery County Community College
MCEPRS	Montgomery County Emergency Preparedness Radio System
MCOEP	Montgomery County Office Emergency Preparedness
MDC	Mobile Data Computer
MIRT	Major Incident Response Team
MSD	Methacton School District
MSO	Medical Services Officer
OBC	Operations Branch Chief
OSLD	Optically Stimulated Luminescent Dosimeter
PAD	Protective Action Decision
PAR	Protective Action Recommendation
PE	Physicial Education
PEIRS	Pennsylvania Emergency Incident Reporting System
PEMA	Pennsylvania Emergency Management Agency
PIO	Public Information Officer
PRD	Permanent Record Dosimeter
PSHS	Pottstown Senior High School
PSP	Pennsylvania State Police
PVSD	Perkiomen Valley School District
RACES	Radio Amateur Civil Emergency Services
RCC	Rumor Control Center
REP	Radiological Emergency Preparedness
RERP	Radiological Emergency Response Plan
RO	Radiological Officer
RSAN	Roam Secure Alert Network
SAE	Site Area Emerency
SASD	Souderton Area School District
SEOC	State Emergency Operations Center

SEVAN	Statewide Emergency Voice Activation Network
SHO	State Health Officer
SOG	Standard Operating Guide
SOP	Standard Operating Procedures
SSL	School Services Liaison
TC	Transportation Coordinator
TCP	Traffic Control Points
TEDE	Total Effective Dose Equivalent
TMI	Three Mile Island
UHF	Ultra High Frequency
UPMS	Upper Perkiomen Middle School
UPSD	Upper Perkiomen School District
VHF	Very High Frequency
WBO	Warnings Branch Officer
WCTS	Western Center Technical School
WES	Worcester Elementary School
WVES	West Vincent Elementary School

APPENDIX E: EXERCISE PLAN

The enclosed Exercise Plan was created as an overall tool for facilitation and implementation of the LGS 2011 Plume Exercise and to integrate the concepts and policies of the Homeland Security Exercise Evaluation Program with the Radiological Emergency Preparedness Program Exercise Methodology. The Exercise Plan was originally drafted and published by the Pennsylvania Emergency Management Agency (PEMA) as a independent document and is annexed here.

The "Limerick Generating Station Extent of Play 2011 Radiological Emergency Preparedness Exercise" was negotiated and agreed upon by FEMA Region III, PEMA, and the emergnecy management agencies of the Risk and Support Counties. It is included as an Appendix of the Exercise Plan.

Radiological Emergency Preparedness (REP)/
Homeland Security Exercise and Evaluation Program (HSEEP)

ExPlan 2011 LIMERICK GENERATING STATION PLUME EXERCISE

NATIONAL EXERCISE PROGRAM

EXERCISE PLAN

2011 LIMERICK GENERATING STATION
FEMA EVALUATED REP EXERCISE

U.S DEPARTMENT OF HOMELAND SECURITY

EXERCISE DATE: 11/15/2011

PUBLISHING DATE: 2/15/2011

FEMA

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PREFACE

The 2011 Limerick Generating Station Plume Exercise Evaluated Full Scale Exercise (FSE) is sponsored by the Federal Emergency Management Agency (FEMA) and the Pennsylvania Emergency Management Agency (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, 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 2011 Limerick Generating Station Plume 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, *but the Controller and Evaluator (C/E) Handbook is a restricted document intended for Controllers and Evaluators only.*

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 the *2010 Susquehanna Steam Electric Station Plume Exercise Plan (ExPlan).*
2. The information gathered in this ExPlan is *For Official Use Only (FOUO)* and 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 the Exercise Planning Director is prohibited.
3. At a minimum, the attached materials will be disseminated only on a need-to-know basis and when unattended, will be stored in a locked container or area offering sufficient protection against theft, compromise, inadvertent access, and unauthorized disclosure.
4. For more information, please consult the following points of contact (POCs):

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CHAPTER 1: GENERAL INFORMATION

Introduction

The 2011 Limerick Generating Station Plume Exercise 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 accidents. 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 the Federal Emergency Management Agency and the Pennsylvania Emergency Management Agency with the input, advice, and assistance of the Exercise Planning Team. The 2011 Limerick Generating Station Plume Exercise is evidence of the growing partnership between State and local jurisdictions for response to the threats our Nation and communities face.

Confidentiality

The 2011 Limerick Generating Station Plume 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, *but the Controller and Evaluator (C/E) Handbooks are restricted documents intended for controllers and evaluators only.*

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 Federal Emergency Management Agency and the Pennsylvania Emergency Management Agency directives.

Public release of exercise materials to third parties is at the discretion of the Federal Emergency Management Agency (FEMA) and the Exercise Planning Team.

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 Interim Radiological Emergency Preparedness (REP) Program Manual (August 2002) to develop this exercise.

The objective of the Federal Emergency Management Agency and the Pennsylvania Emergency Management Agency 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 of.

The capabilities listed below have been selected by the Exercise Planning Team (EPT) from the priority capabilities identified in Pennsylvania Multi-Year TEP and the FEMA Interim Radiological Emergency Preparedness Program Manual (August 2002), Exercise Evaluation Criteria. 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.

- Communications
- Emergency Operations Center Management
- Responder Safety and Health
- Public Safety and Security Response
- WMD/HazMat Response and Decontamination
- Citizen Evacuation and Shelter-In-Place
- Emergency Public Information and Warning
- Mass Care (Sheltering, Feeding, and Related Services)

Exercise Objectives

The Emergency Preparedness Evaluation Areas – the elements and sub-elements – for this exercise are those that are required to be demonstrated in every exercise, as required by 67 FR 20580 (April 25, 2002) and the *Interim REP Program Manual (August 2002)*. Appendix B Extent of Play shows the emergency preparedness elements that are required to be demonstrated in the 2011 Limerick Generating Station Plume Exercise, along with the level of demonstration that will be displayed in the exercise (i.e., fully demonstrated, limited demonstration, simulated, out-of-sequence interviews, not demonstrated).

The objective of this exercise is to demonstrate reasonable assurance that the health and safety of the public can be protected, through successful demonstration of tasks identified in Appendix B.

Outstanding Issues

There is 1 Area Requiring Corrective Action (ARCA) as a result of the FEMA-evaluated plume-phase exercise at Limerick Generating Station in November 2009:

ARCA issue numbers:

35-09-2.a.1-A-04	**Condition:** The Colebrookdale Radiological Officer (RO) authorized KI for emergency workers without authorization from the State Health Officer.

CHAPTER 2: EXERCISE LOGISTICS

Exercise Summary

General

The 2011 Limerick Generating Station Plume 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 2011 Limerick Generating Station Plume Exercise will be conducted on November 15, 2011. Out of sequence evaluations will be conducted as follows:

Schools – November 15th (morning)

Pennsylvania State Police – November 16th

Emergency Worker Monitoring & Decontamination - November 16th

Reception Centers – November 16th [1]

Mass Care Shelters – November 16th[1]

Exercise play on November 15th is scheduled to end at 2230 hours or before. The exercise may conclude when the Lead Controller in consultation with FEMA and the Utility determine that the exercise objectives have been met at each venue.

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 2011 Limerick Generating Station Plume Exercise:

- The exercise will be graded against the REPP 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.

[1] Select sites will have walk-down visits conducted November 3rd.

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:

- Players will utilize normal, everyday communications methods, channels, and equipment.
- 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 prompt 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 Simulation Cell (SimCell), but may occasionally have face-to-face contact with players. Simulators function semi-independently under the supervision of the Lead Controller, 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 Lead Controller. For this exercise, the SimCell will be restricted to the Rumor Control Function.
- *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 players' 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 are members of the Region III REP Program staff, representatives of the Radiological Assistance Committee, and contractors. 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. PEMA observers will be present at selected locations as assigned by the Lead Controller. PEMA observers will receive an observer briefing prior to the day of the exercise. Any V.I.P.s or other visitors will be handled by each agency or location (Municipal EOC, County EOC, etc.) according to that agencies policies and procedures.
- *Media Personnel.* Some media personnel may be present as observers pending approval by the Exercise Director in coordination with the PEMA Press Office. Media interaction may also be simulated by Actors at the Joint Information Center during the simulated press briefing to enhance realism and meet related exercise objectives.
- *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 and Evaluator Handbooks

The 2011 Limerick Generating Station Plume Exercise Controller and Evaluator Handbooks are designed to help exercise Controllers and Evaluators conduct and evaluate an effective exercise. These Handbooks also enable Controllers and Evaluators 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.

Master Scenario Events List

The MSEL outlines benchmarks, as well as injects that drive exercise play. It also details realistic input to the exercise players as well as information expected to emanate from simulated organizations (i.e., those nonparticipating organizations, agencies, and individuals who would usually respond to the situation). An inject will include several items of information, such as inject time, intended recipient, responsible controller, inject type, a short description of the event, and the expected player action.

For the 2011 Limerick Generating Station Plume Exercise the MSEL will be used primarily for out of sequence exercise play. During the plume phase the exercise will be driven by the simulator at the utility. A supplemental MSEL for the plume phase portion of the exercise will also be utilized.

Notifications will go out from the utility in the same manner as they would in a real event with all communications being preceded and terminated by the phrase "This is a Drill". Additionally, Bureau of Radiation Protection (BRP) field teams will be utilizing "exercise measuring instruments" that receive input from the Virtual Plume software. The Virtual Plume software will be programmed to reflect expected conditions at any given time during the exercise.

The MSEL's are controlled documents are will only be made available to exercise evaluators, controllers, and observers.

Exercise Implementation

Exercise Play

Exercise play will begin at approximately 1600 hours 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 Lead Controller after consultation with FEMA and the Utility.

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 a drill."*

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 2011 Limerick Generating Station Plume 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:

- An exercise Safety Controller will be identified and be responsible for participant safety.
- 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 Safety 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 provide aid within their training, call the County 911 Center for additional aid or enlist the aid of another person to call, and advise the nearest controller. Anyone calling County 911 will use the phrase "this is not a drill" prior to explaining the injury or illness.
- The controller who is made aware of a real emergency will contact the County 911 center (if this call has not already been made) and request the appropriate aid. The controller will use the phrase "this is not a drill" prior to explaining the injury or illness.
- The controller will then contact the Lead Controller and Exercise Director with the following information:
    - Venue/function
    - Location within the venue/function
    - Condition of injured parties
    - Requirements for medical aid, fire suppression, rescue, or security resources.
- 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 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 Lead Controller. The notification will be made from the State Emergency Operations Center. The Lead Controller will notify the SimCell by phone.

Site Access

Security

Exercise play for the 2011 Limerick Generating Station Plume Exercise will be conducted at numerous sites with varying degrees of security requirements. The Limerick Generating Station Plume will control entry to the Utility and the Emergency Operations Facility. Security at State, County, and Municipal Emergency Operations Centers will be conducted according to their individual security procedures. Individual Site Controllers will be in charge of entry into their respective exercise sites. To prevent confusion and interruption of the exercise, access to the exercise sites and the SimCell will be limited to exercise participants and approved Observers only. Players should advise their venue's controller or evaluator if an unauthorized person is present. Each organization should follow its internal security procedures, augmented as necessary to comply with exercise requirements.

PEMA Observers and Liaison Officers

PEMA will assign Observers and Liaison Officers to each County and Municipal Emergency Operations Center that is being evaluated in the 2011 Limerick Generating Station Plume Exercise. The Lead Controller will provide a list of Observers and Liaison Officers to the appropriate Off-Site Response Organizations prior to the day of the exercise. All Observers and Liaison Officers will receive a pre-exercise briefing.

PEMA Observers are not intended to be players and should excuse themselves from any active participation in the exercise. If an Observer is engaged in any way by one of the exercise players he/she should refer the player to the PEMA Liaison Officer.

PEMA Liaison Officers are players and are assigned specific responsibilities for the exercise. Liaison Officers are instructed to call into the State Emergency Operations Center (SEOC) upon arrival at the exercise venue. They are required to confirm their arrival and provide to the SEOC Watch Officer phone numbers at which they can be reached during the exercise. Liaison Officers are allowed to interact in the exercise as a PEMA representative and are sometimes required to provide injects to facilitate exercise play.

Venue Locations

Addresses to venue locations will be provided by the lead Controller.

Restroom Facilities

Restroom facilities will be available at each venue.

Exercise Identification

Exercise participants will display their existing organizational identification badges.

Communications Plan

Exercise Start, Suspension, and Termination Instructions

The exercise on November 15, 2011 is scheduled to run for 6 hours or until the Lead Controller after consultation with FEMA and the Utility determine that the exercise objectives have been met. The exercise is scheduled to end by 2200 hours. The Lead Controller will announce the exercise suspension or termination through the State Emergency Operations Center.

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

Player Communication

Players will use routine, in-place agency communication systems. Additional communication assets may be made available as the exercise progresses. All exercise communication over primary dispatch channels will cease immediately if a real world emergency is announced. Communications concerning a real world emergency will be preceded by the phrase "This is not a drill". In no instance will exercise communication interfere with real-world emergency communications. Exercise communication over these channels will recommence when authorized by the Exercise Director after he is advised by County 911 that it is safe to do so. 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 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

Joint Information Centers will be established at both the Utility Emergency Operations Facility and the State Emergency Operations Center. Actors will play the role of reporters "public briefings" will be given as they would for a real incident. These "public briefings" will be simulated and not broadcast for the public. The briefings will be available for viewing at the County EOCs.

Any participation by the actual media will be coordinated through the Exercise Director in conjunction with the PEMA Public Information Office.

CHAPTER 3: PLAYER GUIDELINES

Exercise Staff

Exercise Director

The Exercise Director has the overall responsibility for planning, coordinating, and overseeing all exercise functions. The Exercise Director for the 2011 Limerick Generating Station Plume Exercise is the Radiological Emergency Preparedness Regional Assistance Committee Chair. The Exercise Director has delegated the following responsibilities to other team members:

The FEMA Region III Site Specialist for the Limerick Generating Station has authority to make determinations concerning evaluation issues and re-demonstrations, and,

The PEMA HSEEP Coordinator has responsibility to organize and lead the Exercise Planning Team.

Trusted Agents

Trusted agents are exercise planners and participants who are responsible for developing the Scenario and the Master Scenario Events List (MSEL). These documents are restricted and are not available to the rest of the Exercise Planning Team, Players, or other Participants. The trusted agents for the 2011 Limerick Generating Station Plume Exercise include the Exercise Director, Lead Controller, Bureau of Radiation Protection (BRP) Representative, FEMA Emergency Management Program Specialist, and the Radiological Emergency Preparedness Regional Assistance Committee (RAC) Chair.

Lead Controller

The Lead Controller also functions as a Trusted Agent. He is involved in developing the Master Scenario Events List and is privy to the scenario used at the Utility to generate exercise play. The Lead Controller is responsible for scheduling controllers at the "Out of Sequence" components of the exercise and the 2011 Limerick Generating Station Plume 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 will be the PEMA REP Training Program Manager and is stationed in the State EOC during the Plume 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 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. The Trusted Agent from the Utility will act as the Controller at the Utility Site during the Plume exercise and the BRP Trusted Agent will act as Controller for the BRP Field Teams.

Lead Evaluator

The Lead Evaluator is responsible for the overall evaluation of the 2011 Limerick Generating Station Plume 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 Overview of Play. The Lead Evaluator debriefs the evaluators after the exercise and oversees the entire evaluation and After Action process. The Lead Evaluator will be the FEMA Region III REP Site Specialist.

Evaluators

Evaluators work under the direction of the Lead Evaluator, and as a team with Controllers. Evaluators are Subject Matter Experts who record events that take place during the exercise and assess/submit documentation for review and inclusion in the After Action Report (AAR). Evaluators should refrain from any direct interaction with the players during exercise play except with the facilitation of a Controller for clarification of issues or during scheduled interviews.

Player Instructions

Before the Exercise

- Review the appropriate emergency plans, procedures, and exercise support documents.
- Arrive at the exercise location as instructed. 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.
- Bureau of Radiation Protection Field Monitoring Teams will be briefed by the BRP Coordinator.

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 a drill". 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 a debriefing with the controllers and evaluators.
- Provide all rosters, sign in sheets, logs, messages, notes or materials generated from the exercise to your controller or evaluator for review and inclusion in the AAR.

- Bureau of Radiation Protection Field Monitoring Teams will be debriefed immediately following the exercise by the BRP Coordinator.

Simulation Guidelines

Because the 2011 Limerick Generating Station Plume 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, provide assistance up to the level of your training, call 911 and use the phrase "This is not drill" and ask for the appropriate assistance, and notify the nearest Controller and Evaluator.

CHAPTER 4: EVALUATION AND POST-EXERCISE ACTIVITIES

Exercise Documentation

The goal of the 2011 Limerick Generating Station Plume 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, Observers, 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 EEGs selected by the Exercise Planning Team are contained in the evaluator materials packet along with the Evaluator Handbook. These EEGs have been selected because the activities they describe can be expected to be observed during the exercise and will guide evaluation to match the exercise design objectives. Supplemental REP evaluation material designed for the exercise may also be used.

DEBRIEFING

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

Exercise Evaluation Hotwash

Controllers, Evaluators, and selected exercise participants will attend a facilitated Controller and Evaluator Hotwash on November 17 at 03:30 p.m. at the Exelon Emergency Operations Facility (EOF) in Coatesville, PA. During the Hotwash 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 on November 18 at 1000 hours followed immediately by the Public/Media Briefing at 1130 hours. The Public/Media Briefing will be open to all members of the public. Both briefings will be held at the Exelon Emergency Operations Facility (EOF) in Coatesville, PA.

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, mission outcomes, and capability analysis. The AAR will identify any Deficiencies, Planning Issues, or Areas Requiring Corrective Action that were identified during the exercise and describe recommended actions to correct the issue. The AAR will be drafted by a core group of individuals from the exercise planning team. The draft After Action Report will be released by FEMA to exercise participants for comments and review approximately 30 days after the exercise. The final After Action Report, along with the Improvement Plan, will be released approximately 60 days after the exercise.

After Action Conference and Improvement Plan

The improvement process represents the comprehensive, continuing preparedness effort of which the 2011 Limerick Generating Station Plume 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 After Action Conference will be held approximately 30 days after the exercise. Participants will receive invitations once the conference has been scheduled.

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 2011 Limerick Generating Station Plume Exercise participating agency officials during the After Action Conference.

APPENDIX A: EXERCISE SCHEDULE

Table A.1 *2011 Limerick Generation Station Plume Exercise Schedule*

Time (Tentative)	Personnel	Activity
11/3/2011		
0830-completion	Federal, State, County and Red Cross personnel	Mass Care and Reception Center site visits
11/15/2011		
0900 - 1100	Schools	School District
1600 - 2230	Municipal, County and State EOC'S; Utility; DEP BRP Field Monitoring Teams	Plume Exercise
11/16/2011		
1000-1200	State Police	Traffic and Access Control Points (Briefing only)
1900-2130	Reception Centers, Mass Care Facilities, EW Mon/Decon Teams	Reception Centers, Mass Care, EW Mon/Decon[1]
11/17/2011		
1530-1730	Exercise Participants	Hotwash
11/18/2011		
1000-1100	Exercise Participants	Participants Briefing
1130-1230	Open to Public	Public/Media Briefing

[1] Select Sites will have walk-down visits conducted on November 3, 2011 in Bucks, Lehigh and Montgomery Counties.

LIMERICK GENERATING STATION
2011 RADIOLOGICAL EMERGENCY PREPAREDNESS EXERCISE

METHOD OF OPERATION

FINAL 1.2 – 10/13/11

1. Limerick Generating Station (LGS)

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. LGS will notify the State EOC, the Bureau of Radiation Protection and Risk Counties of emergency classifications.

2. Bureau of Radiation Protection (BRP)

BRP personnel will be present at the State EOC, the nuclear facility EOF and field locations; BRP field teams will be evaluated during this exercise.

3. PEMA Operations at State EOC

This "Method of Operation" Document includes activities for the Full-Scale Plume Exercise (November 15, 2011), and the "Out of Sequence" Activities (November 16, 2011).

A. Plume Exercise – November 15, 2011

PEMA staff, augmented by designated PEMA personnel from the Fire Commissioner's Office, the Bureau of Administration, Technical Services, Plans, plus Emergency Preparedness Liaison Officers (EPLOs) with accompanying response team members from designated state departments/agencies, including representatives from the USDA State Emergency Board will comprise initial operations at the State Emergency Operations Center (EOC). The State EOC will not be evaluated during this exercise.

B. Plume Exercise – "Out of Sequence" Activities – November 15, 2011.

PEMA staff, 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 November 15, 2011. The State Emergency Operations Center (EOC) and County EOCs will NOT be evaluated during the "Out of Sequence" component. PEMA personnel will serve as "observers" at the identified School Districts.

C. "Out of Sequence" Activities – November 16, 2011.

PEMA personnel will serve as "Observers" at the various field exercise locations during the evening "Out-of-Sequence" component November 16, 2011. An exercise coordinator will remain in the State EOC. The State Emergency Operations Center (EOC) and Counties will NOT be evaluated during the evening "Out of Sequence" component.

The Pennsylvania State Police (PSP) demonstration will take place at PSP Skippack Barracks, 2047 C Bridge Road, Schwenksville, Montgomery County. **The PSP briefing will be performed out of sequence in a demonstration window of 10:00 a.m. to 12:00 noon on November 16, 2011.**

4. PEMA Area Office Operations

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

5. Counties Designated to Participate

The three risk counties (Berks, Chester, and Montgomery), 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 two support counties (Bucks and Lehigh) will participate in their assigned support roles. Actual sheltering or evacuation of the general public will be simulated.

6. PEMA Liaison Officers

Liaison officers will be present at the participating risk and support county EOCs, the LGS Emergency Operations Facility (EOF), and LGS Joint Information Center (JIC) to provide assistance, guidance, and support. These liaison officers will participate as players in the exercise.

7. Controllers

A lead controller will be present in the State EOC on November 15, 2011. Controllers will be present at the emergency worker monitoring/decontaminating stations and the mass care monitoring/ decontamination centers (November 16, 2011). 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 manufacturers 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 to participants awaiting a re-demonstration. (Refer to paragraph 13)

9. FEMA Evaluators

Federal evaluators will be present at the risk and support county EOCs, identified risk municipal EOCs, and at appropriate field locations to evaluate player response to the actual and simulated events in the exercise scenario. FEMA will evaluate one-third of the risk municipalities in Berks, Chester, and Montgomery Counties.

Out of Sequence Period (November 15, 2011): Federal evaluators will be present at the identified "out-of-sequence" demonstration sites per Attachment A, Section I.1 These include the identified Public School Districts and participating school buildings.

Plume Phase Exercise (November 15, 2011): Federal evaluators 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 will be federally evaluated.

Out of Sequence Period (November 16, 2011): Federal evaluators will be present at identified Reception Centers, Emergency Worker Monitoring and Decontamination Stations, Mass Care Centers and Mass Care Monitoring and Decontamination Centers, as identified in Attachment A, Section I.B.1, I.B.2 and I.B.3. *Note: 18 Mass Care Centers (as indicated) will receive a federally evaluated walk-down on November 3, 2011(scheduled separately). Additionally, Mass Care Monitoring and Decontamination Centers are either co-located with Reception Centers or Mass Care Centers as indicated in Attachment A.*

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 Abbington Memorial Hospital, Montgomery County on September 21, 2011.

The out-of-sequence exercise window for school demonstrations will be between 9:00 – 11:00 a.m. on November 15, 2011.

The out-of-sequence demonstration of reception centers, mass care centers (as indicated), monitoring / decontamination centers and emergency worker stations will be conducted between 7:00 - 9:30 p.m. on November 16, 2011. Locations are specified within Attachment A, Section I.

Note: 18 mass care centers, (9 in Bucks, 1 in Lehigh and 8 in Montgomery) will receive "walk-down" baseline evaluations on November 3, 2011 (scheduled separately). These 18 mass care centers will **not** be evaluated during the evening of November 16th as they are not co-located with monitoring decontamination centers. One each Mass care center in Berks and Lehigh Counties will be evaluated on the evening of November 16th.

The out-of-sequence interview of Pennsylvania State Police traffic control / access control points will be from 10:00 a.m. - 12:00 noon. November 16, 2011.

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 November 15, 2011. (Please refer to the Extent of Play Demonstration Tables, Attachment A)

B. Post Plume Exercise

A post-plume phase exercise is not scheduled during this evaluation.

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 informed the FEMA evaluator that all evaluation areas have been demonstrated and/or completed, the risk municipality EOCs may request approval from their county EOC to stand-down their portion of the exercise.

b. Support counties may likewise request approval to stand-down upon completion of all evaluated objectives from the state EOC.

c. The risk county EOC will remain operational until the exercise is officially terminated by the State Lead Controller. **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. 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 applied.

13. Re-demonstrations

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.

LIMERICK GENERATING STATION
2011 RADIOLOGICAL EMERGENCY PREPAREDNESS EXERCISE

EXTENT OF PLAY AGREEMENT

EVALUATION AREA 1
Emergency Operations Management

Sub-element 1.a – Mobilization

INTENT

This sub-element derives from NUREG-0654, which provides that Offsite Response Organizations (ORO) should have the capability to alert, notify, and mobilize emergency personnel and to 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, A.4; D.3, 4; E.1, 2; H.4)

1. EXTENT OF PLAY

Responsible OROs should demonstrate the capability to receive notification of an emergency situation from the licensee, verify the notification, and contact, alert, and mobilize key emergency personnel in a timely manner. Responsible OROs should demonstrate the activation of facilities for immediate use by mobilized personnel when they arrive to begin emergency operations. Activation of facilities should be completed in accordance with the plan and/or procedures. Pre-positioning of emergency personnel 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. Further, pre-positioning of staff for out-of-sequence demonstrations is appropriate in accordance with the extent of play agreement.

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:

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 municipalities will conduct call-outs to demonstrate the mobilization of key personnel.

- *Actual calls (or pager notifications) will be made to the municipal EOC personnel for the Plume Phase exercise 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 and equipment will be pre-positioned (School District personnel, Pennsylvania State Police ACP, Reception Centers, Emergency Worker Monitoring and Decontamination Stations and Monitoring and Decontamination Centers).*
- *Individuals working in state facilities and county EOCs may be pre-positioned 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: None

Sub-element 1.c - Direction and Control

INTENT

This sub-element derives from NUREG-0654, which provides that Offsite Response Organizations (ORO) 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, A.1.d; A.2.a, b)

EXTENT OF PLAY

Leadership personnel should demonstrate the ability to carry out essential functions of the response effort, for example: keeping the staff informed through periodic briefings and/or other means, coordinating with other appropriate OROs, and ensuring completion of requirements and requests.

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

PEMA Negotiated Extent of Play: *None*

Sub-element 1.d – Communications Equipment

INTENT

This sub-element derives from NUREG-0654, which provides that Offsite Response Organizations (ORO) should establish reliable primary and backup communication systems to ensure communications with key emergency personnel at locations such as the following: appropriate contiguous governments within the emergency planning zone (EPZ), Federal emergency response organizations, the licensee and its facilities, emergency operations centers (EOC), and field teams.

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, F.1, 2)

EXTENT OF PLAY

OROs will demonstrate that a primary and at least one backup system are fully functional at the beginning of an exercise. 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 should be used as needed for the transmission and receipt of exercise messages. All facilities and field teams should have the capability to access at least one communication system that is independent of the commercial telephone system. Responsible OROs should demonstrate the capability to manage the communication systems and ensure that all

message traffic is handled without delays that might disrupt the conduct of emergency operations. OROs should ensure that a coordinated communication link for fixed and mobile medical support facilities exists. The specific communications capabilities of OROs should be commensurate with that specified in the response plan and/or procedures. Exercise scenarios could require the failure of a communications system and the use of an alternate system, as negotiated in the extent of play agreement.

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

PEMA Negotiated Extent of Play:

Risk and Support Counties will communicate with the State EOC via SEVAN (primary) and e-mail (secondary.) PASTAR, State 800 MHz Radio System, and commercial telephone are available for back-up. The State EOC may communicate with the utility and the risk counties via dedicated telephone circuits, commercial "dial-up" lines, or other available means.

Risk Counties will communicate with their risk municipalities via public safety radio frequencies (EMA Radio), Commercial Telephone, Fax, or 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, dosimetry, potassium iodide (KI), and other supplies are sufficient to support emergency operations. (NUREG-0654, H.7,10; J.10.a, b, e, J.11; K.3.a)**

EXTENT OF PLAY

Equipment within the facility (facilities) should be sufficient and consistent with the role assigned to that facility in the ORO's plans and/or procedures in support of emergency operations. Use of maps and displays is encouraged.

All instruments should be inspected, inventoried, and operationally checked before each use. Instruments should be calibrated in accordance with the manufacturer's recommendations. Unmodified CDV-700 series instruments and other instruments without a manufacturer's recommendation should be calibrated annually.

Modified CDV-700 instruments should be calibrated in accordance with the recommendation of the modification manufacturer. A label indicating such calibration should be on each instrument, or calibrated frequency can be verified by other means. Additionally, instruments being used to measure activity should have a range of reading sticker affixed to the side of the instrument. The above considerations should be included in 4.a.1 for field team equipment; 4.c.1 for radiological laboratory equipment (does not apply to analytical equipment; reception center and emergency worker facilities' equipment under 6.a.1; and ambulance and medical facilities' equipment under 6.d.1.

Sufficient quantities of appropriate direct-reading and permanent record dosimetry and dosimeter chargers should be available for issuance to all categories of emergency workers that could be deployed from that facility. Appropriate direct-reading dosimetry should allow individual(s) to read the administrative reporting limits and maximum exposure limits contained in the ORO's plans and procedures.

Dosimetry should be inspected for electrical leakage at least annually and replaced, if necessary. CDV-138s, due to their documented history of electrical leakage problems, should be inspected for electrical leakage at least quarterly and replaced if necessary. This leakage testing will be verified during the exercise, through documentation submitted in the Annual Letter of Certification, and/or through a staff assistance visit.

Responsible OROs should demonstrate the capability to maintain inventories of KI sufficient for use by emergency workers, as indicated on rosters; institutionalized individuals, as indicated in capacity lists for facilities; and, where stipulated by the plan and/or procedures, members of the general public (including transients) within the plume pathway EPZ.

Quantities of dosimetry and KI available and storage locations(s) will be confirmed by physical inspection at storage location(s) or through documentation of current inventory submitted during the exercise, provided in the Annual Letter of Certification submission, and/or verified during a Staff Assistance Visit. Available supplies of KI should 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.

At locations where traffic and access control personnel are deployed, appropriate equipment (for example, vehicles, barriers, traffic cones and signs, etc.) should be available or their availability described.

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:

In Pennsylvania CDV-700s are calibrated every 4-years. Support counties do not have DRDs, or KI, but those responsible for reception centers and / or monitoring and decontamination centers will have PRDs.

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.

Leakage testing verification and KI extension letters (as appropriate) will be available to the evaluator.

All DRDs "read" in units of Roentgens. The commonwealth, counties and municipalities do not use direct reading dosimeters which "read" in units of milli-Roentgens.

EVALUATION AREA 2
Protective Action Decision-Making

Sub-element 2.a - Emergency Worker Exposure Control

INTENT

This sub-element derives from NUREG-0654, which provides that Offsite Response Organizations (ORO) 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 and 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 emergency workers may be permitted to incur during an emergency. These limits include any pre-established administrative reporting limits (that take into consideration Total Effective Dose Equivalent or organ-specific limits) identified in the ORO's plans and 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, K.4, J.10. e, f)**

EXTENT OF PLAY

OROs authorized to send emergency workers into the plume exposure pathway EPZ should demonstrate a capability to meet the criterion based on their emergency plans and procedures.

Responsible OROs should demonstrate the capability to make decisions concerning the authorization of exposure levels in excess of pre-authorized levels and to the number of emergency workers receiving radiation dose above pre-authorized levels.

As appropriate, OROs should demonstrate the capability to make decisions on the distribution and administration of KI as a protective measure, based on the ORO's plan and/or procedures or projected thyroid dose compared with the established Protective Action Guides (PAGs) for KI administration.

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: None

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

INTENT

This sub-element derives from NUREG-0654, which provides that Offsite Response Organizations (ORO) have the capability to use all available data to independently project integrated dose and compare the estimated dose savings with the protective action guides. OROs have the capability to choose, among a range of protective actions, those most appropriate in a given emergency situation. OROs base these choices on PAGs from the ORO's plans and procedures or EPA 400-R-92-001 and other criteria, such as, plant conditions, licensee protective action recommendations, coordination of protective action decisions with other political jurisdictions (for example, other affected OROs), availability of appropriate in-place shelter, weather conditions, and situations that create higher than normal risk from evacuation.

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

EXTENT OF PLAY

During the initial stage of the emergency response, following notification of plant conditions that may warrant offsite protective actions, the ORO should demonstrate the capability to use appropriate means, described in the plan and/or procedures, to develop protective action recommendations (PARs) for decision-makers based on available information and recommendations from the licensee and field monitoring data, if available.
When the licensee provides release and meteorological data, the ORO also considers these data. The ORO should 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 appropriate to the scenario. In all cases, calculation of projected dose should be demonstrated. Projected doses should be related to quantities and units of the PAGs to which they will be compared. PARs should be promptly transmitted to decision-makers in a prearranged format.

Differences greater than a factor of 10 between projected doses by the licensee and the ORO should be discussed with the licensee with respect to the input data and assumptions used, the use of different models, or other possible reasons. Resolution of these differences should be incorporated into the PAR if timely and appropriate. The ORO should 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 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:
This criterion will not be evaluated during this exercise.

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

2. EXTENT OF PLAY

OROs should have the capability to make both initial and subsequent PADs. They should demonstrate the capability to make initial PADs in a timely manner appropriate to the situation, based on notification from the licensee, assessment of plant status and releases, and PARs from the utility and ORO staff.

The dose assessment personnel may provide additional PARs based on the subsequent dose projections, field monitoring data, or information on plant conditions. The decision-makers should demonstrate the capability to change protective actions as appropriate based on these projections.

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

If more than one ORO is involved in decision-making, OROs should communicate and coordinate PADs with affected OROs. OROs should demonstrate the capability to communicate the contents of decisions to the affected jurisdictions.

All decision-making activities by ORO personnel must be performed 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: *None*

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

INTENT

This sub-element derives from NUREG-0654, which provides that Offsite Response Organizations (ORO) should have the capability to determine protective action recommendations, including evacuation, sheltering and use of potassium iodide (KI), if applicable, for special population groups (for example, hospitals, nursing homes, correctional facilities, schools, licensed day care centers, mobility impaired individuals, and transportation dependent individuals). Focus is on those special population groups that are (or potentially will be) affected by a radiological release from a nuclear power plant.

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

EXTENT OF PLAY

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 situations where there is a high-risk environment or where high-risk groups (e.g., the immobile or infirm) are involved. In these cases, examples of factors that should be considered are weather conditions, shelter availability, availability of transportation assets, risk of evacuation vs. risk from the avoided dose, and precautionary school evacuations. In situations where an institutionalized population cannot be evacuated, the administration of KI should be considered by the OROs.

Applicable OROs should 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. Contacts with public school systems/districts must be actual.

In accordance with plans and/or procedures, OROs and/or officials of pubic school systems/districts should demonstrate the capability to make prompt decisions on protective actions for students. Officials should demonstrate that the decision making process for protective actions considers (that is, either accepts automatically or gives heavy weight to) protective action recommendations made by ORO personnel, the ECL at which these recommendations are received, preplanned strategies for protective actions for that ECL, and the location of students at the time (for example, whether the students are still at home, en route to the school, or at the school).

All decision-making activities associated with protective actions, including consideration of available resources, for special population groups 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: *None*

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

This sub-element will not be evaluated during this exercise.

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

This sub-element will not be evaluated during this exercise.

EVALUATION AREA 3
Protective Action Implementation

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

3. INTENT

This sub-element derives from NUREG-0654, which provides that OROs should have the capability to provide for the following: distribution, use, collection, and processing of direct-reading dosimetry and permanent record dosimetry; the reading of direct-reading dosimetry by emergency workers at appropriate frequencies; maintaining a radiation dose record for each emergency worker; and establishing a decision chain or authorization procedure for emergency workers to incur radiation exposures in excess of protective action guides, always applying the ALARA (As Low As is Reasonably Achievable) principle as appropriate.

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

4. EXTENT OF PLAY

OROs should demonstrate the capability to provide appropriate direct-reading and permanent record dosimetry, dosimeter chargers, and instructions on the use of dosimetry to emergency workers. For evaluation purposes, appropriate direct-reading dosimetry is defined as dosimetry that allows individual(s) to read the administrative reporting limits (that are pre-established at a level low enough to consider subsequent calculation of Total Effective Dose Equivalent) and maximum exposure limits (for those emergency workers involved in life saving activities) contained in the ORO's plans and procedures.

Each emergency worker should have the basic knowledge of radiation exposure limits as specified in the ORO's plan and/or procedures. Procedures to monitor and record dosimeter readings and to manage radiological exposure control should be demonstrated.

During a plume phase exercise, emergency workers should demonstrate the procedures to be followed when administrative exposure limits and turn-back values are reached. The emergency worker should report accumulated exposures during the exercise as indicated in the plans and procedures. OROs should demonstrate the actions described in the plan and/or procedures by determining whether to replace the worker, to authorize the worker to incur additional exposures or to take other actions. If scenario events do not require emergency workers to seek

authorizations for additional exposure, evaluators should interview at least two emergency workers, to determine their knowledge of whom to contact in the event authorization is needed and at what exposure levels. Emergency workers may use any available resources (for example, written procedures and/or co-workers) 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 and adequate control of exposure can be effected for all members of the team by one dosimeter worn by the team leader. Emergency workers who are assigned to low exposure rate areas, for example, at reception centers, counting laboratories, emergency operations centers, and communications centers, may have individual direct-reading dosimeters or they may be monitored by dosimeters strategically placed in the work area. It should be noted that, even in these situations, each team member must still have their own permanent record dosimetry. Individuals without specific radiological response missions, such as farmers for animal care, essential utility service personnel, or other members of the public who must re-enter an evacuated area following or during the plume passage, should be limited to the lowest radiological exposure commensurate with completing their missions.

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 briefings will be provided to address exposure limits and procedures to replace those 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. A maximum of six (6) Dosimetry-KI report forms will be demonstrated.

OROs should also demonstrate the use of all applicable dosimetry forms to emergency workers.

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 turnback values.

Emergency workers who are assigned to low exposure rate areas, e.g., at reception centers, counting laboratories, emergency operations centers, and communications centers, may have individual direct-reading 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
Category C: 1 PRD (no KI)

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. Simulation PRDs with mock serial numbers will be used.

Personnel assigned to operate Monitoring / Decontamination centers and stations are not issued DRDs or KI since the centers/stations are located outside the EPZ. Each will be issued a simulated PRD with mock serial numbers. For purposes of demonstration, a maximum of six PRDs will be issued.

Sub-element 3.b – Implementation of KI Decision

INTENT

This sub-element derives from NUREG-0654, which provides that Offsite Response Organizations (ORO) should have the capability to provide radioprotective drugs for emergency workers, institutionalized individuals, and, if in the plan and/or 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 emergency workers and institutionalized individuals, the provision of KI to the general public is an ORO option and is reflected in ORO's plans and procedures. Provisions should include the availability of adequate quantities, storage, and means of the distribution of radioprotective drugs.

Criterion 3.b.1: KI and appropriate instructions are available should a decision to recommend use of KI be made. Appropriate record keeping of the administration of KI for emergency workers and institutionalized individuals is maintained. (NUREG-0654, J. 10. e)

EXTENT OF PLAY

Offsite Response Organizations (ORO) should demonstrate the capability to make KI available to emergency workers, institutionalized individuals, and, where provided for in the ORO plan and/or procedures, to members of the general public. OROs should demonstrate the capability to accomplish distribution of KI consistent with decisions made. Organizations should have the capability to develop and maintain lists of emergency workers and institutionalized individuals who have ingested KI, including documentation of the date(s) and time(s) they were instructed to ingest KI.

The ingestion of KI recommended by the designated ORO health official is voluntary. For evaluation purposes, the actual ingestion of KI is not necessary. OROs should demonstrate the capability to formulate and disseminate appropriate instructions on the use of KI for those advised to take it. If a recommendation is made for the general public to take KI, appropriate information should be provided to the public by the means of notification specified in the ORO's plan and/or procedures.

Emergency workers should demonstrate the basic knowledge of procedures for the use of KI whether or not the scenario drives the use of KI. This can be accomplished through an interview by the evaluator.

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:

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. KI is not distributed to the general public at the time of an emergency.

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. Each will be issued a simulated PRD with mock serial numbers. For purposes of demonstration, a maximum of six PRDs will be issued.

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

INTENT

This sub-element derives from NUREG-0654, which provides that Offsite Response Organizations (ORO) should have the capability to implement protective action decisions, including evacuation and/or sheltering, for all special populations. Focus is on those special populations that are (or potentially will be) affected by a radiological release from a nuclear power plant.

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

EXTENT OF PLAY

Applicable OROs should demonstrate the capability to alert and notify (for example, provide protective action recommendations and emergency information and instructions) special populations (hospitals, nursing homes, correctional facilities, mobility impaired individuals, transportation dependent, etc.). OROs should demonstrate the capability to provide for the needs of special populations in accordance with the ORO's plans and procedures.

Contact with special populations and reception facilities may be actual or simulated, as agreed to in the Extent of Play. Some contacts with transportation providers should be actual, as negotiated in the extent of play. All actual and simulated contacts should be logged.

All implementing activities associated with protective actions for special populations 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:

The names, locations and contact information of identified individuals with identified special needs are maintained on a list 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. NOTE: Berks County maintains a countywide special needs list for individuals requiring assistance. This list may be viewed at the county as it will not be disseminated for exercise purposes.

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 their plan. All actual and simulated contacts should be logged.

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

EXTENT OF PLAY

Public school systems/districts shall demonstrate the ability to implement protective action decisions for students. The demonstration shall be made as follows: At least one school in each affected school system or district, as appropriate, needs to demonstrate the implementation of protective actions. The implementation of canceling the school day, dismissing early, or sheltering should 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 process, appropriate school personnel including decision making officials (e.g., superintendent/principal, transportation director/bus dispatcher), and at least one bus driver (and the bus driver's escort, if applicable) should 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 plan and/or procedures, should be verified.

Officials of the school system(s) should 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 day care centers that participate in REP exercises pursuant to the ORO's plans and procedures as negotiated in the Extent of Play Agreement.

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:

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.

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 would contact in the event of an emergency in accordance with plans and procedures. Any simulated contacts should be logged.

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

INTENT

This sub-element derives from NUREG-0654, which provides that Offsite Response Organizations (ORO) have the capability to implement protective action plans, 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, J.10.g, j)

EXTENT OF PLAY

OROs should demonstrate the capability to select, establish, and staff appropriate traffic and access control points, consistent with protective action decisions (for example, evacuating, sheltering, and relocation), in a timely manner. OROs should 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 should demonstrate accurate knowledge of their roles and responsibilities. This capability may be demonstrated by actual deployment or by interview, in accordance with the extent of play.

In instances where OROs lack authority necessary to control access by certain types of traffic (rail, water, and air traffic), they should demonstrate the capability to contact the State or Federal agencies with authority to control access.

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:

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.

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

EXTENT OF PLAY

OROs 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 wreckers, need not be demonstrated; however, all contacts, actual or simulated, should be logged.

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:

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.

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

This sub-element will not be evaluated during this exercise.

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

This sub-element will not be evaluated during this exercise.

EVALUATION AREA 4
Field Measurement And Analysis

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

INTENT

This sub-element derives from NUREG-0654, which provides that OROs should have the capability to deploy field teams 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 indicates that OROs should have the capability to use field teams within the plume emergency planning zone to measure airborne radioiodine in the presence of noble gases and to measure radioactive particulate material in the airborne plume. In the event of an accident at a nuclear power plant, the possible release of radioactive material may pose a risk to the nearby population and environment. Although accident assessment methods are available to project the extent and magnitude of a release, these methods are subject to large uncertainties. During an accident, it is important to collect field radiological data in order to help characterize any radiological release. Adequate equipment and procedures are essential to such field measurement efforts.

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

EXTENT OF PLAY

Field teams should be equipped with all instrumentation and supplies necessary to accomplish their mission. This should include instruments capable of measuring gamma exposure rates and detecting the presence of beta radiation. These instruments should be capable of measuring a range of activity and exposure, including radiological protection/exposure control of team members and detection of activity on the air sample collection media, consistent with the intended use of the instrument and the ORO's plans and procedures. An appropriate radioactive check source should be used to verify proper operational response for each low range radiation measurement instrument (less than 1 R/hr) and for high range instruments when available. If a source is not available for a high range instrument, a procedure should exist to operationally test the instrument before entering an area where only a high range instrument can make useful readings.

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:

Department of Environmental Protection (DEP), Bureau of Radiation Protection (BRP) field teams are equipped with the necessary instrumentation and supplies. Evaluators will meet the field teams at the DEP South East Regional Office at 3:00 p.m. on November 15, 2011 to observe instrumentation checks and equipment inventory verification.

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

EXTENT OF PLAY

Responsible Offsite Response Organizations (ORO) should demonstrate the capability to brief teams on predicted plume location and direction, travel speed, and exposure control procedures before deployment.

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

If the responsibility to obtain 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 State and local monitoring teams. If the licensee teams 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 field teams (licensee, federal, and ORO) is essential. Coordination concerning transfer of samples, including a chain-of-custody form, to a radiological laboratory should be demonstrated.

OROs should use Federal resources as identified in the Federal Radiological Emergency Response Plan (FRERP), and other resources (for example, compacts, utility, etc), 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 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:

Field Team Control will be performed within or 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 located 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 team dose ALARA.

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, I. 9).

EXTENT OF PLAY

Field teams should demonstrate the capability to report measurements and field data pertaining to the measurement of airborne radioiodine and particulates and ambient radiation to the field team coordinator, dose assessment, or other appropriate authority. If samples have radioactivity significantly above background, the appropriate authority should consider the need for expedited laboratory analyses of these samples. OROs should share data in a timely manner with all appropriate OROs. All methodology, including contamination control, instrumentation, preparation of samples, and a chain-of-custody form for transfer to a laboratory, will be in accordance with the ORO plan and/or procedures.

OROs should use Federal resources as identified in the FRERP, and other resources (for example, compacts, utility, nuclear insurers, etc), 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 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:

Measurements will be made by Department of Environmental Protection (DEP), Bureau of Radiation Protection (BRP), in accordance with the State Annex E, Appendix 6, and BRP Standard Implementing Procedures (IPs). Two mobile monitoring teams from BRP DEP South East Regional Office 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 locations 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) 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 theR3V immediately upon obtaining data. Evaluators will meet the field teams at the Wilson Farm Park, 500 Lee Road, Chesterbrook PA 19087at 1:30 p.m., November15, 2011.

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

INTENT

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to assess the actual or potential magnitude and locations of radiological hazards in the IPZ and for relocation, re-entry and return measures.
This sub-element focuses on the collection of environmental samples for laboratory analyses that are essential for decisions on protection of the public from contaminated food and water and direct radiation from deposited materials.

> **Criterion 4.b.1: The field teams 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, I.8; J.11)**

EXTENT OF PLAY

The ORO's field team should 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 re-entry, relocation, and return decisions. When resources are available, the use of aerial surveys and in-situ gamma measurement is appropriate.

All methodology, including contamination control, instrumentation, preparation of samples, and a chain-of-custody form for transfer to a laboratory, will be in accordance with the ORO's plan and/or procedures.

Ingestion pathway samples should be secured from agricultural products and water. Samples in support of relocation and return should be secured from soil, vegetation, and other surfaces in areas that received radioactive ground deposition.

OROs should use Federal resources as identified in the FRERP, and other resources (e.g., compacts, utility, nuclear insurers, etc.), 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 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:

This sub-element will not be demonstrated during this exercise.

Sub-element 4.c - Laboratory Operations

INTENT

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (ORO) should 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, C.3; J.11)

EXTENT OF PLAY

The laboratory staff should demonstrate the capability to follow appropriate procedures for receiving samples, including logging of information, preventing contamination of the laboratory, 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 should demonstrate the capability to prepare samples for conducting measurements.

The laboratory should be appropriately equipped to provide analyses of media, as requested, on a timely basis, of sufficient quality and sensitivity to support assessments and decisions as anticipated by the ORO's plans and procedures. The laboratory (laboratories) instrument calibrations should 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 should be as described in the plans and procedures. New or revised methods may be used to analyze atypical radionuclide releases (e.g., transuranics or as a result of a terrorist event) or if warranted by circumstances of the event. Analysis may require resources beyond those of the ORO.

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

OROs should use Federal resources as identified in the FRERP, and other resources (e.g., compacts, utility, nuclear insurers, etc.), 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 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:

This sub-element will not be evaluated during this exercise.

EVALUATION AREA 5
Emergency Notification and Public Information

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

INTENT

This sub-element derives from NUREG-0654, which provides that OROs should have the capability to provide prompt instructions to the public within the plume pathway EPZ. Specific provisions addressed in this sub-element are derived from the Nuclear Regulatory Commission (NRC) regulations (10 CFR Part 50, Appendix E.IV.D.), and FEMA-REP-10, "Guide for the Evaluation of Alert and Notification systems for Nuclear Power Plants."

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 FEMA REP guidance. (10 CFR Part 50, Appendix E.IV.D and NUREG-0654, E.5, 6, 7)

EXTENT OF PLAY

Responsible Offsite Response Organizations (ORO) should 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 pathway EPZ. Following the decision to activate the alert and notification system, in accordance with the ORO's plan and/or procedures, completion of system activation should be accomplished in a timely manner (will not be subject to specific time requirements) for primary alerting/notification. The initial message should include the elements required by current FEMA REP guidance.

Offsite Response Organizations (OROs) with route alerting as the primary method of alerting and notifying the public should demonstrate the capability to accomplish the primary route alerting, following the decision to activate the alert and notification system, in a timely manner (will not be subject to specific time requirements) in accordance with the ORO's plan and/or procedures. 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. The initial message should include the elements required by current FEMA REP guidance.

For exercise purposes, timely is defined as "the responsible ORO personnel/representatives demonstrate actions to disseminate the appropriate information/instructions with a sense of urgency and without undue delay." If message dissemination is to be 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 should be fully demonstrated as they would in an actual emergency up to the point of transmission. Broadcast of the message(s) or test messages is not required. The alert signal activation may be simulated. However, the procedures should be demonstrated up to the point of actual activation.

The capability of the primary notification system to broadcast an instructional message on a 24-hour basis should be verified during an interview with appropriate personnel from the primary notification system.

All activities for this criterion must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, except as noted above or otherwise indicated 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 (April 1, 2004). 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. 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. Broadcast of the message(s) or test message(s) is ***NOT*** *required and* ***NOT*** *requested. Counties may elect to simulate county specific supplemental messages to their electronic local media.*

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.

Each evaluated municipality per risk county will demonstrate, by interview, route alerting of the hearing impaired residents within their jurisdiction. Hearing impaired notification teams will not be deployed.

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)

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 45-minute 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.

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

PEMA Negotiated Extent of Play:

Back-up alert notification of the public due to a simulated siren failure will be demonstrated. (Refer to Attachment A, Section I. 4.) County liaisons will give an inject to the county siren dispatcher, upon confirmation that sirens were sounded, that a particular siren has failed in the municipalities scheduled to demonstrate back-up route alerting. Notice of the siren failure will then be communicated to the appropriate municipalities/locations so they can demonstrate their 45-minute pre-identified back-up route alert run as per Attachment A, Section I.A.4. Pennsylvania does not have any "exception areas." The 45-minute clock starts at the point of notification that a siren has failed.

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

INTENT

This sub-element derives from NUREG-0654, which provides that Offsite Response Organizations (ORO) should have the capability to disseminate to the public appropriate emergency information and instructions, including any recommended protective actions. In addition, NUREG-0654 provides that OROs should 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 also provides that a system should be available for dealing with rumors. This system will hereafter be known as the public inquiry hotline.

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

EXTENT OF PLAY

Subsequent emergency information and instructions should be provided to the public and the media in a timely manner (will not be subject to specific time requirements). For exercise purposes, timely is defined as "the responsible ORO personnel/representatives demonstrate actions to disseminate the appropriate information/instructions with a sense of urgency and without undue delay." If message dissemination is to be 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.

The ORO should ensure that emergency information and instructions are consistent with protective action decisions made by appropriate officials. The emergency information should contain all necessary and applicable instructions (for example, evacuation instructions,

evacuation routes, reception center locations, what to take when evacuating, information concerning pets, shelter-in-place instructions, information concerning protective actions for

schools and special populations, public inquiry telephone number, etc.) to assist the public in carrying out protective action decisions provided to them. The ORO should also be prepared to disclose and explain the Emergency Classification Level (ECL) of the incident. At a minimum, this information must be included in media briefings and/or media releases. OROs should demonstrate the capability to use language that is clear and understandable to the public within both the plume and ingestion pathway EPZs. This includes demonstration of the capability to use familiar landmarks and boundaries to describe protective action areas.

The emergency information should be all-inclusive by including previously identified protective action areas that are still valid, as well as new areas. The OROs should 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 should demonstrate the capability to ensure that current emergency information is repeated at pre-established intervals in accordance with the plan and/or procedures.

OROs should demonstrate the capability to develop emergency information in a non-English language when required by the plan and/or procedures.

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

OROs should 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 situation warrants. The OROs should demonstrate the capability to respond appropriately to inquiries from the news media. All information presented in media briefings and media releases should be consistent with protective action decisions and other emergency information provided to the public. Copies of pertinent emergency information (e.g., EAS messages and media releases) and media information kits should be available for dissemination to the media.

OROs should demonstrate that an effective system is in place for dealing with calls to the public inquiry hotline. Hotline staff should 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, should be included, as appropriate, in emergency information provided to the public, media briefings, and/or media releases.

All activities for this criterion 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*:**

*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 and Decontamination of Evacuees and Emergency Workers and Registration of Evacuees

INTENT

This sub-element derives from NUREG-0654, which provides that Offsite Response Organizations (ORO) have the capability to implement radiological monitoring and decontamination of evacuees and emergency workers, while minimizing contamination of the facility, and registration of evacuees at reception centers.

Criterion 6.a.1: The reception center/emergency worker facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees and/or emergency workers. (NUREG-0654, J.10.h; J.12; K.5.a)

EXTENT OF PLAY

Radiological monitoring, decontamination, and registration facilities for evacuees/ emergency workers should be set up and demonstrated as they would be in an actual emergency or as indicated in the extent of play agreement. This would include adequate space for evacuees' vehicles. Expected demonstration should include 1/3 of the monitoring teams/portal monitors required to monitor 20% of the population allocated to the facility within 12 hours. Before using monitoring instrument(s), the monitor(s) should demonstrate the process of checking the instrument(s) for proper operation.

Staff responsible for the radiological monitoring of evacuees should demonstrate the capability to attain and sustain a monitoring productivity rate per hour needed to monitor the 20% emergency planning zone (EPZ) population planning base within about 12 hours. This 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 monitoring procedure. A minimum of six individuals per monitoring station should be monitored, using equipment and procedures specified in the plan and/or procedures, to allow demonstration of monitoring, decontamination, and registration capabilities. The monitoring sequences for the first six simulated evacuees per monitoring team will be timed by the evaluators in order to determine whether the twelve-hour requirement can be met. Monitoring of emergency workers does not have to meet the twelve-hour requirement. However, appropriate monitoring procedures should be demonstrated for a minimum of two emergency workers.

Decontamination of evacuees/emergency workers may be simulated and conducted by interview. The availability of provisions for separately showering should be demonstrated or explained.

The staff should demonstrate provisions for limiting the spread of contamination. Provisions could include floor coverings, signs and appropriate means (for example, partitions, roped-off areas) to separate clean from potentially contaminated areas. Provisions should also exist to separate contaminated and uncontaminated individuals, provide changes of clothing for individuals whose clothing is contaminated, and store contaminated clothing and personal belongings to prevent further contamination of evacuees or facilities. In addition, for any individual found to be contaminated, procedures should be discussed concerning the handling of potential contamination of vehicles and personal belongings.

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

The capability to register individuals upon completion of the monitoring and decontamination activities should be demonstrated. The registration activities demonstrated should include the establishment of a registration record for each individual, consisting of the individual's name, address, results of monitoring, and time of decontamination, if any, or as otherwise designated in the plan. Audio recorders, camcorders, or written records are all acceptable means for registration.

All activities associated with this criterion must be based on the ORO's plans and procedures and completed, as they would be in an actual emergency, unless otherwise indicated in the extent of play agreement.

PEMA Negotiated Extent of Play:

Radiological monitoring demonstration sites should possess a roster of the monitoring personnel required to process 20% of the population allocated to the facility within a 12 hour period.

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.

Radiological monitoring of the public may be co-located at either reception centers or mass care centers depending on the county plan.

***At each reception center (stand alone – non-mon/decon activity sites)** 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. Note: Co-located facilities do not require strip maps or written directions.*

Mass care centers and mass care monitoring/decontamination centers *will be demonstrated per Attachment A during the out-of-sequence window. The counties will provide space at designated mass care centers for operation of monitoring/decontamination centers. Schematics of these monitoring /decontamination centers will be available to show the organization and layout within the facility and space management for monitoring and decontamination. Procedures will be demonstrated to show the separation of contaminated and non-contaminated (clean) individuals to minimize cross contamination.*

At the ***evacuee monitoring/decontamination centers (if using hand-held meters),*** *a minimum of six (6) volunteer evacuees will be monitored (or one volunteer evacuee may be monitored six times).* ***Centers using portal monitors will not be required to demonstrate the timing aspect of processing six individuals – three (3) will suffice.*** *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.*

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.***

At the ***emergency worker monitoring/decontamination stations****, two (2) emergency workers 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.***

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 Interim Annex E letter, April 2009 or superseding document shall apply.*

Monitoring/decontamination centers and 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. Simulated personal record dosimeters (PRDs) will be worn.

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 pad (if used). Long runs of plastic covered with paper will not be demonstrated, but the materials may be available and explained (as appropriate). Positioning of a fire apparatus on-site may be simulated if otherwise required.

Note: Re-demonstrations may be performed as appropriate and time permitting.

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

INTENT

This sub-element derives from NUREG-0654, which provides that Offsite Response Organizations (ORO) have the capability to implement radiological monitoring and decontamination of emergency worker equipment, including vehicles.

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

EXTENT OF PLAY

The monitoring staff should demonstrate the capability to monitor equipment, including vehicles, for contamination in accordance with the Offsite Response Organizations (ORO) plans and procedures. Specific attention should be given to equipment, including vehicles, that was in contact with individuals found to be contaminated. The monitoring staff should demonstrate the capability to make decisions on the need for decontamination of equipment, including vehicles, based on guidance levels and procedures stated in the plan and/or procedures.

The area to be used for monitoring and decontamination should 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 should 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 should be demonstrated. Interior surfaces of vehicles that were in contact with individuals found to be contaminated should also be checked.

Decontamination capabilities, and provisions for vehicles and equipment that cannot be decontaminated, may be simulated and conducted by interview.

All activities associated with this criterion 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:

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. Schematics of these monitoring/decontamination stations will be available to show organization and space management within the facility. The evaluator will request that decontamination procedures be explained after the vehicle which has simulated contamination has been monitored. One radiological survey meter will be issued to each 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 including clearly defined exit areas, per contamination control procedures and/or step-off pads (if used); with the exception of long runs of plastic covered with paper which will not be demonstrated, but the materials may be available and explained (as appropriate.).

Decontamination capabilities, and provisions for vehicles and equipment that cannot be decontaminated, will be simulated and conducted by interview.

Note: Re-demonstrations may be performed as appropriate and time permitting.

Sub-element 6.c - Temporary Care of Evacuees

INTENT

This sub-element derives from NUREG-0654, which provides that Offsite Response Organizations (ORO) demonstrate the capability to establish relocation centers in host areas. The American Red Cross (ARC) 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. (Found in MASS CARE - Preparedness Operations, ARC 3031) Managers demonstrate the procedures to assure that evacuees have been monitored for contamination and have been decontaminated as appropriate before entering congregate care facilities. (NUREG-0654, J.10.h, J.12)

EXTENT OF PLAY

Under this criterion, demonstration of congregate care centers may be conducted out of sequence with the exercise scenario. The evaluator should conduct a walk-through of the center to determine, through observation and inquiries, that the services and accommodations are consistent with ARC 3031. 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 objective, exercise demonstration expectations should be clearly specified in extent-of-play agreements.

Congregate care staff should also demonstrate the capability to ensure that evacuees have been monitored for contamination, have been decontaminated as appropriate, and have been registered before entering the facility. 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 (for example, cots, blankets, sundries, and large-scale food supplies) need not be physically available at the facility (facilities). However, availability of such items should be verified by providing the evaluator a list of sources with locations and estimates of quantities.

All activities associated with this criterion 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:

Counties demonstrating the operation of mass care centers during the out-of-sequence window (Berks and Lehigh Counties) will provide floor plans of the mass care centers 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 B.3)".

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 responsible American Red Cross chapter will show the source and quantities, by job functional description, to be provided to mass care centers to support the 24-hour operation. The responsible Red Cross Chapter(s) will be visited, or telephonically contacted during business hours on November 16, 2011, by an exercise evaluator, or interviewed at the mass care center(as appropriate) during the out-of-sequence evaluation to provide information regarding the 24-hour operation. 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 November 16, 2011.

Those facilities identified for the FEMA walk-down evaluations will be supported by a participating representative from the appropriate Red Cross Chapter(s). An interview process will be conducted to determine facility compliance of the above stated requirements.

American Red Cross risk and support county chapters:
Berks County Chapter
701 Centre Avenue
Reading PA 19601-2507
Adrian Grieve (610) 375-4383

Greater Lehigh Valley Chapter
2200 Avenue A
Bethlehem PA 18017-2181
Nina Johnson (610) 865-4400 x227

(Montgomery, Chester & Bucks Counties)
Southeast Pennsylvania Chapter
23rd & Chestnut Streets
Philadelphia PA 19103
Clifton Salas (215) 299-4889

Lower Bucks County Chapter
1909 New Rodgers Rd.
Levittown PA 19056
Steve Huizar (215) 946-4870 x105

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

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (ORO's) should have the capability to transport contaminated injured individuals to medical facilities with the capability to provide medical services.

> **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, F.2; H.10; K.5, a, b; L.1,4)**

EXTENT OF PLAY

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

Offsite Response Organizations (ORO) should demonstrate the capability to transport contaminated injured individuals to medical facilities. An ambulance should be used for the response to the victim. However, to avoid taking an ambulance out of service for an extended time, any vehicle (e.g., car, truck, or van) may be utilized to transport the victim to the medical facility. Normal communications between the ambulance/dispatcher and the receiving medical facility should be demonstrated. If a substitute vehicle is used for transport to the medical facility, this communication must occur prior to releasing the ambulance from the drill. This communication would include reporting radiation-monitoring results, if available. Additionally, the ambulance crew should 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 prior to transport, done enroute, or deferred to the medical facility. Prior to using a monitoring instrument(s), the monitor(s) should demonstrate the process of checking the instrument(s) for proper operation. All monitoring activities should be completed, as they would be in an actual emergency. Appropriate contamination control measures should be demonstrated prior to and during transport and at the receiving medical facility.

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

The medical facility should demonstrate the capability to make decisions on the need for decontamination of the individual, to follow appropriate decontamination procedures, and to maintain records of all survey measurements and samples taken.

All procedures for the collection and analysis of samples and the decontamination of the individual should be demonstrated or described to the evaluator.

All activities associated with this criterion 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.
Frequency for Evaluation of New Criteria.

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

This sub-element will be evaluated at Abington Memorial Hospital, Montgomery County on September 21, 2011.

ATTACHMENT A

Limerick Generating Station
Extent of Play Demonstration Tables

I. PLUME PHASE EXERCISE

A. Activities – November 15, 2011

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 FEMA. 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

- **Asterisks items indicate buildings not in EPZ – students may live in the EPZ**
- **"Bold" indicated those facilities that are scheduled for federal evaluation.**

COUNTY	SCHOOL DISTRICT	SCHOOLS (approx. 1/3rd evaluated)	Evaluated
Berks	**Boyertown Area (10)**	1. Boyertown Elementary	2009 *(1)*
		2. Boyertown Senior HS	2009
		3. Colebrookdale Elementary	2007
		4. Earl Elementary *	2005/11
		5. Gilbertsville Elementary	2007
		6. Boyertown JHS East	2007
		7. Boyertown JHS West	2009
		8. New Hanover/Upper Frederick Elementary	2009 2009
		9. Pine Forge Elementary	2007
		10. Washington Elementary *	2009
	Daniel Boone Area (5)	1. Daniel Boone HS *	2009 *(1)*
		2. Daniel Boone MS *	2007
		3. Amity Intermediate Center	2007
		4. Monocacy Elementary Center	2009
		5. Birdsboro Elementary *	2005/11

Chester	**Downingtown Area (7)**	1. Pickering Valley Elementary	2005/07
		2. Lionville Elementary *	2007/11
		3. Shamona Creek Elementary *	2009
		4. Uwchlan Hills Elementary *	2009 *(1)*
		5. Lionville MS *	2009
		6. Downingtown HS East *	2009
		7. Downingtown HS West *	2009
	Great Valley (4) ***(SD Only)***	1. Charlestown Elementary	2005/07
		2. KD Markley Elementary *	2009
		3. Great Valley MS *	2009
		4. Great Valley HS *	2009
	Owen J. Roberts (7)	1. Owen J Roberts HS	2009 *(2)*
		2. Owen J Roberts MS	2007
		3. East Coventry Elementary	2009
		4. East Vincent Elementary	2009
		5. North Coventry Elementary	2007
		6. French Creek Elementary	2005/11
		7. West Vincent Elementary (new)	2011
	Phoenixville Area (6)	1. Phoenixville Senior HS	2009 *(1)*
		2. Phoenixville MS	2007
		3. East Pikeland Elementary	2005/11
		4. Samuel K Barkley Elementary	2007
		5. French Creek Learning Center	2005/11
		6. Schuylkill Elementary	2007
		7. Kindergarten Center	2009
Montgomery	**Methacton Area (7)**	1. Arcola Intermediate	2009 *(2)*
		2. Arrowhead Elementary	2007
		3. Audubon Elementary	2007
		4. Eagleville Elementary *	2009
		5. Methacton Senior HS *	2009
		6. Woodland Elementary	2005/11
		7. Worcester Elementary	2011
	Perkiomen Valley (7)	1. Perkiomen Valley Elementary South	2009
		2. Evergreen Elementary	2007 **(1)**
		3. Perkiomen Valley HS	2009
		4. Perkiomen Valley MS - East	2005/11
		5. Perkiomen Valley MS - West	2007
		6. Skippack Elementary	2007
		7. Schwenksville Elementary	2009

	Pottsgrove (5)	1. Lower Pottsgrove Elementary ***2. Pottsgrove HS*** 3. Pottsgrove MS 4. Ringing Rocks Elementary 5. West Pottsgrove Elementary	2009 2005/11 2007 2007 *(1)* 2009
	Pottstown Area (7)	1. EB Barth Elementary 2. Edgewood Elementary 3. Franklin Elementary 4. Lincoln Elementary ***5. Pottstown HS*** 6. Pottstown MS 7. Rupert Elementary	2007 *(1)* 2009 2009 2009 2005/11 2009 2007
	Souderton Area (3)	1. Indian Valley MS * ***2. Salford Hills Elementary*** 3. Souderton Area Senior HS *	2009 *(1)* 2005/11 2007
	Spring-Ford Area (11)	1. Brooke Elementary 2. Evans Elementary 3. Limerick Elementary 4. Oaks Elementary 5. Royersford Elementary 6. Spring-City Elementary 7. Upper Providence Elementary 8. 5th and 6th Grade Center ***9. 7th Grade Center*** ***10. 8th Grade Center (old MS)*** 11. Spring-Ford Area HS	2007 *(2)* 2009 2009 2007 2009 2007 2009 2009 2011 2005/11 2009
	Upper Perkiomen (4)	1. Hereford Elementary * 2. Marlborough Elementary 3. Upper Perkiomen HS * ***4. Upper Perkiomen MS ***	2007 *(1)* 2009 2009 2005/11
	Western Center Technical Studies (1)	***Western Center Technical Studies***	2005/11 *(1)*

County Emergency Operations Center (EOCs)
Time: Per Exercise Scenario

DEMONSTRATION FOR EOC MOBILIZATION FOR COUNTIES		
COUNTY	**DATE**	**Time**
Berks	November 15, 2011	Exercise Scenario
Bucks	November 15, 2011	Exercise Scenario
Chester	November 15, 2011	Exercise Scenario
Montgomery	November 15, 2011	Exercise Scenario
Lehigh	November 15, 2011	Exercise Scenario

Municipal Emergency Operations Center (EOCs)
Time: Per Exercise Scenario -- * Joint EOC

DEMONSTRATION FOR EOC MOBILIZATION FOR MUNICIPALITIES		
5. **RISK COUNTY**	**6. MUNICIPALITY**	7. **8. DATE**
Berks (7/2)	Amity Twp	November 15, 2011
	**** Boyertown Borough/Colebrookdale Twp***	***ARCA*** - November 15, 2011
	Douglass Twp	November 15, 2011
	Earl Twp - RA	November 15, 2011
	Union Twp	November 15, 2011
	Washington Twp	November 15, 2011
Chester (15/4)	Charlestown Twp	November 15, 2011
	9. East Coventry Twp	November 15, 2011
	East Nantmeal Twp	November 15, 2011
	East Pikeland Twp - RA	November 15, 2011
	East Vincent Twp	November 15, 2011
	North Coventry Twp	November 15, 2011
	Phoenixville Borough	November 15, 2011
	Schuylkill Twp	November 15, 2011
	10. South Coventry Twp	November 15, 2011
	Spring City Borough	November 15, 2011
11.	Upper Uwchlan Twp	November 15, 2011
	Uwchlan Twp	November 15, 2011
	Warwick Twp	November 15, 2011
	12. West Pikeland Twp	November 15, 2011
	13. West Vincent Twp	November 15, 2011

Montgomery (20/ 8)	Collegeville Borough	November 15, 2011
	Douglass Twp	November 15, 2011
	**** Green Lane Borough/Marborough Twp***	November 15, 2011
	Limerick Twp	November 15, 2011
	Lower Frederick Twp	November 15, 2011
	Lower Pottsgrove Twp -RA	November 15, 2011
	Lower Providence Twp	November 15, 2011
	Lower Salford Twp	November 15, 2011
	New Hanover Twp	November 15, 2011
	Perkiomen Twp	November 15, 2011
	Pottstown Borough	November 15, 2011
	Royersford Borough	November 15, 2011
	Schwenksville Borough –new	November 15, 2011
	Skippack Twp	November 15, 2011
	Trappe Borough	November 15, 2011
	Upper Frederick Twp	November 15, 2011
	Upper Pottsgrove Twp	November 15, 2011
	Upper Providence Twp	November 15, 2011
	Upper Salford Twp	November 15, 2011
	West Pottsgrove Twp	November 15, 2011

One back-up one route alerting demonstration by one municipality in each risk county. (During Scenario Exercise)

Back-up Route Alerting		
COUNTY	**MUNICIPALITY/SIREN/ROUTE**	**DATE**
Berks	***Earl Twp / #7 / 19-B***	November 15, 2011
Chester	***14. East Pikeland Twp / #130 / 61-C***	November 15, 2011
Montgomery	***Lower Pottsgrove Twp / #122 /88-C***	November 15, 2011

5. Traffic and Access Control Points

a. The Pennsylvania State Police will brief at the **PSP Skippack Barracks, 2047C Bridge Road, Schwenksville, Montgomery County.** Members 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 a.m. on November 16, 2011.

c. Each municipal/regional police force with a TCP assigned in its plan will demonstrate all preparation duties including TCP responsibilities and radiological briefing. Dispatch of persons to the TCP site will not occur during the exercise.

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. This will be demonstrated between 7:00 p.m. - 9:30 p.m. on November 15, 2011.

These municipal/regional police forces are (by county):

Berks	Chester	Montgomery
Amity Township	East Coventry Township	Marborough Township
Boyertown Borough	East Vincent Township	Collegeville Borough
Colebrookdale Township	North Coventry Township	Douglass Township
Douglass Township	Phoenixville Borough	Green Lane Borough
-	Schuylkill Township	West Pottsgrove Township
-	Spring City Borough	Limerick Township
-	Upper Uwchlan Township	Upper Pottsgrove Township
-	West Pikeland Township	Lower Providence Township
-	West Vincent Township	Lower Salford Township
-	Uwchlan Township	New Hanover Township
-	East Pikeland Township	Pottstown Borough
-	-	Royersford Borough
-	-	Schwenksville Borough
-	-	Upper Providence Township

B. Activities – November 16, 2011

1. Reception Centers: The asterisks (*) indicate monitoring/decontamination center activities at the respective reception centers.

Demonstration of Reception Centers		
COUNTY	**DATE**	**TIME**
Berks	November 16, 2011	7:00 p.m. – 9:30 p.m.
* Bucks	November 16, 2011	7:00 p.m. – 9:30 p.m.
* Chester	November 16, 2011	7:00 p.m. – 9:30 p.m.
* Montgomery	November 16, 2011	7:00 p.m. – 9:30 p.m.
* Lehigh	November 16, 2011	7:00 p.m. – 9:30 p.m.

Reception Centers Locations		
COUNTY	**LOCATION**	**Quantity**
Berks (4)	***Exeter Township Building - new***	1
* Bucks (2)	***County Line Plaza (alt. location, Souderton FC)***	1
* Chester (3)	***West Whiteland Twp***	1
* Montgomery (2)	***Metroplex (alt. location, Plymouth FC)***	1
* Lehigh (2)	***Emmaus High School***	1

Note: County Line Plaza and Metroplex will demonstrate at an alternate location (TBD). Walk-downs will take place during Mass Care site visits on November 3, 2011.

2. Mass Care Centers: Only Berks County (*) conducts monitoring/decontamination center activities at their mass care centers.

DEMONSTRATION of Mass Care Centers / Host School		
COUNTY	**DATE**	**TIME**
* Berks (7/1)	***November 16, 2011***	7:00 p.m. – 9:30 p.m.
Bucks (31/9)	***November 3, 2011***	*Walk-Down Schedule*
Chester (12/0)	***November 3, 2011***	*Walk-Down Schedule*
Montgomery (13/8)	***November 3, 2011***	*Walk-Down Schedule*
Lehigh (15/2)	***November 16, 2011 (1)*** ***November 3, 2011 (1)***	7:00 p.m. – 9:30 p.m. *Walk-Down Schedule*

Mass Care Center Locations		
COUNTY	**LOCATION**	**Quantity**
* Berks (7)	***1. Hamburg Jr/Sr HS – Nov. 16, 2011***	**1**
Lehigh (15)	***1. Emmaus High School – Nov. 16, 2011*** **2. Salisbury High School – walk-down schedule**	**2**
Bucks (31) **walk-down schedule and order**	**1. Bristol Boro HS** **2. Pennwood MS** **3. Charles Boehm HS** **4. Maple Point MS** **5. Council Rock North HS** **6. Klinger Jr. HS** **7. William Tennet Complex** **8. Log College Jr. HS** **9. Palisades Sr. HS**	**9**
Chester (12)	***None due per 6 year cycle*** ***&*** ***No new facilities***	**0**
Montgomery (13) **walk-down schedule and order**	**1. Cedarbrook MS** **2. Cheltenham HS** **3. Abington Jr. HS** **4. Abington Sr. HS** **5. Upper Moreland HS** **6. Upper Moreland MS** **7. Sandy Run MS** **8.Upper Dublin Sr. HS**	**8**

3. Emergency worker monitoring/decontamination stations for each risk county.

Emergency Worker Monitoring / Decontamination Station		
COUNTY	**LOCATION**	**DATE**
Berks (2)	***Daniel Boone Jr/Sr HS***	November 16, 2011
Chester (3)	***Lionville MS***	November 16, 2011
	Twin Valley - new	November 16, 2011
Montgomery (3)	***Indian Valley MS***	November 16, 2011

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