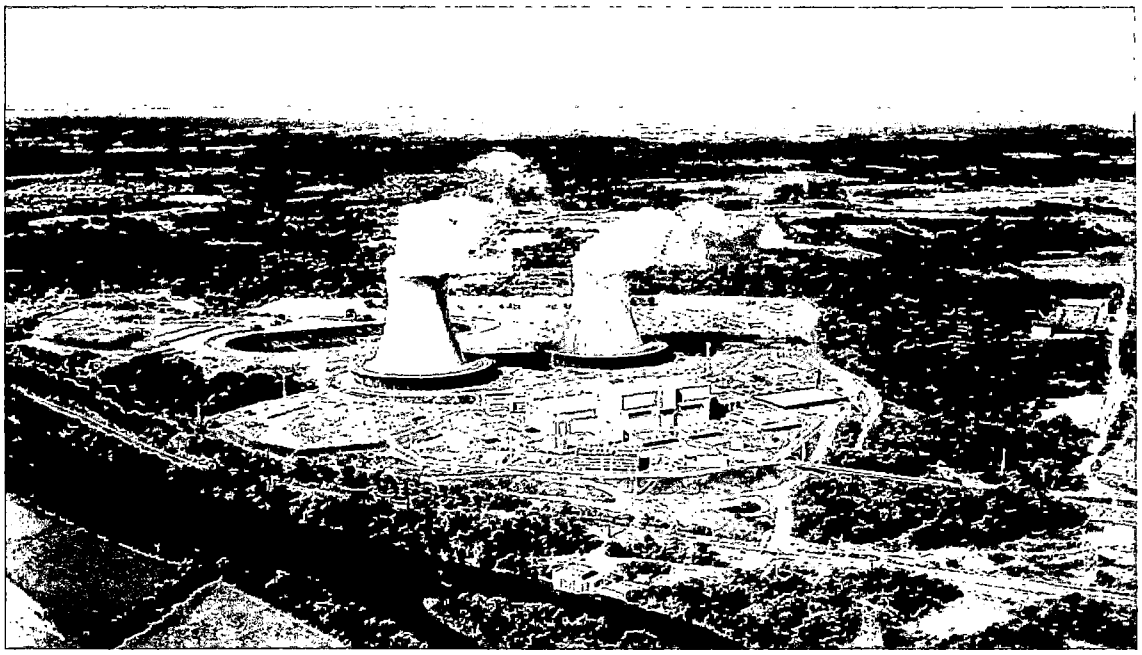

Limerick Generating Station
Pottstown, Pennsylvania
After Action Report/Improvement Plan
Exercise Date – November 19, 2019
Radiological Emergency Preparedness (REP) Program

FEMA

Published March 4, 2020

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Limerick Generating Station

After Action Report/Improvement Plan

Published March 4, 2020

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EXECUTIVE SUMMARY

On November 19, 2019, a full participation Plume Exposure Pathway Exercise was conducted and evaluated for the 10-Mile Emergency Planning Zone (EPZ) around the Limerick Generating Station (LGS) by the U.S. Department of Homeland Security (DHS) Federal Emergency Management Agency (FEMA), Region III. The previous full participation exercise at this site was evaluated on November 14, 2017.

In addition to the plume exercise, out-of-sequence demonstrations of nine mass care centers were evaluated on September 13, 2019; reception centers, evacuee monitoring/decontamination stations, emergency worker monitoring/decontamination stations and mass care centers for each risk county on October 23, 2019; schools during the morning of November 19, 2019; and the Pennsylvania State Police (PSP) traffic control/access control point on November 20, 2019.

The purpose of the exercise and out-of-sequence demonstrations was to assess the capabilities of State, counties, and local jurisdictions to implement Radiological Emergency Response Plans (RERP) and Procedures to protect the property and lives of residents and transients in the event of an emergency at the Limerick Generating Station. The findings in this report are based on the evaluations of the Federal evaluation team, with final determinations made by the FEMA, Region III Regional Assistance Committee (RAC) Chairperson, and approved by FEMA Headquarters. These reports are provided to the Nuclear Regulatory Commission (NRC) and participating States. State and local governments utilize the findings contained in these reports for the purposes of planning, training, and improving emergency preparedness.

FEMA wishes to acknowledge the efforts of the many individuals in the Commonwealth of Pennsylvania; the three risk jurisdictions of Berks, Chester and Montgomery Counties; the two support counties of Bucks, Lehigh; and the 21 Commonwealth of Pennsylvania participating municipalities. Protecting the public health and safety is the full-time job of some of the exercise participants and an additional assigned responsibility for others. Still others have willingly sought this responsibility by volunteering to provide vital emergency services to their communities. Cooperation and teamwork of all the participants were evident during the exercise.

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

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

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

Section 4 of this report entitled "Demonstrated Strengths" includes exemplary performances that were demonstrated during the exercise and information on best practices that were observed.

Section 5 of this report entitled "Conclusion" presents a summary of the findings and performance of the evaluated agencies.

The appendices, present supplementary information that is relevant to the exercise:

- Appendix A – Exercise Timeline. A table that depicts the times when an event or notifications were noted at participating agencies and locations.
- Appendix B – Exercise Evaluators and Team Leaders. A table listing the evaluator names, organizations, and responsibilities of the evaluators and management.
- Appendix C – Acronyms and Abbreviations. An alphabetized table defining the formal names used in this report.
- Appendix D – Extent of Play Agreement

SECTION 1: EXERCISE OVERVIEW

1.1 Exercise Details

Exercise Name
2019 Limerick Generating Station Biennial Exercise

Type of Exercise
Plume

Exercise Date
11-19-2019

Program
Department of Homeland Security/FEMA Radiological Emergency Preparedness Program

Scenario Type
No Release

1.2 Exercise Planning Team Leadership

Tina Thomas
Technological Hazards Program Specialist
DHS/FEMA Region III
One Independence Mall, 6th Floor
615 Chestnut Street
Philadelphia, PA, 19106-4404
(215) 478-2923
tina.thomas@fema.dhs.gov

Sandra Silva
Emergency Management Specialist
Pennsylvania Emergency Management Agency
1310 Elmerton Avenue
Harrisburg, PA 17110
717-651-2235
sansilva@pa.gov

Wade DeHaas
Radiation Health Physicist
Dept. of Environmental Protection
Bureau of Radiation Protection
Rachel Carlson State Office Building
Harrisburg, Pennsylvania, 17105
717-787-2699
wdehaas@pa.gov

Sara Reese
Offsite Coordinator
Exelon Energy Company
Limerick Generating Station
200 Exelon Way
Kennett Square, Pennsylvania, 19348
267-533-1426
Sara.Schmidt@exeloncorp.com

Mike Braswell
Sr. Emergency Preparedness Specialist, Drill & Exercise
Exelon Energy Company
Limerick Generating Station
200 Exelon Way
Kennett Square, Pennsylvania, 19348
267-533-1422
Michael.Braswell@exeloncorp.com

1.3 Participating Organizations

Agencies and organizations of the following jurisdictions participated in the Limerick Generating Station Exercise:

State Jurisdictions
Commonwealth of Pennsylvania

- American Red Cross
- Auxiliary Communication Services (ACS)
- Commonwealth Media Services
- Department of Environmental Protection - Bureau of Radiation Protection
- Department of Military and Veterans Affairs
- Pennsylvania Animal Rescue Team
- Pennsylvania Department of Aging
- Pennsylvania Department of Agriculture
- Pennsylvania Department of Corrections
- Pennsylvania Department of Drug and Alcohol Programs
- Pennsylvania Department of Environmental Protection
- Pennsylvania Department of Environmental Protection, Bureau of Radiation Protection
- Pennsylvania Department of General Services
- Pennsylvania Department of Health
- Pennsylvania Department of Human Services
- Pennsylvania Department of Labor and Industry
- Pennsylvania Department of Revenue
- Pennsylvania Department of Transportation
- Pennsylvania Donations Manager
- Pennsylvania Emergency Management Agency

- Pennsylvania Fish and Boat Commission
- Pennsylvania Game Commission
- Pennsylvania Office of Administration
- Pennsylvania Public Utilities Commission
- Pennsylvania State Police
- Pennsylvania Statewide Radio Network (PA-STARNet)
- Pennsylvania Turnpike Commission
- Voluntary Organizations Active in Disasters (VOAD)

Risk Jurisdictions

Berks County

- Amateur Radio Emergency Services (ARES)/Radio Amateur Civil Emergency Services (RACES)
- Berks Area Regional Transportation Authority (BARTA)
- Berks County Department of Emergency Services
- Berks County Department of Procurement
- Berks County GIS
- Berks County HAZMAT
- Berks County Human Resources
- Berks County Investigation Unit
- Berks County Mental Health/Developmental Disabilities
- Berks County Office of Budget and Finance
- Berks County Planning Commission
- Berks County Sheriff's Office
- Boyertown Area School District
- Colebrookdale Elementary School
- Daniel Boone Area School District
- Daniel Boone Intermediate Center
- First Energy Nuclear Operating Company
- Hospital Association of Pennsylvania
- Penn State Extension
- Penn State Health St. Joseph
- Pennsylvania Department of Transportation
- Pennsylvania Emergency Management Agency
- Pennsylvania National Guard
- Pennsylvania State Police
- Pennsylvania Power and Light (PPL) Electric Company
- Tri County American Red Cross

Amity Township

- Amity Fire Company
- Amity Police Department
- Amity Township
- Amity Township Private Citizen Volunteers
- Monarch Fire Company

- New Rhoads Transportation
- Radio Amateur Civil Emergency Services (RACES)

Douglass Township (Berks County)

- Douglass Township Community Volunteers
- Douglass Township Office of Emergency Management
- Douglass Township Officials
- Douglass Township Police Department
- Douglass Township Public Works
- Douglass Township Volunteers, Amateur Radio Emergency Services (ARES)/Radio Amateur Civil Emergency Services (RACES) Reading Radio Club
- Emergency Medical Services (Northern Sector and Southern Sector)
- Volunteer Fire Companies (Northern Sector and Southern Sectors)

Washington Township

- Bally Borough/Washington Township/Bechtelsville Borough (BWB) Representatives
- Bally Community Ambulance Company
- Eastern Berks Fire Department
- Radio Amateur Civil Emergency Services (RACES)
- Washington Township Board of Supervisors
- Washington Township Public Works Department

Chester County

- Amateur Radio Emergency Services (ARES)
- American Red Cross
- Charlestown Elementary School
- Chester County Department of Emergency Services
- Chester County Fire Services
- Chester County Health and Human Services
- Chester County Sherriff Office
- Downingtown Area School District
- Great Valley School District
- Owen J. Roberts Middle School
- Owen J. Roberts School District
- Pennsylvania Emergency Management Agency
- Phoenixville Area School District
- Phoenixville Middle School
- Pickering Valley Elementary School
- Radio Amateur Civil Emergency Services (RACES)

East Nantmeal Township

- Chester County Amateur Radio Emergency Services (ARES)
- East Nantmeal Township Board of Supervisors
- East Nantmeal Township Communication Officer
- East Nantmeal Township Emergency Management

- East Nantmeal Township Fire Services
- East Nantmeal Township Public Health
- East Nantmeal Township Public Safety
- East Nantmeal Township Public Works
- East Nantmeal Township Transportation

North Coventry Township

- Chester County HAZMAT
- North Coventry Police Department
- North Coventry Safety and Security
- North Coventry Township Board of Supervisors
- North Coventry Township Department of Public Works
- North Coventry Township Emergency Management
- North Coventry Township Public Health and Medical Services
- North Coventry Township Transportation
- North Coventry Township; NORCO Fire/Rescue Company
- Radio Amateur Civil Emergency Services (RACES)

Phoenixville Borough

- Amateur Radio Emergency Services (ARES)
- Phoenixville Borough Administration
- Phoenixville Borough Emergency Management Agency
- Phoenixville Borough Fire Department
- Phoenixville Borough Office of the Mayor
- Phoenixville Borough Police Department
- Phoenixville Borough Public Works Department
- Radio Amateur Civil Emergency Services (RACES)

South Coventry Township

- Chester County Department of Emergency Services/Chester County Amateur Radio
- South Coventry Township

Spring City Borough

- Chester County Emergency Management Division
- Radio Amateur Civil Emergency Services (RACES)
- Spring City Borough Council
- Spring City Borough Police

Upper Uwchlan Township

- Amateur Radio Emergency Services (ARES)
- Chester County Hazmat Team Station 15
- Upper Uwchlan Public Works Department
- Upper Uwchlan Township Administration
- Upper Uwchlan Township Emergency Management Agency
- Upper Uwchlan Township Police Department

Warwick Township

- Chester County Department of Emergency Services
- Radio Amateur Civil Emergency Services (RACES)
- Warwick Township

West Pikeland Township

- West Pikeland Township Department

Montgomery County

- Amateur Radio Emergency Service (ARES)
- Arrowhead Elementary School
- Brooke Elementary School
- EB Barth Elementary School
- Evergreen Elementary School
- Hospital Association of Pennsylvania
- Methacton Area School District
- Montgomery County Animal Rescue Team
- Montgomery County Department of Public Safety
- Montgomery County Office of Public Health
- Oaks Elementary School
- Penn State Agricultural Extension
- Pennsylvania Emergency Management Agency
- Perkiomen Valley Middle School
- Perkiomen Valley School District
- Pottsgrove Middle School
- Pottsgrove School District
- Pottstown Area School District
- Radio Amateur Civil Emergency Service (RACES)
- Ringing Rocks Elementary School
- Rupert Elementary School
- Skippack Elementary School
- Southeastern Pennsylvania Chapter – American Red Cross
- Spring-City Elementary School
- Spring-Ford Area School District
- Upper Dublin Police Department
- Western Center Technical Studies

Collegeville Borough

- Collegeville Borough Emergency Management Agency
- Collegeville Borough Fire Department
- Collegeville Borough Police Department
- Amateur Radio Emergency Services (ARES)/Radio Amateur Civil Emergency Services (RACES)

Douglass Township

- Douglass Township Administration
- Douglass Township Office of Emergency Management
- Douglass Township Police Department
- Douglass Township Public Works
- Gilbertsville Area Community Ambulance Services
- Gilbertsville Fire & Rescue Services
- Montgomery County Amateur Radio Emergency Services (ARES)/Radio Amateur Civil Emergency Services (RACES)

Lower Providence Township

- Lower Providence Township Emergency Medical Services
- Lower Providence Township Fire Marshall/Emergency Management Office
- Lower Providence Township Police Department
- Lower Providence Township Public Works Department
- Lower Providence Township Transportation Department
- Radio Amateur Civil Emergency Services (RACES) (Philmont Mobile Radio Club)

Lower Salford Township

- Harleysville Fire Company/Police Department
- Lower Salford Emergency Operations Center
- Lower Salford Township Police Department
- Lower Salford Township Public Works
- Amateur Radio Emergency Services (ARES)/Radio Amateur Civil Emergency Services (RACES) Radio volunteers

Royersford Borough

- Montgomery County Chapter Radio Amateur Civil Emergency Services (RACES) – A.C.S.
- Montgomery County Hazardous Materials Team
- Royersford Borough Fire Department & Friendship Ambulance
- Royersford Borough Office Emergency Management
- Royersford Borough Police Department
- Royersford Borough Public Works Department

Schwenksville Borough

- Lower Fredrick Fire Company
- Radio Amateur Civil Emergency Services (RACES)
- Schwenksville Borough Council
- Schwenksville Borough Staff

Skippack Township

- Montgomery County Amateur Radio Emergency Services (ARES)/Radio Amateur Civil Emergency Services (RACES)
- Skippack Township Emergency Medical Services

- Skippack Township Fire Company
- Skippack Township Manager
- Skippack Township Public Works

Upper Providence Township

- Upper Providence Parks & Recreation
- Upper Providence Township Public Works
- Upper Providence Township Administration
- Upper Providence Township Police
- Upper Providence Township Fire Department
- Black Rock Fire Department
- Montgomery County Amateur Radio Emergency Service

Upper Salford Township

- Upper Salford Township Emergency Management
- Upper Salford Township Volunteer Fire Company
- Upper Salford Township Public Works
- Montgomery County Amateur Radio Emergency Service/Radio Amateur Civil Emergency Service

West Pottsgrove Township

- Amateur Radio Emergency Services (ARES)/Radio Amateur Civil Emergency Services (RACES) Unit
- West Pottsgrove Township Board of Commissioners
- West Pottsgrove Township Communications
- West Pottsgrove Township Oil/HazMat (Radiological)
- West Pottsgrove Township Public Health and Medical Services
- West Pottsgrove Township Public Works and Engineering
- West Pottsgrove Township Emergency Management
- West Pottsgrove Township Fire Department
- West Pottsgrove Township Police Department
- West Pottsgrove Township Transportation

Support Jurisdictions

Bucks County

- Bucks County Fire Department
- Bucks County General Services
- Bucks County Health Department
- Bucks County Human Services Department
- Bucks County Public Information
- Bucks County Sherriff
- Pennsylvania Department of Transportation
- Pennsylvania Emergency Management Agency

Lehigh County

- Allentown Emergency Management Agency
- Allentown Fire Department
- Allentown Police Department
- American Red Cross
- Lehigh County 911 Communication Center
- Lehigh County Emergency Management Agency
- Lehigh County Public Health Department
- Lehigh County Sheriff's Department
- Lower Macungie Emergency Management
- Pennsylvania Emergency Management Agency
- Saint Luke's Hospital
- Upper Saucon Township Emergency Management
- Upper Saucon Township Police Department
- Washington Township Emergency Management

Private Organizations

- Exelon

Federal Organizations

- Federal Emergency management Agency
- Nuclear Regulatory Commission (NRC)
- Environmental Protection Agency (EPA)
- American Red Cross Tri-County Chapter
- American Red Cross Lehigh Valley-Bucks Chapter
- American Red Cross Southeastern Pennsylvania Chapter

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 Generating Station accident in March 1979.

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

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 based on observation and evaluation of exercises 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 December 7, 2015 (Federal Register, Vol. 81, No. 57, March 24, 2016); 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
- U.S. Food and Drug Administration

Representatives of these agencies serve on the Region III Regional Assistance Committee (RAC), which is Chaired by FEMA. A REP Plume Exposure Pathway Exercise was conducted during the week of November 18, 2019 to assess the capabilities of State and local emergency preparedness organizations in implementing their RERPs and procedures to protect the public health and safety of the public during a radiological emergency involving the 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 evaluation team, with final determinations made by the FEMA Region III RAC Chairperson and approved by FEMA Headquarters.

These reports are provided to the NRC and participating States. State and local governments utilize the findings contained in these reports for the purposes of planning, training, and improving emergency response capabilities.

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

- NUREG-0654/FEMA-REP-1, Rev. 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980
- Radiological Emergency Preparedness Program Manual, January 2016

Emergency Planning Zone Description:
Limerick Generating Station (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. 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 traverse the site about 500 feet from the plant.

2.2 Exercise Objectives, Capabilities and Activities

The objectives of the 2019 Limerick Generating Station (LGS) Plume Exercise were to demonstrate the capabilities of State and local emergency management agencies to mobilize emergency management and emergency response personnel, to activate emergency operations centers and support facilities, and to protect the health, lives, and property of the citizens residing within the 10-mile Emergency Planning Zone (EPZ).

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

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

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

2.3 Scenario Summary

Initial meteorological conditions were overcast, wind speed at 7-8 mph with wind direction from 250 degrees. Unit 1 and 2 were operating 100% power.

At 1625, operators at the Limerick Generating Station (LGS) detect that a seismic event has occurred and declares a Notice of Unusual Event (NOUE) and makes notification to off-site response organizations.

At 1700, operators at LGS declare an ALERT due to potential plant system degradation and notifies off-site response organizations. Off-site response organizations follow plans and procedures and mobilize staff.

At 1821, the operators at LGS declare a Site Area Emergency (SAE) due to plant conditions and makes appropriate notifications. There is no radiological release and no protective action recommendations made by the Licensee. State and local governments are expected to follow plans and procedures and implement protective/precautionary actions as necessary.

At 1915, operators at LGS are successful at mitigating the accident and the reactor is in a safe condition. No radiological release had occurred, and no protective action recommendations made by the Licensee.

At approximately 1930 the exercise will terminate.

SECTION 3: ANALYSIS OF CAPABILITIES

3.1 Exercise Evaluation and Results

Contained in this section are the results and findings of the evaluations of all jurisdictions and locations that participated in the November 19, 2019, Biennial Plume Exposure Pathway EPZ Radiological Emergency Preparedness (REP) Exercise. The exercise was conducted to demonstrate the ability of the Offsite Response Organizations of State and local government to protect the health and safety of the public in the 10-mile Emergency Planning Zone surrounding the Limerick Generating Station.

Each jurisdiction and functional entity were evaluated based on 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 can be found in the Exercise Plan.

3.2 Summary Results of Exercise Evaluation

The matrix presented in Table 3.1, on the following pages, presents the status of the exercise evaluation area criteria from the REP Program Manual that was 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 using the following letters:

- (D) Demonstrated Strength: an observed action, behavior, procedure, and/or practice that is worthy of special notice and positive recognition, note: this is already a common practice that many Regions employ when identifying demonstrated strengths.
- (L1) Level 1 Finding: an observed or identified inadequacy or organizational performance in an exercise that could cause a determination that offsite emergency preparedness is not adequate to provide reasonable assurance that appropriate protective measures can be taken in event of a radiological emergency to protect the health and safety of the public living near a nuclear power plant (NPP).
- (L2) Level 2 Finding: an observed or identified inadequacy of organizational performance in an exercise that is not considered, by itself, to adversely impact public health and safety.
- (P) Plan Issue: an observed or identified inadequacy in the offsite response organizations' (OROs) emergency plan/implementation procedures, rather than that of the ORO's performance.
- (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 eight-year interval required in the FEMA REP Program Manual.
- (M) Met: The jurisdiction or functional entity performed all activities under the Demonstration Criterion to the level required in the Extent-of-Play Agreement, with no Level 1 or Level 2 Findings assessed under that criterion in the current exercise and no unresolved prior Level 2 Findings.

DATE: 11/19/2019 SITE: Limerick Generating Station - PA M: Met, L1: Level 1 Issue, L2: Level 2 Issue, P: Plan Issue, N: Not Demonstrated	Mobilization	Facilities	Direction and Control	Communications Equipment	Equipment and Supplies to Support Operations
Emergency Operations Management	1a1	1b1	1c1	1d1	1e1
Douglass Township TACP (Montgomery County)				M	M
Douglass Township EOC (Montgomery County)	M	M	M	M	M
North Coventry Township Back-up Route Alerting Team 2	M			M	M
Douglass Township Back-Up Route Alerting Team 2 (Montgomery County)	M			M	M
Bucks County Reception Center Souderton Fire Company				M	M
Chester County Reception Center Stetson Middle School				M	
Emmaus High School (Lehigh County Reception Center)				M	M
Montgomery Mall (Montgomery County Reception Center)			M	M	M
Lehigh County EOC	M	M	M	M	M
Bucks County EOC	M	M	M	M	M
West Pottsgrove Township TACP				M	M
West Pottsgrove Township EOC	M	M	M	M	M
Upper Salford Township EOC	M	M	M	M	M
Upper Providence Township TACP				M	M
Upper Providence Township EOC	M	M	M	M	M
Skippack Township EOC	L1	M	L1	M	M
Schwenksville Borough EOC	M	M	M	M	M
Accident Assessment (BRP)	M		M	M	M
Amity Township EOC	M	M	M	M	M
Amity Township TCP/ACP				M	M
Berks County EOC	M	M	M	M	M
BRP Radiation Rapid Response Vehicle (R3V)	M			M	M
Chester County EOC	M	M		M	M
Collegeville Borough EOC	M	M	M	M	M
Collegeville Borough TACP				M	M
Commonwealth Response Coordination Center (CRCC)	M		M	M	M
Douglass Township Back-up Route Alerting Team 1 (Montgomery County)	M			M	M
Douglass Township EOC (Berks County)	M	M	M	M	M
Douglass Township TACP (Berks County)				M	M
East Nantmeal Township EOC	M	M	M	M	M
Emmaus High School (Lehigh County Mon/Decon)				M	M
Exelon Emergency Operations Facility (EOF)				M	M
Emmaus High School (Mass Care)			M	M	M
Exeter Township Building Berks County (Reception Center)			M	M	M
Joint Public Information Center/Rumor Control (CRCC)	M			M	
Lower Salford Township EOC	M	M	M	M	M
Lower Salford Township TACP				M	M
Lower Providence Township EOC	M	M	M	M	M
Lower Providence Township TACP				M	M
Methacton High School (EW Mon/Decon)			M	M	M
Montgomery County EOC	M	M	M	M	M

Montgomery Mall (Montgomery County Mon/Decon)				M	M
North Coventry Back-up Route Alerting Team 1	M			M	M
North Coventry Township EOC	M	M	M	M	M
North Coventry TACP				M	M
Oley Valley High School Berks County EW Mon/Decon			M	M	M
Phoenixville Borough EOC	M	M	M	M	M
Phoenixville Borough TACP				M	M
PSP/TACP	M			M	M
Royersford Borough EOC	M	M	M	M	M
Royersford Borough TACP				M	M
Spring City Borough EOC	M	M	M	M	M
Spring City Borough TACP				M	M
South Coventry Township EOC	M	M	M	M	M
State Field Monitoring Team Alpha	M			M	M
State Field Monitoring Team Bravo	M			M	M
Souderton Fire Company (Bucks County Mon/Decon)			M	M	M
Stetson Middle School (Chester County Mon/Decon)			M	M	M
Upper Uwchlan Township EOC	M	M	M	M	M
Upper Uwchlan TACP				M	M
Valley Forge (Chester County EW Mon/Decon)			M	M	M
Warwick Township EOC	M	M	M	M	M
Washington Township Back-up Route Alerting	M			M	M
Washington Township EOC	M	M	M	M	M
West Pikeland Township EOC	M	M	M	M	M
West Pikeland Township TACP				M	M
Wilson Senior High School (Mass Care)			M	M	M
Wilson Senior High School Berks County Mon/Decon				M	M

DATE: 11/19/2019
SITE: Limerick Generating Station - PA

M: Met, L1: Level 1 Issue, L2: Level 2 Issue, P: Plan Issue, N: Not Demonstrated

Protective Action Decision-Making	Emergency Worker Exposure Control 2a1	Dose Assessment & PARs & PADs for the Emergency Event 2b1	2b2	PADs for the Protection of persons with disabilities and access/functional needs 2c1	Radiological Assessment and Decision-making for the Ingestion Exposure Pathway 2d1	Radiological Assessment & Decision-making Concerning Post-Plume Phase Relocation, Reentry, and Return 2e1
Accident Assessment (BRP)	M	M	M			
Berks County EOC				M		
Commonwealth Response Coordination Center (CRCC)	M			M		
Montgomery County EOC				M		

DATE: 11/19/2019 SITE: Limerick Generating Station - PA M: Met, L1: Level 1 Issue, L2: Level 2 Issue, P: Plan Issue, N: Not Demonstrated	Implementation of Emergency Worker Exposure Control	Implementation of KI Decision for Institutionalized Individuals and the Public	Implementation of Protective Actions for persons with disabilities and access/functional needs		Implementation of Traffic and Access Control		Implementation of Ingestion Exposure Pathway Decisions		Implementation of Post-Plume Phase Relocation, Reentry, and Return Decisions
Protective Action Implementation	3a1	3b1	3c1	3c2	3d1	3d2	3e1	3e2	3f1
Charlestown Elementary School				M					
Great Valley School District				M					
Douglass Township TACP (Montgomery County)	M				M				
Douglass Township EOC (Montgomery County)	M	M	M		M				
North Coventry Township Back-up Route Alerting Team	M								
Douglass Township Back-Up Route Alerting Team 2	M								
Souderton Fire Company (Bucks County Reception Ctr)	M								
Emmaus High School (Lehigh County Reception Center)	M								
Montgomery Mall (Montgomery County Reception Ctr)	M								
Western Technical Studies School				M					
Spring-City Elementary School				M					
Oaks Elementary School				M					
Brooke Elementary School				M					
Rupert Elementary School				M					
EB Barth Elementary School				M					
Pottstown Area School District				M					
Ringing Rock Elementary School				M					
Pottsgrove Middle School				M					
Pottsgrove School District				M					
Skippack Elementary School				M					
Perkiomen Valley Middle School				M					
Evergreen Elementary School				M					
Perkiomen Valley School District				M					
Arrowhead Elementary School				M					
Methacton Area School District				M					
Phoenixville Middle School				M					
Phoenixville Area School District				M					
Owen J. Roberts Middle School				M					
Owen J. Roberts School District				M					
Pickering Valley Elementary School				M					
Downingtown Area School District				M					
Daniel Boone Intermediate Center				M					
Daniel Boone Area School District				M					
Colebrookdale Elementary School				M					
Boyertown Area School District				M					
West Pottsgrove Township TACP	M				M				
West Pottsgrove Township EOC	M	M	M		M				
Upper Salford Township EOC	M	M	M		M				
Upper Providence Township TACP	M				M				
Upper Providence Township EOC	M	M	M		P	M			

Skippack Township EOC	L1	M	L1		L1				
Schwenksville Borough EOC	M	M	M		M				
Amity Township EOC	L2	M	M		M				
Amity Township TCP/ACP	M				M				
Berks County EOC	M	M	M		M	M			
BRP Radiation Rapid Response Vehicle (R3V)	M								
Chester County EOC	M	M	M			M			
Collegeville Borough EOC	M	M	M		M				
Collegeville Borough TACP	M				M				
Commonwealth Response Coordination Center (CRCC)		M							
Douglass Township Back-up Route Alerting Team 1	M								
Douglass Township EOC (Berks County)	M	M	M		M				
Douglass Township TACP (Berks County)	M				M				
East Nantmeal Township EOC	M	M	M		M				
Emmaus High School (Lehigh County Mon/Decon)	M								
Exeter Township Building Berks County (Reception Ctr)	M								
Lower Salford Township EOC	M	M	M		M				
Lower Salford Township TACP	M				M				
Lower Providence Township EOC	M	M	M		M				
Lower Providence Township TACP	M				M				
Methacton High School (EW Mon/Decon)	M								
Montgomery County EOC	M	M	M		M	M			
Montgomery Mall (Montgomery County Mon/Decon)	M								
North Coventry Back-up Route Alerting Team 1	M								
North Coventry Township EOC	M	M	M		M				
North Coventry TACP	M				M				
Oley Valley High School Berks County EW Mon/Decon	M								
Phoenixville Borough EOC	M	M	M		M	M			
Phoenixville Borough TACP	M				M				
PSP/TACP	M				M				
Royersford Borough EOC	M	M	M		M				
Royersford Borough TACP	M				M				
Spring City Borough EOC	M	M	M		M				
Spring City Borough TACP	M				M				
South Coventry Township EOC	M	M	M		M				
State Field Monitoring Team Alpha	M								
State Field Monitoring Team Bravo	M								
Souderton Fire Company (Bucks County Mon/Decon)	M								
Upper Uwchlan Township EOC	M	M	M		M				
Upper Uwchlan TACP	M				M				
Warwick Township EOC	M	M	M		M				
Washington Township Back-up Route Alerting	M								
Washington Township EOC	M	M	M		M				
West Pikeland Township EOC	M	M	M		M				
West Pikeland Township TACP	M				M				
Wilson Senior High School Berks County Mon/Decon	M								

DATE: 11/19/2019 SITE: Limerick Generating Station - PA M: Met, L1: Level 1 Issue, L2: Level 2 Issue, P: Plan Issue, N: Not Demonstrated	Plume Phase Field Measurement and Analyses			Post Plume Phase Field Measurements and Sampling	Laboratory Operations
Field Measurements and Analyses	4a1	4a2	4a3	4b1	4c1
BRP Radiation Rapid Response Vehicle (R3V)		M			
State Field Monitoring Team Alpha			M		
State Field Monitoring Team Bravo			M		

DATE: 11/19/2019 SITE: Limerick Generating Station - PA M: Met, L1: Level 1 Issue, L2: Level 2 Issue, P: Plan Issue, N: Not Demonstrated	Activation of the Prompt Alert and Notification System				Emergency Information and Instructions for the Public and the Media
Emergency Notification and Public Information	5a1	5a2	5a3	5a4	5b1
Douglass Township EOC (Montgomery County)			M		
North Coventry Township Back-up Route Alerting Team 2			M		
Douglass Township Back-Up Route Alerting Team 2 (Montgomery County)			M		
Lehigh County EOC					M
Bucks County EOC					M
Berks County EOC	M		M		M
Chester County EOC			M		
Commonwealth Response Coordination Center (CRCC)	M				
Douglass Township Back-up Route Alerting Team 1 (Montgomery County)			M		
Exelon Emergency Operations Facility (EOF)					M
Joint Public Information Center/Rumor Control (CRCC)					M
Montgomery County EOC	M		M		P
North Coventry Back-up Route Alerting Team 1			M		
North Coventry Township EOC			M		
Washington Township Back-up Route Alerting			M		
Washington Township EOC			M		

DATE: 11/19/2019 SITE: Limerick Generating Station - PA M: Met, L1: Level 1 Issue, L2: Level 2 Issue, P: Plan Issue, N: Not Demonstrated	Monitoring, Decontamination, and Registration of Evacuees	Monitoring and Decontamination of Emergency Workers and their Equipment and Vehicles	Temporary Care of Evacuees	Transportation and Treatment of Contaminated Injured Individuals
Emergency Notification and Public Information	6a1	6b1	6c1	6d1

Souderton Fire Company (Bucks County Reception Center)	M			
Emmaus High School (Lehigh County Reception Center)	M			
Montgomery Mall (Montgomery County Reception Center)	M			
Bensalem High School			M	
Brandywine Heights High School			M	
Cecelia Snyder Middle School			M	
Cedarbrook Middle School			M	
Emmaus High School (Lehigh County Mon/Decon)	M			
Emmaus High School (Mass Care)			M	
Exeter Township Building Berks County (Reception Center)	M			
Hamburg Area High School			M	
Methacton High School (EW Mon/Decon)		M		
Montgomery Mall (Montgomery County Mon/Decon)	M			
Neshaminy Senior High School			M	
Oley Valley High School Berks County EW Mon/Decon		M		
Robert Shafer Middle School			M	
Souderton Fire Company (Bucks County Mon/Decon)	M			
Tulpehocken Junior - Senior High School			M	
William Penn Middle School			M	
Wilson Senior High School (Mass Care)			M	
Wilson Senior High School Berks County Mon/Decon	M			

3.3 Criteria Evaluation Summaries

3.3.1 State Jurisdictions

In summary, the status of DHS/FEMA criteria for the State jurisdictions are as follows:

3.3.1.1 PA State Field Monitoring Team A

a. Met: 1.a.1, 1.d.1, 1.e.1, 3.a.1, 4.a.3
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.1.2 PA State Field Monitoring Team B

a. Met: 1.a.1, 1.d.1, 1.e.1, 3.a.1, 4.a.3
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.1.3 PA State Traffic and Access Control Points, State Police Reading Barracks

a. Met: 1.a.1, 1.d.1, 1.e.1, 3.a.1, 3.d.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.1.4 Pennsylvania Accident Assessment Center, State EOC-Bureau of Radiation Protection

Criteria Not Demonstrated Observed only

a. Met: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.1, 2.b.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.1.5 Pennsylvania Bureau of Radiation Protection, Radiological Rapid Response Vehicle

a. Met: 1.a.1, 1.d.1, 1.e.1, 3.a.1, 4.a.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.1.6 Pennsylvania Commonwealth Response Coordination Center Criteria Not Demonstrated Observed only

a. Met: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.c.1, 3.b.1, 5.a.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.1.7 Pennsylvania Joint Information Center/Rumor Control Criteria Not Demonstrated Observed Only

a. Met: 1.a.1, 1.d.1, 5.b.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.1.8 Exelon Emergency Operations Facility (EOF)/Joint Information Center

a. Met: 1.d.1, 1.e.1, 5.b.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2 Risk Jurisdictions

In summary, the status of DHS/FEMA criteria for the Risk jurisdictions are as follows:

3.3.2.1 Berks County Reception Centers, Exeter Township Building

a. Met: 1.c.1, 1.d.1, 1.e.1, 3.a.1, 6.a.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.2 Berks County Emergency Worker Monitoring/Decontamination Station, Oley Valley High School

a. MET: 1.c.1, 1.d.1, 1.e.1, 3.a.1, 6.b.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.3 Berks County Evacuee Monitoring/Decontamination Station Wilson Senior High School

a. Met: 1.d.1, 1.e.1, 3.a.1, 6.a.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.4 Berks County Mass Care Center, Wilson Senior High School

a. Met: 1.c.1, 1.d.1, 1.e.1, 6.c.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.5 Berks County Boyertown Area School District

a. Met: 3.c.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.6 Berks County Boyertown Area School District, Colebrookdale Elementary School

a. Met: 3.c.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.7 Berks County Daniel Boone Area School District

a. Met: 3.c.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.8 Berks County Daniel Boone Area School District, Daniel Boone Intermediate Center

a. Met: 3.c.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE

d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.9 Berks County Emergency Operations Center

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.d.1, 3.d.2, 5.a.1, 5.a.3, 5.b.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.10 Berks County Amity Township Emergency Operations Center

a. Met: 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 3.b.1, 3.c.1, 3.d.1
b. Level 1 Findings: NONE
c. Level 2 Findings: ONE

LOCATION: Amity Township Emergency Operations Center

ISSUE FOR CRITERION: 35-19-3a1-L2-001

CONDITION (describe the inadequacy): During the Amity Township Emergency Operations Center (EOC) emergency worker radiological equipment briefing the Radiological Officer (RO) explained the use of a "dosimetry kit" for monitoring the radiation exposure of personnel working inside the EOC. The RO did not describe or issue individual Permanent Record Dosimeters, KI or Dosimetry-KI Report Forms to each individual as required for a Category "B" emergency worker.

POSSIBLE CAUSE (what is responsible): The RO used an outdated "Area Kit Instructions" form dated 10/09/2009 rather than the current (2019) Amity Township Radiological Emergency Response Plan. The outdated form incorrectly described requirements for issuance of permanent record dosimetry and KI for individuals working in an EOC and are classified as category "B" workers.

REFERENCE (cite the specific NUREG-0654 element, regulation, etc.): Area Kit Instructions packet, dated 10/09/09
Radiological Officer (RO) Briefing Checklist, no date
Radiological Emergency Response Plan for Amity Township, August 2019
NUREG 0654 /FEMA-REP-1, K.3.a

EFFECT (what resulted, or could have resulted, from this issue): Individuals working in an EOC would not have had their individual permanent record dosimetry or individual records for the radiation exposure received during a response to an incident at Limerick Generating Station.

RECOMMENDATION/RE-DEMONSTRATION (how to correct it): The exercise demonstration was stopped and the RO provided an opportunity to review current procedures and consult with the Radiological Officer at the Berks County EOC. After procedure review and consultation, the Amity RO conducted an updated radiological briefing for personnel in the Amity EOC. During the re-demonstrations, the RO correctly described how each person would be issued a permanent record dosimeter, potassium iodide, and a Dosimetry-KI Report Form to track their radiological exposure. The RO would read the two EOC area direct reading dosimeters on a 30-minute frequency and update the EOC staff if any radiation exposure was accrued.

d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.11 Berks County Amity Township Traffic and Access Control

a. Met: 1.d.1, 1.e.1, 3.a.1, 3.d.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.12 Berks County Douglass Township Emergency Operations Center

a. Met: 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.1, 3.d.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2. 13 Berks County Douglass Township Traffic and Access Control

a. Met: 1.d.1, 1.e.1, 3.a.1, 3.d.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.14 Berks County Washington Township Emergency Operations Center

a. Met: 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.1, 3.d.1, 5.a.3
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.15 Berks County Washington Township Back up Route Alerting

a. Met: 1.a.1, 1.d.1, 1.e.1, 3.a.1, 5.a.3
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.16 Chester County Reception Center, Stetson Middle School

a. Met: 1.c.1, 1.d.1, 1.e.1, 3.a.1, 6.a.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.17 Chester County Emergency Worker Monitoring and Decontamination Center, Valley Forge Intermediate School

a. Met: 1.c.1, 1.d.1, 1.e.1, 3.a.1, 6.b.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.18 Chester County Evacuee Monitoring and Decontamination Center, Stetson Middle School

a. Met: 1.c.1, 1.d.1, 1.e.1, 3.a.1, 6.a.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.19 Chester County Downingtown Area School District

a. Met: 3.c.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.20 Chester County Downingtown Area School District, Pickering Valley Elementary School

a. Met: 3.c.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE

e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.21 Chester County Owen J. Roberts School District

a. Met: 3.c.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.22 Chester County Owen J. Roberts School District, Owen J. Roberts Middle School

a. Met: 3.c.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.23 Chester County Great Valley School District

a. Met: 3.c.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.24 Chester County Great Valley School District, Charlestown Elementary School

a. Met: 3.c.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.25 Chester County Phoenixville Area School District

a. Met: 3.c.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2 26 Chester County Phoenixville Area School District, Phoenixville Middle School

a. Met: 3.c.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.27 Chester County Emergency Operations Center

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.d.1, 3.d.2, 5.a.1, 5.a.3, 5.b.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.28 Chester County East Nantmeal Township Emergency Operations Center

a. Met: 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.1, 3.d.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.29 Chester County North Coventry Township Emergency Operations Center

a. Met: 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.1, 3.d.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.30 Chester County North Coventry Township Traffic and Access Control

a. Met: 1.d.1, 1.e.1, 3.a.1, 3.d.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.31 Chester County North Coventry Township, Back up Route Alerting (1)

a. Met: 1.a.1, 1.d.1, 1.e.1, 3.a.1, 5.a.3
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.32 Chester County North Coventry Township, Back up Route Alerting (2)

a. Met: 1.a.1, 1.d.1, 1.e.1, 3.a.1, 5.a.3
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.33 Chester County Phoenixville Borough, Emergency Operations Center

a. Met: 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.1, 3.d.1, 3.d.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.34 Chester County Phoenixville Borough, Traffic and Access Control

a. Met: 1.d.1, 1.e.1, 3.a.1, 3.d.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.35 Chester County South Coventry Township, Emergency Operations Center

a. Met: 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.1, 3.d.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.36 Chester County Spring City Borough, Emergency Operations Center

a. Met: 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.1, 3.d.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.37 Chester County Spring City Borough, Traffic and Access Control

a. Met: 1.d.1, 1.e.1, 3.a.1, 3.d.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE

f. Prior Issues - Unresolved: NONE

3.3.2.38 Chester County Upper Uwchlan Township, Emergency Operations Center-Demonstrated at UUT Public Works Building

a. Met: 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.1, 3.d.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.39 Chester County, Upper Uwchlan Township Traffic and Access Control-Demonstrated at UUT Public Works Building

a. Met: 1.d.1, 1.e.1, 3.a.1, 3.d.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.40 Chester County Warwick Township Emergency Operations Center

a. Met: 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.1, 3.d.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.41 Chester County West Pikeland Emergency Operations Center

a. Met: 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.1, 3.d.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.42 Chester County West Pikeland Township Traffic and Access Control

a. Met: 1.d.1, 1.e.1, 3.a.1, 3.d.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.43 Montgomery County Reception Centers, Montgomery Mall-Demonstrated at Fire Department of Montegomery County

a. Met: 1.c.1, 1.d.1, 1.e.1, 3.a.1, 6.a.1

b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.44 Montgomery County Emergency Worker Monitoring/Decontamination Center, Methacton High School-Demonstrated at Worcester Fire Company

a. Met: 1.c.1, 1.d.1, 1.e.1, 3.a.1, 6.b.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.45 Montgomery County Evacuee Monitoring/Decontamination Center, Montgomery Mall-Demonstrated at Fire Department of Montegomery County

a. Met: 1.c.1, 1.d.1, 1.e.1, 3.a.1, 6.a.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.46 Montgomery County Methacton School District

a. Met: 3.c.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.47 Montgomery County Methacton School District, Arrowhead Elementary School

a. Met: 3.c.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.48 Montgomery County Perkiomen School District

a. Met: 3.c.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE

f. Prior Issues - Unresolved: NONE

3.3.2.49 Montgomery County Perkiomen School District, Evergreen Elementary School

a. Met: 3.c.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.50 Montgomery County Perkiomen School District, Perkiomen Valley Middle School

a. Met: 3.c.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.51 Montgomery County Perkiomen School District, Skippack Elementary School

a. Met: 3.c.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.52 Montgomery County Pottsgrove School District

a. Met: 3.c.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.53 Montgomery County Pottsgrove School District, Pottsgrove Middle School

a. Met: 3.c.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.54 Montgomery County Pottsgrove School District, Ringing Rocks Elementary School

a. Met: 3.c.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.55 Montgomery County Pottstown School District

a. Met: 3.c.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.56 Montgomery County Pottstown Area School District, EB Barth Elementary School

a. Met: 3.c.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.57 Montgomery County Pottstown Area School District, Rupert Elementary School

a. Met: 3.c.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.58 Montgomery County Spring-Ford Area School District

a. Met: 3.c.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.59 Montgomery County Spring-Ford Area School District, Brooke Elementary School

a. Met: 3.c.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE

e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.60 Montgomery County Spring-Ford Area School District, Oaks Elementary School

a. Met: 3.c.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.61 Montgomery County Spring-Ford Area School District, Spring-City Elementary School

a. Met: 3.c.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.62 Montgomery County Western Center Technical Studies

a. Met: 3.c.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.63 Montgomery County Emergency Operations Center

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.d.1, 3.d.2, 5.a.1, 5.a.3
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: ONE

LOCATION: Montgomery County Emergency Operations Center

ISSUE FOR CRITERION: 35-19-5b1-P-002

CONDITION (describe the inadequacy): The Public Inquiry staff did not log calls or report identified trends to the Public Information Officer (PIO)

POSSIBLE CAUSE (what is responsible): The Montgomery County Radiological Emergency Response Plan (RERP) does not include a section for Public Inquiry team and PIO coordination of addressing trends to the public.

REFERENCE (cite the specific NUREG-0654 element, regulation, etc.): NUREG-0654/FEMA-REP-1, E.5, 7; G.3.a, G.4.a, c
Montgomery County RERP Section 4

EFFECT (what resulted, or could have resulted, from this issue): Rumors and/or false information would continue to circulate amongst the public

RECOMMENDATION (how to correct it): Add a section to RERP Section 4 that more directly lists individual steps, responsibilities, and processes for the PIO and Public Inquiry.

e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.64 Montgomery County Collegeville Borough, Emergency Operations Center

a. Met: 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.65 Montgomery County Collegeville Borough, Traffic and Access Control

a. Met: 1.d.1, 1.e.1, 3.a.1, 3.d.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.66 Montgomery County Douglass Township, Emergency Operations Center

a. Met: 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.67 Montgomery County Douglass Township, Traffic and Access Control

a. Met: 1.d.1, 1.e.1, 3.a.1, 3.d.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.68 Montgomery County Douglass Township, Back Up Route Alerting (1)

a. Met: 1.d.1, 1.e.1, 3.a.1, 5.a.3

b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.69 Montgomery County Douglass Township, Back Up Route Alerting (2)

a. Met: 1.d.1, 1.e.1, 3.a.1, 5.a.3
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.70 Montgomery County Lower Providence Township Emergency Operations Center

a. Met: 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.1, 3.d.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.71 Montgomery County Lower Providence Township Traffic and Access Control Point

a. Met: 1.d.1, 1.e.1, 3.a.1, 3.d.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.72 Montgomery County Lower Salford Township Emergency Operations Center

a. Met: 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.1, 3.d.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.73 Montgomery County Lower Salford Township Traffic and Access Control

a. Met: 1.d.1, 1.e.1, 3.a.1, 3.d.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE

f. Prior Issues - Unresolved: NONE

3.3.2.74 Montgomery County Royersford Borough Emergency Operations Center

a. Met: 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.1, 3.d.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.75 Montgomery County Royersford Borough Traffic and Access Control

a. Met: 1.d.1, 1.e.1, 3.a.1, 3.d.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.76 Montgomery County Schwenksville Borough Emergency Operations Center

a. Met: 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.1, 3.d.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.77 Montgomery County Skippack Township Emergency Operations Center

a. Met: 1.b.1, 1.d.1, 1.e.1, 3.b.1
ddddddd. Level 1 Findings: ONE

LOCATION: Montgomery County Emergency Operations Center

ISSUE FOR CRITERION: 35-19-1c1-L1-004

CONDITION (describe the inadequacy): The Emergency Management Coordinator (EMC) failed to provide adequate direction and control in order to accomplish all required tasks within the Skippack Township EOC. Specifically, the following tasks, collectively, can be attributed to the overall Level 1 Finding.

1.a.1 Mobilization
There was no 24-hour roster available to review and there were no pre-designated staff to respond or replace an existing staff member.

3.a.1 Implementation of Emergency Worker Exposure Control
The Oil and Hazardous Material representative in the EOC did not perform all required functions for exposure control. There was no area dosimetry kit assembled and placed in the EOC to track radiation dose. The EOC staff was

not provided the required Category B dosimetry kits and no dose tracking forms were completed. The radiological briefing was conducted only after urging through the controller and county EOC.

3.c.1 Implementation of Precautionary and/or Protective Actions for Persons with Disabilities and Access/Functional Needs

The Public Health and EMS, Transportation and Oil and Hazardous Material representatives in the EOC did not perform all required functions to provide notification or meet transportation needs for persons with disabilities and access/functional needs. Transportation needs were discussed for the persons identified and means of transporting those persons were mentioned. However, no calls or simulated calls were made to providers as required. The Public Health and EMS officer was to review the township's list for individuals with hearing-impairments and to coordinate with the Oil and Hazardous Materials representative on actual notification of the emergency to the hearing-impaired. During the exercise, the EMC advised the RO and Firefighting Officer that door-to-door notification would need accomplished for the hearing-impaired. Staff acknowledged that it could be done, but the actual coordination between the Oil and Hazardous Material staff and Public Health and EMS Officer was not demonstrated. When the township received notification that sirens were to be sounded, no preparations or activation of personnel was made or simulated to notify the hearing-impaired.

3.d.1 Implementation of Traffic and Access Control

Staffing of the Traffic Control Points (TCPs) under the authority of Skippack Township was not clear. Activation of the TCPs was not conducted during the exercise. The Emergency Management Coordinator stated that the Township does not have a Police Department and that staffing of the TCPs in Skippack Township would be performed by Pennsylvania State Police (PSP). The Township Plan states that one of the four TCPs would be staffed by PSP and the remaining three by "Fire Police". The Skippack EOC made no effort to coordinate or communicate with any other agency to make sure the TCPs would be staffed.

POSSIBLE CAUSE (what is responsible): The Emergency Management Coordinator did not provide adequate supervision and conduct no staff briefings. The EMC did not ensure that several tasks were completed during the drill. For example, no area dosimetry kit was placed in the EOC, TCP staffing was never finalized (state police or local fire provide staff), TCP activation was never discussed, specific transportation providers for persons requiring assistance was never finalized, staff were never issued personal dosimetry kits, and the EMC had to be urged to have a radiological briefing conducted. There appeared to be a lack of understanding on who is responsible for activating and staffing TCPs. The local plan gives the responsibility to the Public Safety and Security representative in the EOC to make sure the TCPs are activated. The person filing that role did not appear to follow checklists. Also, the Public Safety and Security Checklist is not clear when the TCPs should be activated.

The Oil and Hazardous Material representative served as the Radiological Officer (RO) during the exercise. The RO failed to follow the checklist provided. It appeared the RO had not participated in a drill or been trained for the role. The Emergency Management Coordinator did not ensure that these tasks were completed during the drill. Also, the Oil and Hazardous Material and Firefighting checklists do not contain instructions to coordinate on the notification for the hearing-impaired. The Public Health and EMS staff person did not facilitate the coordination for the notification of the hearing-impaired citizens.

REFERENCE (cite the specific NUREG-0654 element, regulation, etc.): NUREG-0654, FEMA REP 1, Rev. 1: (A.1.d; A.2.a, b; A.3; C.4, 6)

REP Program Manual, Assessment Area 1: Emergency Operations Management, Sub-element 1.c – Direction and Control, page 181.

Radiological Emergency Response Plan for Skippack Township, Montgomery County, Pennsylvania, Annex E, Emergency Management Checklist, June 2019, page 60-66.

EFFECT (what resulted, or could have resulted, from this issue): Several important tasks listed above may not have been accomplished in providing notification and emergency preparations.

RECOMMENDATION (how to correct it): Conduct periodic situational awareness updates within the EOC. By periodically holding these updates, each staff member can relay what work they have accomplished, tasks they are currently working on, and actions planned if the emergency progresses. Thus, each staff person is held accountable for the required actions according to the RERP. The EMC also needs to be more assertive and detailed in performing task on the EMC checklist and following through to make sure staff have completed their required functions.

In accordance with Appendix 1 to 44 CFR 350, a Level 1 Finding requires a remedial exercise to be conducted within 120 days of the exercise. In this case, the remedial exercise must be conducted prior to March 19, 2020.

CORRECTED ACTION: On January 14, 2020, during the remedial exercise Skippack Township successfully re-demonstrated the Level 1 Finding. Skippack Township successfully implemented protective actions for persons with disability and / access functional needs, demonstrated adequate direction & control by leadership, implemented appropriate emergency worker exposure control measures, demonstrated adequate mobilization and staffing, and implemented traffic & access control posts in accordance with plans and procedures.

c. Level 2 Findings: NONE
d. Plan Issues: NONE

e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.78 Montgomery County Upper Providence Township Emergency Operations Center

a. Met: 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: ONE

Location: Upper Providence Township Emergency Operations Center

ISSUE FOR CRITERION: 35-19-3d1-P-003

CONDITION (describe the inadequacy): When Limerick Generating Station (LGS) escalated to a Site Area Emergency (SAE), the Upper Providence Township (UPT) Emergency Management Coordinator (EMC) did not begin the process of implanting Traffic and Access Control Points (TACPs)in accordance with plans and procedures.

POSSIBLE CAUSE (what is responsible): The EMC did not follow the checklists listed in the Upper Providence Township Radiological Emergency Response Plan.

REFERENCE:
NUREG-0654/FEMA-REP-1, A.3; C.1,4; J.10.g, j
Upper Providence Township (UPT) Radiological Emergency Response Plans (RERP) dated May 2019, pages 54, 62 - 66

EFFECT (what resulted, or could have resulted, from this issue): Without traffic and access control in place the evacuation of the EPZ could be delayed, thereby placing the public at risk.

RECOMMENDATION (how to correct it): Ensure that leadership and TACP personnel are aware and appropriately trained in TACP responsibilities.

e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.79 Montgomery County Upper Providence Township Traffic and Access Control

a. Met: 1.d.1, 1.e.1, 3.a.1, 3.d.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.80 Montgomery County Upper Salford Township Emergency Operations Center

a. Met: 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.1, 3.d.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.81 Montgomery County West Pottsgrove Township Emergency Operations Center

a. Met: 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.1, 3.d.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.82 Montgomery County West Pottsgrove Township Traffic and Access Control

a. Met: 1.d.1, 1.e.1, 3.a.1, 3.d.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.3 Support Jurisdictions

In summary, the status of DHS/FEMA criteria for the Support Jurisdictions are as follows:

3.3.3.1 Bucks County Emergency Operations Center

a. Met: 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 5.b.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.3.2 Bucks County Reception Centers, County Line Plaza

a. Met: 1.c.1, 1.d.1, 1.e.1, 3.a.1, 6.a.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.3.3 Bucks County Evacuee Monitoring/Decontamination Station, County Line Plaza

a. Met: 1.c.1, 1.d.1, 1.e.1, 3.a.1, 6.a.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.3.4 Lehigh County Emergency Operations Center

a. Met: 1.b.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 6.a.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.3.5 Lehigh County Reception Center, Emmaus High School

a. Met: 1.c.1, 1.d.1, 1.e.1, 6.a.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.3.6 Lehigh County Evacuee Monitoring and Decontamination Center, Emmaus Lehigh High School

a. Met: 1.c.1, 1.d.1, 1.e.1, 6.a.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.3.7 Lehigh County Mass Center, Emmaus High School

a. Met: 1.d.1, 1.e.1, 3.a.1, 6.c.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.4 Private Jurisdictions

In summary, the status of DHS/FEMA criteria for the private jurisdictions are as follows:

3.3.4.1 Exelon Joint Information Center

a. Met: 1.d.1, 1.e.1, 5.b.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE

d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.5 Limerick Generating Station Mass Care Assessment

In summary, the status of DHS/FEMA criteria for the Mass care Assessment are as follows:

3.3.5.1 Berks Count, Tulpenhocken Junior-Senior High School

a. Met: 6.c.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.5.2 Berks County Hamburg Area High School

a. Met: 6.c.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.5.3 Berks County Brandywine Heights High School

a. Met: 6.c.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.5.4 Bucks County William Penn Middle School

a. Met: 6.c.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.5.5 Bucks County Neshaminy Senior High School

a. Met: 6.c.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.5.6 Bucks County Bensalem High School

a. Met: 6.c.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.5.7 Bucks County Cecelia Snyder Middle School

a. Met: 6.c.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.5.8 Bucks County Robert Shafer Middle School

a. Met: 6.c.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.5.9 Montgomery County Cedarbrook Middle School

a. Met: 6.c.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

SECTION 4: DEMONSTRATED STRENGTHS

4.1 Commonwealth of Pennsylvania

4.1.1 Commonwealth Response Coordination Center (CRCC)

The CRCC Command Staff demonstrated a forward-thinking assessment of the incident by notifying the general public through early siren activations at Alert, early identification of potential impacts to special populations and resources needed to protect the public prior to escalation of the event.

4.2 Risk Jurisdictions

4.2.1 Berks County Emergency Operations Center

Radio Amateur Civil Emergency Services (RACES) personnel conducted a test of their capability to send messages digitally to 2 other sites. This is the first time that it has been attempted and communications between all locations was established and operated without incident. This allows for a clearer communication, eliminating possible mistakes in understanding.

4.2.2 Amity Township Emergency Operations Center

The Emergency Management Coordinator (EMC) assigned an individual to monitor the "Knowledge Center" exercise database. The individual assigned to monitor for data entries updated the EMC anytime a significant entry was made; especially noting entries that could impact the township. For example, a real-life road closure in the township would have impacted evacuation of a neighborhood. The EMC was notified of the road closure; the EOC group discussed how they would notify and assist in evacuation of the affected neighborhood.

4.2.3 Douglass Township Emergency Operations Center

Participants took the opportunity for innovative improvements; such as everyone participating in additional training and the Douglass Township Police Chief suggesting creating a detailed map to display Traffic Access Control Points. This map can provide immediate tracking of resources. Great job!

4.2.4 Chester County Emergency Operations Center

The utilization of Geographic Information System (GIS) technology in the Chester County Emergency Operations Center (EOC) proved to be an invaluable tool in support of response and coordination efforts during the Limerick REP Exercise on November 19, 2019. Of particular note was the large monitor / status board in the EOC, which was being beta tested during the Exercise. The status board provided an excellent situational awareness platform that incorporated WebEOC inputs interfaced with ArcGIS mapping technology to produce a real-time representation of county and municipal EOC statuses, disaster declarations, government status, etc. County staff also utilized in-house mapping technology to quickly and effectively assist with re-routing traffic during the traffic impediment scenario inject.

4.2.5 North Coventry Township Emergency Operations Center

Immediately upon issuance of dosimetry, the Radiological Officer properly ensured the delivery of the Control PRDs to the Police Chief for transfer to the County Sheriff

for rapid delivery out of the EPZ. This procedure was noted as a 'Text-Book' proper demonstration.
The Chester County Haz-Mat; Station 15 Liaison was instrumental in assisting the Radiological Officer with completion of paperwork during the RAD briefings.

4.2.6 Montgomery County Emergency Operations Center

Montgomery County Department of Public Safety utilized the exercise as an opportunity to train additional staff members. The EOC Manager, Radiological Officer, Planning Section, Public Information Officer and the Rumor Control Staff were all new to these positions and did extremely well during the exercise.

4.2.7 Upper Salford Township Emergency Operations Center

The Upper Salford Township Emergency Operation Center staff were mostly new volunteers. The Emergency Management Coordinator had the staff swap positions and discuss what their responsibilities had been to give everyone a chance to experience different aspects of Emergency Operations Center responsibilities.

SECTION 5: CONCLUSION

The Commonwealth of Pennsylvania and local jurisdictions, except where noted in this report, demonstrated knowledge of their Radiological Emergency Response Plans (RERP) and procedures. Except where noted in this report, implementation of plans and procedures were adequately demonstrated during the 2019 Limerick Generating Station Plume Pathway exercise evaluated on November 19, 2019.

Federal Emergency Management Agency (FEMA) evaluators assessed 475 evaluation criteria in six Assessment Areas:

- Evaluation Area 1: Emergency Operations Management
- Evaluation Area 2: Protective Action Decision Making
- Evaluation Area 3: Protective Action Implementation
- Evaluation Area 4: Field Measurement and Analysis
- Evaluation Area 5: Emergency Notification and Public Information
- Evaluation Area 6: Support Operation/Facilities

The full participation Limerick Generating Station Radiological Emergency Preparedness Plume Exercise that was held on November 19, 2019. The evaluation of this exercise determined that there was one Level II Finding which was successfully re-demonstrated during the exercise on November 19, 2019. There were two Plan Issues identified. Also, there were one Level 1 Findings identified during the exercise on November 19, 2019. In accordance with Appendix 1 to 44 CFR 350, a Level 1 Finding requires a remedial exercise to be conducted within 120 days of the exercise.

On January 14, 2020, during the remedial exercise Skippack Township successfully re-demonstrated the Level 1 Finding. Skippack Township successfully implemented protective actions for persons with disability and / access functional needs, demonstrated adequate direction & control by leadership, implemented appropriate emergency worker exposure control measures, demonstrated adequate mobilization and staffing, and implemented traffic & access control posts in accordance with plans and procedures.

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 (meet the planning and preparedness standards of NUREG-0654/FEMA-REP-1, Revision 1, November 1980, as referenced in 44 CFR 350.5) and there is reasonable assurance they can be implemented, as demonstrated during this exercise.

An After-Action Improvement Plan (IP) will be developed as part of this report.

LGS APPENDIX A – EXERCISE TIMELINE

This section contains the Exercise Timeline. A table that depicts the times when an event or notifications were noted at participating agencies and locations. (See next page).

Limerick Generating Station Plume Exercise-November 19, 2019

Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received at the Listed Location							
		Commonwealth of PA (CRCC)	PA JIC (CRCC)	PA (BRP)	Exelon EOF/JIC	Berks County EOC	Amity Twp. EOC	Douglass Township EOC	Washington Township EOC
Unusual Event	1611	1620	1620	1620	N/A	1624	N/A	N/A	N/A
Alert	1642	1654	1654	1654	1708	1656	1707	1715	1714
Site Area Emergency	1805	1811	1811	1811	1805	1813	1824	1823	1821
General Emergency	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Simulated Radiation Release Started	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Simulated Radiation Release Terminated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Facility Declared Operational		1700	1700	1700	1730	1705	1738	1714	1750
Governor's Declaration of State of Emergency		1822	1822	1822	1844	1822	1840	1902	1832
Exercise Terminated		2000	2000	2000	1920	1920	2000	1959	2020
First Precautionary Actions: Monitor and Prepare/Tune to EAS		1745	1745	1745	1745	1745	1745	1745	1745
Restrict Rail Traffic		1745	1745	1745	1745	1745	1745	1745	1745
Siren Sounding		1750	1750	1750	1758	1750	1750	1750	1750
EAS Broadcast		1753	1753	1753	1758	1733	1753	1753	1753
Second Precautionary/Protective Actions: Describe		1822	1822	1822	1822	1822	1822	1822	1822
Air 1-mile 1000 ft		1824	1824	1824	1824	1824	1824	1824	1824
10-mile water restriction		1849	1849	1849	1849	1849	1849	1849	1849
Livestock on stored feed and water		1822	1822	1822	1822	1822	1822	1822	1822
Siren Sounding		1834	1834	1834	1835	1834	1834	1834	1834
EAS Message Broadcast		1837	1837	1837	1835	1837	1837	1837	1837
Decision to take KI: EWs		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Decision to take KI: Public		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Limerick Generating Station Plume Exercise-November 19, 2019

Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received at the Listed Location								
		Chester County EOC	East Nantmeal Township	North Coventr Township EOC	Phoenixville Borough EOC	South Coventry EOC	Spring City Borough EOC	Upper Uwchlan Twp. EOC	Warwick Township EOC	West Pikeland Twp. EOC
Unusual Event	1611	1620	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Alert	1642	1652	1657	1657	1657	1657	1658	1658	1657	1658
Site Area Emergency	1805	1817	1828	1829	1829	1830	1830	1829	1829	1829
General Emergency	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Simulated Radiation Release Started	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Simulated Radiation Release Terminated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Facility Declared Operational		1722	1738	1730	1720	1715	1722	1725	1728	1720
Governor's Declaration of State of Emergency		1822	1737	1834	1835	1910	1837	1910	1850	1837
Exercise Terminated		1949	1950	1950	1850	1950	1950	2050	1950	1950
First Precautionary Action Monitor and Prepare/Tune to EAS		1745	1745	1745	1745	1745	1745	1745	1745	1745
Restrict Rail Traffic		1745	1745	1745	1745	1745	1745	1745	1745	1745
Siren Sounding		1750	1750	1750	1750	1750	1750	1750	1750	1750
EAS Broadcast		1753	1753	1753	1753	1753	1753	1753	1753	1753
Second Precautionary/ Protective Actions: Describe		1822	1822	1822	1822	1822	1822	1822	1822	1822
Air 1-mile 1000 ft		1824	1824	1824	1824	1824	1824	1824	1824	1824
10-mile water restriction		1849	1849	1849	1849	1849	1849	1849	1849	1849
Livestock on stored feed and water		1822	1822	1822	1822	1822	1822	1822	1822	1822
Siren Sounding		1834	1834	1834	1834	1834	1834	1834	1834	1834
EAS Message Broadcast		1837	1837	1837	1837	1837	1837	1837	1837	1837
Decision to take KI: EWs		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Decision to take KI: Public		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Limerick Generating Station Plume Exercise-November 19, 2019

Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received at the Listed Location							
		Montgomery County EOC	Collegeville Borough EOC	Douglass Township EOC	Lower Providence Twp. EOC	Lower Salford EOC	Royersford Borough EOC	Schwenksville Borough EOC	Skippack Township EOC
Unusual Event	1611	1620	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Alert	1642	1654	1657	1659	1658	1658	1658	1658	1658
Site Area Emergency	1805	1811	1812	1814	1817	1815	1824	1819	1817
General Emergency	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Simulated Radiation Release Started	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Simulated Radiation Release Terminated	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Facility Declared Operational		1700	1733	1714	1702	1709	1703	1725	1702
Governor's Declaration of State of Emergency		1824	N/A	1902	N/A	N/A	N/A	N/A	N/A
Exercise Terminated		2000	2000	1959	N/A	2003	2005	1959	2003
First Precautionary Action Monitor and Prepare/Tune to EAS		1745	1745	1745	1745	1745	1745	1745	1745
Restrict Rail Traffic		1745	1745	1745	1745	1745	1745	1745	1745
Siren Sounding		1750	1750	1750	1750	1750	1750	1750	1750
EAS Broadcast time		1753	1753	1753	1753	1753	1753	1753	1753
Second Precautionary/ Protective Actions: Describe		1822	1822	1822	1822	1822	1822	1822	1822
Air 1-mile 1000 ft		1824	1824	1824	1824	1824	1824	1824	1824
10-mile water restriction		1849	1849	1849	1849	1849	1849	1849	1849
Livestock on stored feed and water		1822	1822	1822	1822	1822	1822	1822	1822
Siren Sounding		1834	1834	1834	1834	1834	1859	1833	1834
EAS Message Broadcast		1837	1837	1837	1837	1837	1859	1837	1839
Decision to take KI: EWs		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Decision to take KI: Public		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Limerick Generating Station Plume Exercise-November 19, 2019

Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received at the Listed Location							
		Upper Providence Township EOC	Upper Salford Township EOC	West Pottsgrove Township EOC	Bucks County EOC	Lehigh County EOC			
Unusual Event	1611	N/A	N/A	N/A	1639	1645			
Alert	1642	1658	1657	1658	1716	1717			
Site Area Emergency	1805	1817	1820	1816	1819	1822			
General Emergency	N/A	N/A	N/A	N/A	N/A	N/A			
Simulated Radiation Release Started	N/A	N/A	N/A	N/A	N/A	N/A			
Simulated Radiation Release Terminated	N/A	N/A	N/A	N/A	N/A	N/A			
Facility Declared Operational		1704	1700	1707	1719	1645			
Governor's Declaration of State of Emergency		N/A	N/A	N/A	1822	1824			
Exercise Terminated		2000	2002	1955	1936	1937			
First Precautionary Action Monitor and Prepare/Tune to EAS		1745	1745	1745	1745	1745			
Restrict Rail Traffic		1745	1745	1745	1745	1745			
Siren Sounding		1750	1750	1750	1750	1750			
EAS Broadcast time		1753	1753	1753	1753	1753			
Second Precautionary/ Protective Actions: Describe		1822	1822	1822	1822	1822			
Air 1-mile 1000 ft		1824	1824	1824	1824	1824			
10-mile water restriction		1849	1849	1849	1849	1849			
Livestock on stored feed and water		1822	1822	1822	1822	1822			
Siren Sounding		1834	1834	1834	1834	1834			
EAS Message Broadcast		1837	1837	1837	1837	1837			
Decision to take KI: EWs		N/A	N/A	N/A	N/A	N/A			
Decision to take KI: Public		N/A	N/A	N/A	N/A	N/A			

APPENDIX B: EXERCISE LOCATIONS EVALUATOR AND TEAM LEADERS

The following is the list of Evaluators and Team Leaders for the Limerick Generating Station (LGS) Radiological Emergency Preparedness Plume Exposure Pathway Exercise evaluated on November 19, 2019. The following constitutes the managing staff for the Exercise Evaluation:

- Thomas Scardino, DHS/FEMA, Regional Assistance Committee (RAC) Chairman
- Paul Nied, ICF, Regional Coordinator
- Tina Thomas, DHS/FEMA, Project Officer and Site Specialist
- Cristina Schulingkamp, Environmental Protection Agency (EPA)

LOCATION	TEAM LEADERS	AGENCY
Commonwealth Response Coordination Center	Joseph Suders	FEMA RIII
Berks County Emergency Operation Center	Chris Nemcheck	FEMA RIII
Chester County Emergency Operation Center	Daniel Rose	FEMA RIII
Montgomery County Emergency Operation Center	Lee Torres	FEMA RIII
School Districts and Schools	Joseph Suders	FEMA RIII
Support County	Lisa Hamilton	FEMA HQ
LOCATION	EVALUATOR	AGENCY
Berks County Emergency Operation Center	Chris Nemcheck	FEMA RIII
Berks County Emergency Operation Center	John Rice	FEMA RI
Berks County Emergency Operation Center	Barbara Thomas	FEMA RI
Berks County Emergency Operation Center	Larry Broockerd	FEMA HQ
Berks County, Reception Centers Exeter Township Building	Nick Buls	FEMA RIII
Berks County, Emergency Worker Monitoring/Decontamination Station Oley Valley High School	Bruce Swiren	ICF
Berks County, Evacuee Monitoring/Decontamination Station Wilson Senior High School	Chris Nemcheck	FEMA RIII
Berks County, Mass Care Center Assessment, Tulpehocken Junior-Senior High School	Lee Torres	FEMA RIII
Berks County, Mass Care Center Assessment, Hamburg Area High School	Lee Torres	FEMA RIII
Berks County, Mass Care Center Assessment, Brandywine Heights High School	Lee Torres	FEMA RIII
Berks County, Mass Care Center Assessment, Wilson High School	Lee Torres	FEMA RIII
Berks County, Amity Township	Marcy Campbell	ICF
Berks County, Amity Township TCP/ACP	Richard Smith	ICF
Berks County, Douglass Township	Helen LaForge	FEMA RI
Berks County, Douglass Township TCP/ACP	Meg Swearingen	ICF
Berks County, Washington Township	Taneeka Hollins	FEMA RI

Berks County, Washington Township Back-up Route Alerting	Lashawn Halsey	FEMA HQ
Berks County, Boyertown Area School District	Brian Hasemann	FEMA RII
Berks County, Boyertown Area School District Colebrookdale Elementary School	Brian Hasemann	FEMA RII
Berks County, Daniel Boone Area School District	Reggie Rodgers	ICF
Berks County, Daniel Boone Area School District, Daniel Boone Intermediate Center	Reggie Rodgers	ICF
Bucks County Emergency Operations Center	Lisa Hamilton	FEMA HQ
Bucks County, Mass Care Assessment, William Penn Middle School	Tina Thomas	FEMA RIII
Bucks County, Mass Care Assessment, Neshaminy Senior High School	Tina Thomas	FEMA RIII
Bucks County, Mass Care Assessment, Bensalem High School	Tina Thomas	FEMA RIII
Bucks County, Mass Care Assessment, Cecelia Snyder Middle School	Tina Thomas	FEMA RIII
Bucks County, Mass Care Assessment, Robert Shafer Middle School	Tina Thomas	FEMA RIII
Bucks County Reception Centers, County Line Plaza	Tina Thomas	FEMA RIII
Buck County, Evacuee Monitoring/Decontamination Station County Line Plaza	Kevin Reed	ICF
Chester County Emergency Operations Center	Daniel Rose	FEMA RIII
Chester County Emergency Operations Center	Jennifer Greene	FEMA RIII
Chester County Emergency Operations Center	Steve Ward	FEMA RIII
Chester County Emergency Operations Center	Kathy Duran	FEMA RIII
Chester County, Reception Centers Stetson Middle School	Renee Hupp	FEMA RIII
Chester County, Emergency Worker Monitoring/Decontamination Station, Valley Forge Intermediate School	Daniel Rose	FEMA RIII
Chester County, Evacuee Monitoring/Decontamination Station, Stetson Middle School	Jennifer Greene	FEMA RIII
Chester County, Downingtown Area School District	Teresa Englehart	ICF
Chester County, Downingtown Area School District, Pickering Valley Elementary School	Danny Loomis	FEMA RIII
Chester County, Owen J. Roberts School District	Jill Leatherman	ICF
Chester County, Owen J. Roberts School District, Owen J. Roberts Middle School	Jill Leatherman	ICF
Chester County, Great Valley School District	Robert Walker	ICF
Chester County, Great Valley School District, Charlestown Elementary School	Peter Judge	ICF
Chester County, Phoenixville Area School District	Bruce Swiren	ICF
Chester County, Phoenixville Area School District, Phoenixville Middle School	Bruce Swiren	ICF
Chester County, North Coventry Township Emergency Operations Center	Roy Smith	ICF

Chester County, North Coventry Township Emergency Operations Center TCP/ACP	Dan Carlton	ICF
Chester County, North Coventry Township Emergency Operations Center Back-up Route Alerting 1	Jim Greer	ICF
Chester County, North Coventry Township Emergency Operations Center Back-up Route Alerting 2	Danny Loomis	ICF
Chester County, Phoenixville Borough Emergency Operations Center	Henry Christiansen	ICF
Chester County, Phoenixville Borough Emergency Operations Center, TCP/ACP	Carol Shepard	ICF
Chester County, South Coventry Township Emergency Operations Center	Reggie Rodgers	ICF
Chester County, South Coventry Township Emergency Operations Center	Teresa Englehart	ICF
Chester County, Spring City Emergency Operations Center	Thomas Reynolds	ICF
Chester County, Spring City Emergency Operations Center TCP/ACP	Brenda Rembert	ICF
Chester County, Upper Uwchlan Township Emergency Operations Center	John Wills	ICF
Chester County, Upper Uwchlan Township TCP/ACP	Ron Bonner	ICF
Chester County, Warwick Township Emergency Operations Center	Jill Leatherman	ICF
Chester County, Warwick Township Emergency Operations Center	Bonnie Sheffield	ICF
Chester County, West Pikeland Township Emergency Operations Center	Tom Essig	ICF
Chester County, West Pikeland Township TCP/ACP	Ronald Schmitt	ICF
Exelon Joint Information Center	Paul Nied	ICF
Lehigh County Emergency Operations Center	Daren Bates	FEMA HQ
Lehigh County Reception Centers Emmaus High School	Kathy Duran	FEMA RIII
Lehigh County Evacuee Monitoring and Decontamination Station Emmaus High School	Gary Goldberg	ICF
Lehigh County Mass Care Emmaus High School	Robert Walker	ICF
Montgomery County Emergency Operations Center	Lee Torres	FEMA RIII
Montgomery County Emergency Operations Center	Joseph Demuro	FEMA RIII
Montgomery County Emergency Operations Center	Renee Hupp	FEMA RIII
Montgomery County Emergency Operations Center	Ingrid Pierce	FEMA RI
Montgomery County, Mass Care Center Assessment, Cedarbrook Middle School	Lee Torres	FEMA RIII
Montgomery County Reception Centers Montgomery Mall	Rebecca Thomson	FEMA RIII
Montgomery County, Emergency Worker Monitoring/Decontamination Center, Methacton High School	Lee Torres	FEMA RIII
Montgomery County, Emergency Worker Monitoring/Decontamination Center, Methacton High School	Joseph DeMuro	FEMA RIII

Montgomery County, Evacuee Monitoring/Decontamination Center, Montgomery Mall	Cheryl Weaver	ICF
Montgomery County, Collegeville Borough Emergency Operations Center	David Kayen	ICF
Montgomery County, Collegeville Borough TCP/ACP	Robert Duggleby	ICF
Montgomery County, Douglass Township Emergency Operations Center	Brad McRee	ICF
Montgomery County, Douglass Township TCP/TCP	Cheryl Weaver	ICF
Montgomery County, Douglass Township Back-up Route Alerting Team 1	Bruce Swiren	ICF
Montgomery County, Douglass Township Back-up Route Alerting Team 2	Kent Tosch	ICF
Montgomery County, Emergency Operations Center	Michael Henry	ICF
Montgomery County, Lower Providence Township TCP/ACP	Jim Hickey	ICF
Montgomery County, Lower Salford Township Emergency Operations Center	Lynn Steffensen	ICF
Montgomery County, Lower Salford Township TCP/ACP	Roger Winkelmann	ICF
Montgomery County, Royersford Borough Emergency Operations Center	Kevin Reed	ICF
Montgomery County, Royersford Borough TCP/ACP	John Wiecjorek	ICF
Montgomery County, Schwenksville Borough Emergency Operations Center	Debra Blunt	ICF
Montgomery County, Schwenksville Borough Emergency Operations Center	Gary Bolender	ICF
Montgomery County, Skippack Township Emergency Operations Center	Bart Ray	ICF
Montgomery County, Skippack Township Emergency Operations Center	Herb Massie	ICF
Upper Providence Township Emergency Operations Center	Robert Walker	ICF
Upper Providence Township TCP/ACP	Peter Judge	ICF
Upper Salford Township Emergency Operations Center	Gary Goldberg	ICF
Upper Salford Township Emergency Operations Center	Rosemary Samsel	ICF
West Pottsgrove Township Emergency Operations Center	Thomas Gahan	ICF
West Pottsgrove Township TCP/ACP	Rebecca Thomson	ICF
Montgomery County, Methacton School District,	Debra Blunt	ICF
Montgomery County, Methacton School District, Arrowhead Elementary School	Gary Bolender	ICF
Montgomery County, Perkiomen Valley School District,	Bart Ray	ICF
Montgomery County, Perkiomen Valley School District, Evergreen Elementary School	Herb Massie	ICF
Montgomery County, Perkiomen Valley School District, Perkiomen Valley Middle School	Gary Goldberg	ICF
Montgomery County, Perkiomen Valley School District, Skippack Elementary School	Rosemary Samsel	ICF
Montgomery County, Pottsgrove School District,	Kent Tosch	ICF

Montgomery County, Pottsgrove School District, Pottsgrove Middle School	Bonnie Sheffield	ICF
Montgomery County, Pottsgrove School District, Ringing Rocks Elementary School	Kent Tosch	ICF
Montgomery County, Pottstown Area School District	Alonzo McSwain	FEMA HQ
Montgomery County, Pottstown Area School District, EB Barth Elementary School	Mike Howe	FEMA HQ
Montgomery County, Pottstown Area School District, Rupert Elementary School	Charles Blue	FEMA HQ
Montgomery County, Spring-Ford Area School District	James Greer	ICF
Montgomery County, Spring-Ford Area School District, Brooke Elementary School	James Greer	ICF
Montgomery County, Spring-Ford Area School District, Oaks Elementary School	Paul Nied	ICF
Montgomery County, Spring-Ford Area School District, Spring-City Elementary School	Larry Broockerd	FEMA HQ
Montgomery County, Western Montgomery Career and Technology Center	Daren Bates	FEMA HQ
PA State Field Monitoring Team A	Michael DeBonis	FEMA RII
PA State Field Monitoring Team B	Cristina Schulingkamp	EPA Region III
PA State Traffic and Access Control Points, State Police Reading Barracks	Brian Hasemann	FEMA RII
Pennsylvania Accident Assessment Center, State EOC-Bureau of Radiation Protection	Michael Howe	FEMA HQ
Pennsylvania Bureau of Radiation Protection, Radiological Rapid Response Vehicle	Ken Wierman	FEMA HQ
Pennsylvania Commonwealth Response Coordination Center	Joseph Suders	FEMA RIII
Pennsylvania Commonwealth Response Coordination Center	Nick Buls	FEMA RIII
Pennsylvania Joint Information Center/Rumor Control	Alonzo McSwain	FEMA HQ

APPENDIX C: ACRONYMS AND ABBREVIATIONS

Acronym	Meaning
ACP	Access Control Point
ALC	Annual Letter of Certification
ANS	Alert and Notification System
ARC	American Red Cross
ARD	Automatic Ring Down
ARES	Amateur Radio Emergency Services
ATWS	Anticipated Transit Without SCRAM
BRP	Bureau of Radiation Protection
CERT	Community Emergency Response Team
CFR	Code of Federal Regulations
CRCC	Commonwealth Resource Coordination Center
CST	Civil Support Team
DHS	Department of Homeland Security
DRD	Direct Reading Dosimeter
EAL	Emergency Action Level
EAS	Emergency Alert System
ECL	Emergency Classification Level
EMC	Emergency Management Coordinator
EMD	Emergency Management Director
EMS	Emergency Medical Services
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EOP	Extent of Play
EPT	Exercise Planning Team
EPZ	Emergency Planning Zone
ESF	Emergency Support Function
EW	Emergency Workers
FBI	Federal Bureau of Investigation
FD	Fire Department
FEMA	Federal Emergency Management Agency
FMT	Field Monitoring Team
FRMAC	Federal Radiological Monitoring Assessment Center
FTC	Field Team Coordinator
GE	General Emergency
GIS	Geographic Information Systems
GPS	Global Positioning System

HAB	Hostile Action Based
HazMat	Hazardous Materials
JIC	Joint Information Center
JPIC	Joint Public Information Center
KI	Potassium Iodide
LCD	Liquid Crystal Display
LGS	Limerick Generating Station
LOA	Letter of Agreement
MOU	Memorandum of Understanding
MSEL	Master Scenario Events List
NPP	Nuclear Power Plant
NRC	Nuclear Regulatory Commission
OOS	Out of Sequence
ORO	Offsite Response Organization
OSD	Optically Stimulated Dosimeter
PAD	Protective Action Decision
PAG	Protective Action Guide
PAR	Protective Action Recommendation
PAZ	Protective Action Zone
PEMA	Pennsylvania Emergency Management Agency
PI	Planning Issue
PIO	Public Information Officer
PPE	Personal Protective Equipment
PRD	Permanent Record Dosimeter
RAC	Regional Assistance Committee
RACES	Radio Amateur Civil Emergency Services
REA	Radiation Emergency Area
REPP	Radiological Emergency Preparedness Program
RERP	Radiological Emergency Response Plan
RO	Radiological Officer
SAC	Staging Area Coordinator
SAE	Site Area Emergency
SAV	Staff Assistance Visit
SEOC	State Emergency Operations Center
SEVAN	State Emergency Voice Activation Network
SED	Station Emergency Director

APPENDIX D: EXTENT-OF-PLAY AGREEMENT

The 2019 Limerick Generating Station Plume Pathway Exercise Extent-of-Play (EOP) Agreement is a document created by the Pennsylvania Emergency Management Agency that sets the parameters for exercise demonstration. The EOP agreement was signed by the FEMA Region III and Pennsylvania Emergency Management Agency planning team members.

pennsylvania EMERGENCY MANAGEMENT AGENCY

FEMA

2019 LIMERICK GENERATING STATION PLUME EXERCISE

By signing this Extent of Play Agreement, the Commonwealth of Pennsylvania and the FEMA Region III exercise planning team confirms that all conditions have been met to satisfy the requirements to drive exercise play and satisfy the Demonstration Criteria as agreed upon for the November 19, 2019 Limerick Generating Station Plume Exercise.

Tina Lai Thomas
FEMA Site Specialist

11/7/2019
Date

Lead State Planner

11/7/19
Date

Joseph A. Suders
FEMA Team Leader

11/7/2019
Date

LIMERICK GENERATING STATION

EXTENT-OF-PLAY

FINAL

2019 RADIOLOGICAL EMERGENCY PREPAREDNESS EXERCISE

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LIMERICK GENERATING STATION
2019 RADIOLOGICAL EMERGENCY PREPAREDNESS EXERCISE

METHOD OF OPERATION

I. 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 Commonwealth Response Coordination Center (CRCC), the Department of Environmental Protection's Bureau of Radiation Protection (BRP) and risk counties of emergency classifications.

II. Bureau of Radiation Protection (BRP)

BRP personnel will be present at the CRCC, the nuclear facility Emergency Operations Facility (EOF), branch and field locations; BRP field teams **WILL** be evaluated during this exercise. BRP field teams will perform air sampling out-of-sequence, preferably before they deploy to the plume area due to the time of the exercise (seasonably darker early and visibly challenging).

III. PEMA Operations at the CRCC

This "Method of Operation" Document includes activities for the Full-Scale Plume Exercise (November 19, 2019), and the "Out-of-sequence" Activities (October 23 and November 20, 2019).

A. "Out-of-Sequence" Activities – October 23 & November 20, 2019

PEMA personnel will serve as "Observers" at the various field exercise locations (reception centers, emergency worker and general public monitoring/decontamination centers, and mass care centers). This will be performed out-of-sequence in a demonstration window of 7:00 p.m. to 9:30 p.m. on October 23,2019. An exercise coordinator will remain in the CRCC. The CRCC and counties WILL NOT be evaluated during the evening "Out-of-Sequence" component.

The Pennsylvania State Police (PSP) demonstration will take place at PSP Troop L located at Reading Barracks, 600 Kenhorst Boulevard, Berks County. The PSP briefing will be performed out-of-sequence in a demonstration window of 10:00 a.m. to 12:00 p.m. on November 20, 2019.

B. Plume Exercise – School "Out-of-Sequence" Activity – November 19, 2019

A PEMA Lead Controller will disseminate exercise-related messages from the CRCC to the risk counties for dissemination to the participating school districts during a demonstration window of 9:00 a.m. to 11:00 a.m. on November 19, 2019. The CRCC and County Emergency Operation Centers (EOCs) will participate but WILL NOT be evaluated during the "Out-of-Sequence" component. PEMA personnel will serve as Observers at the identified school districts and schools.

C. Plume Exercise – November 19, 2019

PEMA staff and Agency Representatives (AREPs) from designated state departments/agencies, will comprise initial operations at the CRCC during a demonstration window of 4:00 p.m. to 10:00 p.m. on November 19, 2019. The CRCC will not be evaluated during this exercise.

IV. 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 Offices will serve as Liaison Officers to risk and support Counties as assigned. Liaison Officers are exercise participants.

V. 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 EOCs 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.

VI. PEMA Liaison Officers

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

VII. Controllers

Controllers will be present at the emergency worker monitoring/decontaminating stations and the mass care monitoring/decontamination centers (October 23, 2019). Controllers are not players. Controllers will provide pre-approved injects and information to the players, as appropriate, regarding radiological readings during the monitoring of personnel. Live radioactive sources will not be used. ***Exception:*** *Individuals tasked with the setup of portal monitoring equipment will use a standard 1 micro curie Cesium 137 source for the purpose of conducting operational tests. Additionally, appropriate test sources will be available and used to verify the operation of the monitoring/survey instruments per manufacturer's recommendations.*

VIII. 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 XIV)

IX. Outside Observer Coordination

Each organization with observers will coordinate with PEMA, or the Utility for access to their specific exercise site. Observers will be escorted to an observation area for orientation and conduct of the exercise. All observers will be asked to remain within the designated observation area during the exercise. Designated PEMA or Utility representatives and/or the Observer Controller will be present to explain the exercise program and answer questions for the observers during the exercise.

X. 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 half (50%) of the risk municipalities in Berks, Chester, and Montgomery counties.

Out-of-Sequence Period (October 23, November 19 and 20, 2019):

- On October 23, Federal Evaluators will be present at identified Reception Centers, Emergency Worker and Evacuee Monitoring and Decontamination Centers, and Mass Care Centers, as identified in Attachment A, Sections I.1, I.2, I.3, and I.4
- On November 19, Federal evaluators will be present at the identified "out-of-sequence" demonstration sites per Attachment A, Sections II.1 and II.2. These include the identified Public School Districts and participating school buildings, and BRP Field Teams
- On November 20, Federal Evaluators will be present at PSP Troop L – Reading Barracks for Traffic and Access Control Points demonstration as per Attachment A, Section II.6.a

Plume Phase Exercise (November 19, 2019): Federal Evaluators will be present at the identified risk and support county EOCs to evaluate player response to the actual and simulated events in the exercise scenario. Additionally, half (50%) of the risk municipalities will be federally evaluated.

XI. 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 will be federally evaluated at Brandywine Hospital, Chester County on September 26, 2019. Additionally, the following MS-1 hospitals were federally evaluated in 2018: Reading Hospital on May 16, Lehigh Valley Hospital on June 21, Abington Hospital on September 18, and Holy Redeemer Hospital on October 25.

Nine mass care centers (3 in Berks, 5 in Bucks, 0 in Chester, 0 in Lehigh, and 1 in Montgomery) will receive "walkdown" baseline evaluations on September 13, 2019. *These nine mass care centers will not be evaluated during the evening of October 23. There are one co-located Mass Care/Monitoring and Decontamination Centers in Berks and one in Lehigh that will be evaluated on the evening of November 19. (Please refer to the Extent-of-Play Attachment A, Demonstration Tables)*

The mass care walkdown will have team(s) consisting of a FEMA Evaluator, PEMA, County Representative, ARC Representative, and Exelon Representative (optional). The mass care centers mentioned will have a team enter the facility to verify layout, usable common areas, square footage estimate, and capability of being used as a mass care facility. A walkdown assessment of mass care facilities scheduled for evaluation will be accomplished to satisfy FEMA's evaluation process.

Reception Centers, Emergency Worker and Evacuee Monitoring and Decontamination Centers, and Mass Care Centers, as identified in Attachment A, Sections I.1, I.2, I.3, and I.4 will be conducted on October 23, 2019 from 7:00 p.m. to 9:30 p.m.

The out-of-sequence exercise window for school demonstrations will be on November 19, 2019 from 9:00 a.m. to 11:00 a.m.

County and municipal EOC operations will be conducted on November 19, 2019 with exercise period from approximately 4:00 p.m. to 10:00 p.m. unless terminated by the Lead Controller in coordination with the Utility and PEMA. (Please refer to the Extent-of-Play Demonstration Tables, Attachment A)

The out-of-sequence interview of PSP traffic control/access control points will be on November 20, 2019 from 10:00 a.m. to 12:00 p.m.

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

B. Post Plume Exercise

No post-plume phase exercise is scheduled during this evaluation.

XII. Stand-down

All jurisdictions will request approval on a jurisdiction by jurisdiction basis prior to stand-down. Upon completion of all requirements and after having been informed by 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.

A. Support counties may request approval to stand-down upon completion of all evaluated objectives from the CRCC.

B. The risk county EOCs will remain operational until the exercise is officially terminated by the State Lead Controller. **The CRCC will issue an Exercise Termination Message.**

XIII. General Concepts

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

XIV. 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. FEMA Evaluators are not permitted to provide refresher training. Re-demonstrations will be negotiated between the players, observers, controllers, and evaluators. PEMA may advise the Regional Assistance Committee (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
2019 RADIOLOGICAL EMERGENCY PREPAREDNESS EXERCISE

EXTENT-OF-PLAY AGREEMENT

EVALUATION AREA 1

Emergency Operations Management

Sub-element 1.a – Mobilization

INTENT

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

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

Assessment/Extent-of-Play

Assessment of this Demonstration Criterion may be accomplished during a biennial exercise, an actual event, out-of-sequence evaluation or by means of drills conducted at any time.

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

Pre-positioning of emergency personnel is appropriate, in accordance with the Extent-of-Play Agreement, at those facilities located beyond a normal commuting distance from the individual's duty location or residence. This includes the staggered release of resources from an assembly area. Additionally, pre-positioning of staff for out-of-sequence demonstrations may be used in accordance with the Extent-of-Play Agreement.

The REP program does not evaluate Incident Command Post tactical operations (e.g., Law Enforcement hostile action suppression techniques), only coordination among the incident command, the utility, and all appropriate OROs, pursuant to plans/procedures.

Initial law enforcement, fire service, HAZMAT, and emergency medical response to the NPP site may impact the ability to staff REP functions. The ability to identify and request additional resources or identify compensatory measures must be demonstrated. Exercises must also address the role of mutual aid in the incident, as appropriate. An integral part of the response to an HAB scenario at an NPP may also be within the auspices of the Federal Government (e.g., FBI, NRC, or DHS). Protocols for requesting Federal, State, local, and Tribal law enforcement support must be demonstrated, as appropriate. Any resources must be on the ORO's mobilization list so they can be contacted during an incident, if needed.

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

PEMA Negotiated Extent-of-Play:

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

- *Actual calls (or pager notifications) will be made to the 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 will be pre-positioned, and equipment will be demonstrated or shown to be inventoried (School District personnel, PSP TCP/ACP, Reception Centers, Emergency Worker Monitoring and Decontamination Stations Mass Care/Sheltering Centers and Monitoring and Decontamination Centers).*
- *Individuals working in state facilities and county EOCs may be pre-positioned for the plume phase.*
- *Other locations, including Municipal EOCs, will **NOT** pre-stage but will wait for notification of emergency before staffing their duty location.*

Sub-element 1.b – Facilities

INTENT

This sub-element derives from NUREG–0654/FEMA-REP-1, which provides that OROs have facilities to support the emergency response.

Criterion 1.b.1: Facilities are sufficient to support the emergency response. (NUREG-0654/FEMA-REP-1, G.3.a; H.3; J.10.h; J.12; K.5.b)

Assessment/Extent-of-Play

Assessment of this Demonstration Criterion may be accomplished during a biennial exercise, an actual event, SAVs, or by out-of-sequence evaluations.

Responsible OROs must demonstrate, no less than once every eight years, the availability of facilities to support accomplishment of emergency operations. This includes all alternate and backup facilities. Evaluations are typically performed for EOCs and JICs, as well as other facilities such as reception/relocation centers. Some of the areas evaluated within the facilities are adequate space, furnishings, lighting, restrooms, ventilation, access to backup power, and/or alternate facility, if required to support operations. Radio stations, laboratories, initial warning points and hospitals are not evaluated under 1.b.1.

In addition, facilities will be evaluated for this criterion during the first biennial exercise after any new or substantial changes in structure, equipment, or mission that affect key capabilities, as outlined in respective emergency plans/procedures. A substantial change is one that has a direct effect or impact on emergency response operations performed in those facilities. Examples of substantial changes include modifying the size or configuration of an emergency operations center, adding more function to a center, or changing the equipment available for use in a center.

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

PEMA Negotiated Extent-of-Play:

Upper Uwchlan Township in Chester County and Schwenksville Borough in Montgomery County will use temporary EOC locations for this exercise. Upper Salford Township in Montgomery County has permanently moved from the Township Building to the Upper Salford Volunteer Fire Company.

Collegeville Borough, Douglass Township, and Royersford Borough municipalities in Montgomery County have moved to permanent locations. Please review the LGS Exercise Location Address Spreadsheet for more information.

County and municipal EOCs mentioned in Attachment A, will be evaluated on this criterion.

Sub-element 1.c – Direction and Control

INTENT

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

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

Assessment/Extent-of-Play

Assessment of this Demonstration Criterion may be accomplished in a biennial or tabletop exercise.

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

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

PEMA Negotiated Extent of Play

None

Sub-element 1.d – Communications Equipment

INTENT

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

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

Assessment/Extent-of-Play

Assessment of this Demonstration Criterion is accomplished initially in a baseline evaluation and subsequently in periodic testing and drills. System familiarity and use must be demonstrated as applicable in biennial or tabletop exercise, or if their use would be required, during an actual event.

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

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

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

PEMA Negotiated Extent-of-Play:

The plant will communicate to the risk counties and CRCC utilizing the EMNet Communications System (primary) and the commercial telephone system (secondary). Risk and support counties will intercommunicate with the CRCC via the commercial telephone system (primary), SEVAN (secondary), email, and other systems. In the event the plant is unable to contact the CRCC via the Dedicated Automatic Ring Down Telephone, the Power Plant will contact the CRCC via the commercial telephone system. If the plant cannot contact the CRCC, the Power Plant will contact the ***Montgomery County EOC*** *and they will fulfill the role of primary contact until communications with the CRCC can be made.*

The Commonwealth coordinates commonwealth and county response via a phone/internet bridge line. When warranted, siren sounding will be coordinated on the phone/internet bridge line.

Risk counties will communicate with their risk municipalities via public safety radio frequencies (EMA Radio), commercial telephone, email, fax, or Amateur Radio Communications (ARES/RACES) or other available means.

Bureau of Radiation Protection Field Teams will demonstrate two or more forms of communications.

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

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have emergency equipment and supplies adequate to support the emergency response.

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

Assessment/Extent-of-Play

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

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

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

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

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

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

Appropriate direct-reading dosimetry must allow an individual(s) to read the administrative reporting limits and maximum exposure limits contained in the ORO's plans/procedures.

Direct-reading dosimeters must be zeroed or operationally checked prior to issuance. The dosimeters must be inspected for electrical leakage at least annually and replaced when necessary. Civil Defense Victoreen Model 138s (CD V-138s) (0-200 mR), due to their documented history of electrical leakage problems, must be inspected for electrical leakage at least quarterly and replaced when necessary. This leakage testing will be verified during the exercise through documentation submitted in the ALC and/or through an SAV.

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

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

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

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

Mutual Aid Resources: If the incoming resources arrive with their own equipment (i.e., monitors and/or dosimetry), they will be evaluated by REP Program standards. FEMA will not inventory equipment that is not part of the REP Program. If an agency has a defined role in the REP Plan, they are subject to the planning process and standards, as well as the guidance of this Manual.

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

PEMA Negotiated Extent-of-Play:

Radiological survey instruments are calibrated per manufacturer's recommendations. In Pennsylvania, 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 dosimetry and KI quantities will be verified using inventory sheets. Dosimetry and KI will not be removed from storage locations and boxes/packages will not be opened. KI questions will be addressed through interviews.

Annual Direct Reading Dosimeter 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 DRDs which "read" in units of milli-Roentgens.

Reception Centers shall be evaluated on their ability to use maps or other documentation to direct evacuating persons to the correct Monitoring/Decontamination Centers and/or Mass Care Centers (as applicable). Maps will be available for viewing by evaluators. If Reception Centers are collocated with Monitoring/Decontamination centers and Mass Care Centers the use of maps or documents to provide direction does not apply. ***Personnel manning reception centers should receive a radiological briefing and receive category C dosimetry due to potential for radiological contamination.***

Note: Bus drivers returning to the EPZ to fulfill relocation requirements will be equipped with Category A dosimetry and receive a radiological briefing.

EVALUATION AREA 2

Precautionary and/or Protective Action Decision-Making

Sub-element 2.a – Emergency Worker Exposure Control

INTENT

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

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

Criterion 2.a.1: OROs use a decision-making process, considering relevant factors and appropriate coordination, to ensure that an exposure control system, including the use of KI, is in place for emergency workers, including provisions to authorize radiation exposure in excess of administrative limits or protective action guides.
(NUREG-0654/FEMA-REP-1, C.6; f; K.3.a; K.4)

Assessment/Extent-of-Play

Assessment of this Demonstration Criterion must be assessed concurrently with a licensee exercise and may be demonstrated in a biennial or tabletop exercise.

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

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

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

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

PEMA Negotiated Extent-of-Play:

If the scenario has no radiological release or potential for a radiological release the decision on distribution and administration of KI as a protective measure for emergency workers and the authorization process for emergency workers to exceed pre-authorized levels can be addressed through an interview if required at the CRCC.

Sub-element 2.b. – Radiological Assessment, Protective Action Recommendations, and Precautionary and/or Protective Action Decisions for the Plume Phase of the Emergency

INTENT

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to independently project integrated dose from projected or actual dose rates and compare these estimates to the PAGs.

OROs must have the capability to choose among a range of protective actions, those most appropriate in a given emergency. OROs base these choices on PAGs from their plans/procedures or EPA's *Manual of Protective Action Guides and Protective Actions for Nuclear Incidents* and other criteria, such as plant conditions, licensee PARs, coordination of precautionary and/or protective action decisions with other political jurisdictions (e.g., other affected OROs and incident command), availability of in-place shelter, weather conditions, and situations, to include HAB incidents, the threat posed by the specific hostile action, the affiliated response, and the effect of an evacuation on the threat response effort that create higher than normal risk from general population evacuation.

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

Assessment/Extent-of-Play

Assessment of this Demonstration Criterion must be accomplished concurrently with a licensee exercise and may be demonstrated in a biennial or tabletop exercise.

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

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

When the licensee and ORO projected doses differ by more than a factor of 10, the ORO and licensee must determine the source of the difference by discussing input data and assumptions, using different models, or exploring possible reasons. Resolution of these differences must be incorporated into the PARs if timely and appropriate. The ORO must demonstrate the capability to use any additional data to refine projected doses and exposure rates and revise the associated PARs. All activities must be based on the ORO's plans/procedures and completed as they would be in an actual emergency, unless noted above or otherwise specified in the Extent-of-Play Agreement.

PEMA Negotiated Extent-of-Play:

If the scenario has no radiological release, or potential of a radiological release, the decision-making process used to make protective action decisions (PADs) can be addressed through an interview at the CRCC if required.

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

Assessment/Extent-of-Play

Assessment of this Demonstration Criterion must be accomplished concurrently with a licensee exercise and may be demonstrated in a biennial or tabletop exercise.

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

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

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

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

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

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

PEMA Negotiated Extent-of-Play:

If the scenario has no radiological release, or potential of a radiological release, the decision-making process used to make PADs can be addressed through an interview at any time during the exercise at the CRCC if required.

Sub-element 2.c – Precautionary and/or Protective Action Decision Consideration for the Protection of Persons with Disabilities and Access/Functional Needs

INTENT

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

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

Assessment/Extent-of-Play

Assessment of this Demonstration Criterion must be accomplished concurrently with a licensee exercise and may be demonstrated in a biennial or tabletop exercise that would include the use of plant conditions transmitted from the licensee.

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

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

The OROs must demonstrate how the decision-making process takes those with disabilities and access/functional needs (e.g., nursing homes, correctional facilities, licensed day cares, mobility-impaired individuals, and transportation-dependent individuals) into account.

In accordance with plans/procedures, OROs and/or officials of public school systems/districts must demonstrate the capability to make prompt decisions on protective actions for students. The decision-making process, including any preplanned strategies for protective actions for that ECL, must consider the location of students at the time (e.g., whether the students are still at home, en route to school, or at school).

Since other agencies place requirements on hospitals to prepare for contaminated patients, the REP Program has no need to evaluate hospitals in the EPZ that need to evacuate, or the facilities that are receiving these evacuees, nor does the ORO have the responsibility to provide training or dosimetry to these hospitals/facilities. Additionally, hospital evacuation plans do not need to be reviewed or tested by the REP program.

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

PEMA Negotiated Extent-of-Play:

If the scenario has no radiological release, or potential of a radiological release, the decision-making process used to make PADs can be addressed through an interview, at any time during the exercise at the CRCC if required.

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 Post-Plume Phase Relocation, Reentry, 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

INTENT

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

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

Assessment/Extent-of-Play

Assessment of this Demonstration Criterion may be accomplished during a biennial or tabletop exercise. Other means may include drills, seminars or training activities that would fully demonstrate technical proficiency.

OROs must demonstrate the capability to provide emergency workers (including supplemental resources) with the appropriate direct-reading and permanent record dosimetry, dosimeter chargers, KI, and instructions on the use of these items. For evaluation purposes, appropriate direct-reading dosimetry is defined as dosimetry that allows an individual(s) to read the administrative reporting limits that are pre-established at a level low enough to consider subsequent calculation of TEDE and maximum exposure limits, for those emergency workers involved in lifesaving activities, contained in the ORO's plans/procedures.

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

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

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

phase must be limited to the lowest radiological exposure commensurate with completing their missions.

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

OROs must demonstrate the capability to accomplish distribution of KI to emergency workers consistent with decisions made. OROs must have the capability to develop and maintain lists of emergency workers who have ingested KI, including documentation of the date(s) and time(s) they did so. Ingestion of KI recommended by the designated ORO health official is voluntary. For evaluation purposes, the actual ingestion of KI shall not be performed. OROs must demonstrate the capability to formulate and disseminate instructions on using KI for those advised to take it. Emergency workers must demonstrate basic knowledge of procedures for using KI whether or not the scenario drives the implementation of KI use. This can be accomplished by an interview with the evaluator.

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

PEMA Negotiated Extent-of-Play:

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

OROs should also demonstrate the use of all applicable dosimetry forms to emergency workers. The completion of one "Dosimetry-KI Form" will be demonstrated.

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

In Pennsylvania, emergency workers do not have turn-back values.

Emergency workers who are assigned to low exposure rate areas, (e.g., 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

NOTE: Emergency responders located outside the EPZ have limited potential for radiation exposure (e.g., monitoring/decontamination teams, MS-1 hospital staffs). EMS crews transporting contaminated or potentially contaminated individuals outside of the EPZ are not provided dosimetry as per Annex E, Appendix 5, page E-5-35.

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 minimum of one PRD will be properly issued.

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

INTENT

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

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

Assessment/Extent-of-Play

Assessment of this Demonstration Criterion may be accomplished during a biennial or tabletop exercise. Other means may include drills, seminars, or training activities that would fully demonstrate technical proficiency.

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

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

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

PEMA Negotiated Extent-of-Play:

Within Pennsylvania, the Pennsylvania Department of Health is responsible for distribution of KI to the general public located within the EPZ. Pre-distribution is accomplished on an annual basis. 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 minimum of one PRD will be issued.

If the scenario has no radiological release, or potential of a radiological release, the decision-making process on the need to recommend KI can be addressed through an interview if required.

Sub-element 3.c – Implementation of Precautionary and/or Protective Action Decisions for Persons with Disabilities and Access/Functional Needs

INTENT

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

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

Assessment/Extent-of-Play

Assessment of this Demonstration Criterion may be accomplished during a biennial exercise, an actual event, or by means of drills conducted at any time.

Applicable OROs must demonstrate the capability to alert and notify (i.e., provide PARs and emergency information and instructions to) persons with disabilities and access/functional needs,

including hospitals/medical facilities, licensed day cares, nursing homes, correctional facilities, and mobility-impaired and transportation-dependent individuals. OROs must demonstrate the capability to provide for persons with disabilities and access/functional needs in accordance with plans/procedures.

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

Since other agencies place requirements on hospitals to prepare for contaminated patients, the REP Program has no need to evaluate hospitals in the EPZ that need to evacuate, or the facilities that are receiving these evacuees, nor does the ORO have the responsibility to provide training or dosimetry to these hospitals/facilities. Additionally, hospital evacuation plans do not need to be reviewed or tested by the REP program.

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

PEMA Negotiated Extent-of-Play:

The names, locations and contact information of identified individuals with access/functional 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 access/functional needs list for individuals requiring assistance. This list may be viewed at the county as it will not be disseminated for exercise purposes.*

Evaluators may ask, by interview at the county, about the transportation plans concerning transportation, staging, source of vehicles, radiological protection of the drivers/emergency workers, and routes or assignments of vehicles for transportation dependent individuals and transportation of persons with disabilities and access/functional needs. No buses or drivers will be mobilized.

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 precautionary and/or protective action decisions for schools. (NUREG-0654/FEMA-REP-1, J.10.c, d, e, g)

Assessment/Extent-of-Play

Assessment of this Demonstration Criterion may be accomplished during a biennial, or tabletop exercise, an actual event, staff assistance visit, or by means of drills conducted at any time.

School systems/districts (these include public and private schools, kindergartens, and preschools) must demonstrate the ability to implement precautionary and/or protective action decisions for students. The demonstration must be made as follows: each school system/district within the 10 mile EPZ must demonstrate implementation of protective actions. At least one school per affected system/district must participate in the demonstration. Canceling the school day, dismissing early, or sheltering in place must be simulated by describing to evaluators the procedures that would be followed. If evacuation is the implemented protective action, all activities to coordinate and complete the evacuation of students to reception centers, congregate care centers, or host schools may actually be demonstrated or accomplished through an interview process.

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

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

If a school facility has emergency plans as a condition of licensing, those plans may be submitted to FEMA review in place of demonstration or interview pursuant to the ORO's plans/procedures as negotiated in the Extent-of-Play Agreement.

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

PEMA Negotiated Extent-of-Play:

School students will not be involved during the exercise. Actions and activities associated with the demonstration of Criterion 3.c.2 will be limited to the School District Administration key personnel, evaluated schools, 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). 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 is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to implement protective action plans/procedures, including relocation and restriction of access to evacuated/sheltered areas. This Sub-element focuses on selecting, establishing, and staffing of traffic and access control points, and removal of impediments to the flow of evacuation traffic.

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

Assessment/Extent-of-Play

Assessment of this Demonstration Criterion may be accomplished during a biennial exercise, an actual event, staff assistance visit, or by means of drills conducted at any time.

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

Traffic and access control staff must demonstrate accurate knowledge of their roles and responsibilities, including verifying emergency worker identification and access authorization to the affected areas, as per the Extent-of-Play Agreement. These capabilities may be demonstrated by actual deployment or by interview, in accordance with the Extent-of-Play Agreement.

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

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

PEMA Negotiated Extent-of-Play:

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

Criterion 3.d.2: Impediments to evacuation are identified and resolved. (NUREG0654/FEMA-REP-1, J.10.k)

Assessment/Extent-of-Play

Assessment of this Demonstration Criterion may be accomplished during a biennial exercise, an actual event, staff assistance visit, or by means of drills conducted at any time.

OROs must demonstrate the capability to identify and take appropriate actions concerning impediments to evacuations. In demonstrating this capability, the impediment must remain in place during the evacuation long enough that re-routing of traffic is required and must also result in demonstration of decision-making and coordination with the JIC to communicate the alternate route to evacuees.

When, due to specifics of the scenario or jurisdiction, the impediment cannot be located on an evacuation route, it must be located so as to impact the evacuation. When not possible, actual dispatch of resources need not be physically demonstrated; however, all contacts, actual or simulated, must be logged.

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

PEMA Negotiated Extent-of-Play:

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 tow trucks, need not be demonstrated; however, simulated contacts will be logged. If the scenario does not lead to evacuation the criteria shall be deemed complete if the ORO can describe to the evaluator through controller inject or interview the actions, they would take to overcome a major traffic impediment during an evacuation and how such actions would be communicated to the public and affected OROs. (Risk counties only)

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

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

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

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

EVALUATION AREA 4

Field Measurement and Analyses

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

INTENT

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

Criterion 4.a.1: [RESERVED]

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

Assessment/Extent-of-Play

Assessment of this Demonstration Criterion may be accomplished during a biennial exercise. Other means may include drills that would fully demonstrate technical proficiency.

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

Field measurements are needed to help characterize the release and support the adequacy of implemented protective actions, or to be a factor in modifying protective actions.

Teams must be directed to take measurements at such locations and times as necessary to provide sufficient information to characterize the plume and its impacts.

If the responsibility for obtaining peak measurements in the plume has been accepted by licensee field monitoring teams, with concurrence from OROs, there is no requirement for these measurements to be repeated by ORO monitoring teams. If the licensee FMTs do not obtain peak measurements in the plume, it is the ORO's decision as to whether peak measurements are

necessary to sufficiently characterize the plume. The sharing and coordination of plume measurement information among all FMTs (licensee, Federal, and ORO) is essential.

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

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

PEMA Negotiated Extent-of-Play:

Department of Environmental Protection (DEP), Bureau of Radiation Protection (BRP) field teams are equipped with the necessary instrumentation and supplies. FEMA evaluators will meet the field teams at the Radiological Rapid Response Vehicle (R3V) staging area at Wilson Farm Park, 500 Lee Road in Chesterbrook, Pennsylvania 19087 at 1:30 p.m. on November 19, 2019 to evaluate instrumentation checks and equipment inventory verification.

Field Team Control will be performed within or near the 10-mile EPZ using the DEP R3V. During the exercise, the field teams will be directed to take measurements in locations to provide information sufficient to characterize the plume and impacts. If necessary, field teams will be provided with inject(s) for additional demonstration. The inject(s) will have no impact on the CRCC's activities. In addition to field team measurements, remote detectors will be placed by the field teams near the expected plume pathway. These detectors will automatically transmit data to the R3V. Field teams will follow As Low As Reasonably Achievable (ALARA) principles in the deployment of these detectors.

*Field teams **WILL** be evaluated by FEMA.*

Criterion 4.a.3: Ambient radiation measurements are made and recorded at appropriate locations, and radioiodine and particulate samples are collected. Teams will move to an appropriate low background location to determine whether any significant (as specified in the plan and/or procedures) amount of radioactivity has been collected on the sampling media. (NUREG-0654/FEMA-REP-1, C.1; H.12: I.8, 9; J.10.a)

Assessment/Extent-of-Play

Assessment of this Demonstration Criterion may be accomplished during a biennial exercise. Other means may include drills that would fully demonstrate technical proficiency.

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

transfer of samples, including a chain-of-custody form(s), to a radiological laboratory(ies) must be demonstrated.

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

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

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

PEMA Negotiated Extent-of-Play:

Measurements will be made by DEP/BRP, in accordance with the State Annex E, Appendix 6: BRP Technical Assessment and Protective Actions, and BRP Standard Implementing Procedures (IPs). Two mobile monitoring teams from BRP South East Regional Office will demonstrate ambient radiation monitoring and radioiodine, and particulate sampling. Field teams will be equipped with appropriate dosimetry and KI. ***Field 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. Field teams will take simulated air samples, as directed and relay information to the R3V. In place of silver zeolite cartridges, charcoal cartridges will be used for the exercise. All measurements will be forwarded to the R3V immediately upon obtaining data.*

FEMA evaluators will meet the field teams at the R3V staging area at Wilson Farm Park, 500 Lee Road in Chesterbrook, Pennsylvania 19087 at 1:30 p.m. on November 19, 2019.

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

INTENT

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

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

Assessment/Extent-of-Play

Assessment of this Demonstration Criterion may be accomplished during a biennial or tabletop exercise. Other means may include drills, seminars or training activities that would fully demonstrate technical proficiency.

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

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

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

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

PEMA Negotiated Extent-of-Play:

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

Sub-element 4.c – Laboratory Operations

INTENT

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

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

Assessment/Extent-of-Play

Assessment of this Demonstration Criterion may be accomplished during a biennial, tabletop exercise, or an actual event. Other means may include drills, seminars or training activities that would fully demonstrate technical proficiency.

The laboratory staff must demonstrate the capability to follow appropriate procedures for receiving samples, including logging information, preventing contamination of the laboratory(ies),

preventing buildup of background radiation due to stored samples, preventing cross contamination of samples, preserving samples that may spoil (e.g., milk), and keeping track of sample identity. In addition, the laboratory staff must demonstrate the capability to prepare samples for conducting measurements.

The laboratory (ies) must be appropriately equipped to provide, upon request, timely analyses of media of sufficient quality and sensitivity to support assessments and decisions anticipated in the ORO's plans/procedures. The laboratory instrument calibrations must be traceable to standards provided by the National Institute of Standards and Technology. Laboratory methods used to analyze typical radionuclides released in a reactor incident must be as described in the plans/procedures. New or revised methods may be used to analyze atypical radionuclide releases (e.g., transuranic or as a result of a terrorist incident) or if warranted by incident circumstances. Analysis may require resources beyond those of the ORO.

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

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

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

PEMA Negotiated Extent-of-Play:

This sub-element will not be 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 is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to provide prompt instructions to the public within the plume exposure pathway EPZ. Specific provisions addressed in this Sub-element are further discussed in Section V, Part A of this Manual, Alert and Notification Systems.

Criterion 5.a.1: Activities associated with primary alerting and notification of the public are completed in a timely manner following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. The initial instructional message to the public must include as a minimum the elements required by current REP guidance. (NUREG-0654/FEMA-REP-1, E.5, 6, 7)

Assessment/Extent-of-Play

Assessment of this Demonstration Criterion may be accomplished during a biennial exercise, drills, or operational testing of equipment that would fully demonstrate capability.

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

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

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

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

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

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

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

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

PEMA Negotiated Extent-of-Play:

The Commonwealth of Pennsylvania has implemented a Statewide EAS Control System in cooperation with the Pennsylvania Association of Broadcasters per the State Emergency Communications Committee and Pennsylvania Emergency Alert System State EAS Plan (November 2, 2011). The CRCC (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 CRCC 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 three minutes following the simulated activation of the sirens. The EAS will be read and explained to the evaluator, and given a copy of the EAS to them. 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 OROs' plan and/or procedures, ANS activation should be accomplished in a timely manner for primary alerting/notification. This action will be performed "with a sense of urgency and without undue delay" (REP Manual-January 2016).

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

Assessment/Extent-of-Play

Assessment of this Demonstration Criterion may be accomplished during a biennial exercise, drills, or operational testing of equipment that would fully demonstrate capability.

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 during the exercise, OROs must demonstrate

backup means of alert and notification. Backup means of alert and notification will differ from facility to facility.

Backup alert and notification procedures that would be implemented in multiple stages must be structured such that the population closest to the plant (e.g., within 2 miles) is alerted and notified first. The populations farther away and downwind of any potential radiological release would be covered sequentially (e.g., 2 to 5 miles, followed by downwind 5 to 10 miles, and finally the remaining population as directed by authorities). Topography, population density, existing ORO resources, and timing will be considered in judging the acceptability of backup means of alert and notification.

Although circumstances may not allow this for all situations, FEMA and the NRC recommend that OROs and operators attempt to establish backup means that will reach those in the plume exposure EPZ within a reasonable time of failure of the primary alert and notification system, with a recommended goal of 45 minutes. The backup alert message must, at a minimum, include: (1) a statement that an emergency exists at the plant; and (2) instructions regarding where to obtain additional information.

When backup route alerting is demonstrated, **only one route needs to be selected and demonstrated.** All alert and notification activities along the route(s) must be simulated (i.e., the message that would actually be used is read for the evaluator, but not actually broadcast), as negotiated in the Extent-of-Play. Actual testing of the mobile public address system will be conducted at an agreed-upon location.

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

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

PEMA Negotiated Extent-of-Play:

Back-up alert notification of the public due to a simulated siren failure will be demonstrated. (Refer to Attachment A, Section II.11) 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 recommended goal of 45 minute per-identified back-up route alert run as per Attachment A, Section II.11 Pennsylvania does not have any "exception areas." The 45-minute clock starts when the siren dispatcher receives the notification that a siren has failed.

IPAWS may be used, as long as it does not interfere with the required, demonstrated, and evaluated notifications. Alternate methods of route alerting will NOT be evaluated.

Criterion 5.a.4: 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.

(NUREG-0654/FEMA-REP-1, E.6; Appendix 3.B.2.c)

Assessment/Extent-of-Play

Assessment of this Demonstration Criterion may be accomplished during a biennial exercise, drills, or operational testing of equipment that would fully demonstrate capability.

OROs with FEMA-approved exception areas (identified in the approved *Alert and Notification System Design Report*), 5 to 10 miles from the NPP, must demonstrate the capability to accomplish primary alerting and notification of the exception area(s). FEMA and the NRC recommend that OROs and operators establish means that will reach those in approved exception areas within 45 minutes once the initial decision is made by authorized offsite emergency officials to notify the public of an incident. The exception area alert message must, at a minimum, include (1) a statement that an emergency exists at the plant and (2) instructions regarding where to obtain additional information.

For exception area alerting, at least one route must be demonstrated and evaluated. The selected route(s) must vary from exercise to exercise. However, the most difficult route(s) must be demonstrated no less than once every eight years. All alert and notification activities along the route(s) must be simulated (i.e., the message that would actually be used is read for the evaluator, but not actually broadcasted) as negotiated in the Extent-of-Play. Actual testing of the mobile public address system will be conducted at an agreed-upon location. For exception areas alerted by air/water craft, actual routes will be negotiated in the Extent-of-Play, but must be demonstrated no less than once every eight years.

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

PEMA Negotiated Extent-of-Play:

This sub-element will not be demonstrated or evaluated during this exercise. Pennsylvania has no exception areas.

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

INTENT

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

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

Assessment/Extent-of-Play

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

Message elements: The ORO must ensure that emergency information and instructions are consistent with PADs made by appropriate officials. The emergency information must contain all necessary and applicable instructions (e.g., evacuation instructions, evacuation routes, reception center locations, what to take when evacuating, shelter-in-place instructions, information concerning protective actions for schools and persons with disabilities and access/functional needs, and public inquiry hotline telephone number) to assist the public in carrying out the PADs provided. The ORO must also be prepared to disclose and explain the ECL of the incident. At a minimum, this information must be included in media briefings and/or media releases. OROs must demonstrate the capability to use language that is clear and understandable to the public within both the plume and ingestion exposure pathway EPZs. This includes demonstration of the capability to use familiar landmarks and boundaries to describe protective action areas.

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

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

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

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

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

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

PEMA Negotiated Extent-of-Play:

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

Risk and support counties will receive and handle "Public Inquiry" messages via their individual "Public Inquiry" processes (in compliance with NIMS terminology, Rumor Control is now considered to be "Public Inquiry"). Counties will receive approximately ten 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 Operations/Facilities

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

INTENT

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

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

Assessment/Extent-of-Play

Assessment of this Demonstration Criterion may be accomplished during a biennial exercise, an actual event, drills, or SAV.

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

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

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

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

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

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

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

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

PEMA Negotiated Extent-of-Play:

Radiological monitoring demonstration sites should possess a roster of the monitoring personnel required to process 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 volunteer evacuees will be monitored (or any combination of individuals totaling six demonstrations). **Centers using portal monitors are only required to demonstrate three volunteer evacuees.** 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 remain contaminated after two decontamination attempts. Exercise participants will be prepared to discuss the process of handling the evacuee following the failed decontamination attempts. 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, see below.***

At the emergency worker monitoring/decontamination stations, *two 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 permanent 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.

Reception Centers and Evacuee Monitoring and Decontamination Stations at County Line Plaza in Bucks County and Montgomery Mall in Montgomery County are using alternate exercise sites for the exercise. County Line Plaza will demonstrate at Souderton Fire Company and Montgomery Mall will demonstrate at Fire Department of Montgomery Township. See Attachment A, I.1 & 1.3.

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

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

INTENT

This Sub-element is derived from NUREG0654/FEMA-REP-1, which requires that OROs have the capability to implement radiological monitoring and decontamination of emergency workers and their equipment, inclusive of vehicles.

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

Assessment/Extent-of-Play

Assessment of this Demonstration Criterion may be accomplished during a biennial exercise, drills, an actual event, or SAV.

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

Specific attention must be given to equipment, including any vehicles that were in contact with contamination. The monitoring staff must demonstrate the capability to make decisions on the need for decontamination of personnel, equipment, and vehicles based on trigger/action levels and procedures stated in the ORO plans/procedures. Monitoring of emergency workers does not have to meet the 12-hour requirement. However, appropriate monitoring procedures must be demonstrated for a minimum of two emergency workers and their equipment and vehicles. Before using monitoring instrument(s), the monitor(s) must demonstrate the process of checking the instrument(s) for proper operation.

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

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

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

Monitoring activities shall not be simulated. Monitoring personnel must explain use of trigger/action levels for determining the need for decontamination. They must also explain the procedures for referring any emergency workers who cannot be adequately decontaminated for assessment and follow-up in accordance with the ORO's plans/procedures.

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

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

PEMA Negotiated Extent-of-Play:

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. Water will NOT be used.

Emergency Worker Monitoring and Decontamination Station at Methacton High School in Montgomery County will use an alternate exercise site for the exercise due to a rescheduled school play-off game. Methacton High School will demonstrate at Worcester Fire Company. See Attachment A, I.2.

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

Sub-element 6.c – Temporary Care of Evacuees

INTENT

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

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

Assessment/Extent-of-Play

Assessment of this Demonstration Criterion may be accomplished during a biennial exercise, drills, an actual event, or SAV.

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

For planning purposes, OROs must plan for a sufficient number of congregate care centers in host/support jurisdictions based on their all-hazard sheltering experience and what is historically relevant for that particular area. In this simulation, it is not necessary to set up operations as they would be in an actual emergency. Alternatively, capabilities may be demonstrated by setting up stations for various services and providing those services to simulated evacuees. Given the substantial differences between demonstration and simulation of this criterion, exercise demonstration expectations must be clearly specified in Extent-of-Play Agreements.

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

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

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

However, those individuals who are found to be contaminated and are then decontaminated will have their vehicles held in a secure area until they can be monitored and decontaminated (if applicable) and do need confirmation that their vehicle is being held in a secure area or free from contamination prior to entering the congregate care areas. This capability may be determined through an interview process.

If operations at the center are demonstrated, material that would be difficult or expensive to transport (e.g., cots, blankets, sundries, and large-scale food supplies) need not be physically

available at the facility(ies). However, availability of such items must be verified by providing the evaluator a list of sources with locations and estimates of quantities.

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

PEMA Negotiated Extent-of-Play:

Counties demonstrating mass care center operations 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 I.4).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 October 23, 2019, 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 on October 23, 2019 from 7:00 p.m. to 9:30 p.m.

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.

Lehigh County Animal Response Team (CART) will participate in animal monitoring and decontamination at Emmaus High School. ***This is an observed only activity and will not be evaluated during the out of sequence exercise.***

AMERICAN RED CROSS RISK AND SUPPORT COUNTY CHAPTERS:

Tri-County Chapter
(Serving Berks and Chester Counties)
701 Centre Avenue
Reading, Pennsylvania 19601
Erika Wolfe (215) 347-0425

Lehigh Valley-Bucks Chapter
(Serving Bucks and Lehigh Counties)
3939 Broadway
Allentown, Pennsylvania 18104
Erika Wolfe (215) 347-0425

Southeastern Pennsylvania Chapter
(Serving Montgomery County)
2221 Chestnut Street
Philadelphia Pennsylvania 19103
Angel Ferris (267) 246-4511

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

INTENT

This Sub-element is derived from NUREG0654/FEMA-REP-1, which requires that OROs have the capability to transport contaminated injured individuals to medical facilities with the capability to provide medical services.

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

Assessment/Extent-of-Play

Assessment of this Demonstration Criterion may be accomplished during a biennial exercise, an actual event, or drills. FEMA has determined that these capabilities have been enhanced and consistently demonstrated as adequate; therefore, offsite medical services drills need only be evaluated biennially. FEMA will, at the request of the involved ORO, continue to evaluate the drills on an annual basis. All hospitals listed in the plan as medical services hospitals must be evaluated, with a transportation provider, every 2 years. Additional transportation providers will be rotated through the drills in the 8-year exercise cycle. For ambulance providers who do not participate in an evaluated drill during the two-year cycle, training will be provided. This training will be documented in the ALC.

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

OROs must demonstrate the capability to monitor/decontaminate and transport contaminated, injured individuals to medical facilities.

An ambulance must be used for response to the victim. However, to avoid taking an ambulance out of service for an extended time, OROs may use any vehicle (e.g., car, truck, or van) to transport the victim to the medical facility. It is allowable for an ambulance to demonstrate up to the point of departure for the medical facility and then have a non-specialized vehicle transport the "victim(s)" to the medical facility. This option is used in areas where removing an ambulance

from service to drive a great distance (over an hour) for a drill would not be in the best interests of the community.

Normal communications between the ambulance/dispatcher and the receiving medical facility must be demonstrated. If a substitute vehicle is used for transport to the medical facility, this communication must occur before releasing the ambulance from the drill. This communication would include reporting radiation monitoring results, if available. In addition, the ambulance crew must demonstrate, by interview, knowledge of where the ambulance and crew would be monitored and decontaminated, if required, or whom to contact for such information.

Monitoring of the victim may be performed before transport or en route, or may be deferred to the medical facility. Contaminated injured individuals transported to medical facilities are monitored as soon as possible to assure that everyone (ambulance and medical facility) is aware of the medical and radiological status of the individual(s). However, if an ambulance defers monitoring to the medical facility, then the ambulance crew presumes that the patient(s) is contaminated and demonstrate appropriate contamination controls until the patient(s) is monitored. Before using monitoring instruments, the monitor(s) must demonstrate the process of checking the instrument(s) for proper operation. All monitoring activities must be completed as they would be in an actual emergency. Appropriate contamination control measures must be demonstrated before and during transport and at the receiving medical facility.

The medical facility must demonstrate the capability to activate and set up a radiological emergency area for treatment. Medical facilities are expected to have at least one trained physician and one trained nurse to perform and supervise treatment of contaminated injured individuals. Equipment and supplies must be available for treatment of contaminated injured individuals.

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

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

PEMA Negotiated Extent-of-Play:

This sub-element was evaluated at Brandywine Hospital, Chester County, on September 26, 2019. Additionally, the following MS-1 hospitals were federally evaluated in 2018: Reading Hospital on May 16, Lehigh Valley Hospital on June 21, Abington Hospital on September 18, and Holy Redeemer Hospital on October 25.

ATTACHMENT A

2019 LIMERICK GENERATING STATION EXTENT-OF-PLAY DEMONSTRATION TABLES

I. Out-of-Sequence Events

Activities – **October 23, 2019**

1. Reception Centers

Time: 7:00 p.m. to 9:30 p.m.

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

RECEPTION CENTERS LOCATIONS		
COUNTY	**LOCATION**	**DATE**
Berks	Exeter Township Building	October 23,2019
Bucks*	County Line Plaza (demonstrate at Souderton Fire Company)	
Chester*	Stetson Middle School	
Lehigh*	Emmaus High School	
Montgomery*	Montgomery Mall (demonstrate at Fire Dept. of Montgomery Township)	

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

EMERGENCY WORKER MONITORING/DECONTAMINATION STATION		
COUNTY	**LOCATION**	**DATE**
Berks	Oley Valley High School	October 23,2019
Chester	Valley Forge Intermediate School	
Montgomery	Methacton High School (demonstrate at Worchester Fire Company)	

3. Evacuee monitoring/decontamination station for each risk and support counties.

The asterisks (*) indicate mass care center activities at the monitoring/decontamination centers.

EVACUEE MONITORING/DECONTAMINATION STATION		
COUNTY	**LOCATION**	**DATE**
Berks*	Wilson Senior High School	October 23, 2019
Bucks	County Line Plaza (demonstrate at Souderton Fire Company)	

Chester	Stetson Middle School	
Lehigh*	Emmaus High School	
Montgomery	Montgomery Mall (demonstrate at Fire Dept. of Montgomery Township)	

4. Mass Care Centers for risk and support counties.

MASS CARE CENTER		
COUNTY	**LOCATION**	**DATE**
Berks	Wilson Senior High School	October 23, 2019
Lehigh	Emmaus High School	
	Lehigh CART ***(observe only)***	

Activities – **November 19, 2019**

5. School Districts

Time: 9:00 a.m. – 11:00 a.m.

FEMA Evaluated – Risk Public School District Administration Offices and schools located within the EPZ or School District Administration Offices located outside the EPZ with schools located within the EPZ.

NOTE – If a Risk Public School District Administration Office is outside of the EPZ but has schools inside the EPZ, they will be evaluated by FEMA.

PEMA Observed – Risk Public School District Administration Offices and schools located outside the EPZ with students living within the EPZ.

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 eight-year exercise cycle.

Asterisks (*) items indicate buildings not in EPZ – students may live in the EPZ. PEMA will observe these locations; no FEMA evaluator will attend those particular school districts or schools outside of the EPZ.

(^) School District Administration Office located outside of the EPZ with schools inside the EPZ. These will be evaluated by FEMA.

COUNTY	**SCHOOL DISTRICT**	**SCHOOLS (approx. 1/4th evaluated)**
Berks	**Boyertown** 1 FEMA & PEMA	1. Boyertown S.D. Admin. Office 2. Colebrookdale Elementary School
	Daniel Boone 1 FEMA & PEMA	1. Daniel Boone S.D. Admin. Office 2. Daniel Boone Intermediate Center

Chester	**Downingtown**	1. Downingtown S.D. Admin. Office 2. Pickering Valley Elementary School
	Great Valley	1. Great Valley S.D. Admin. Office 2. Charlestown Elementary School
	Owen J. Roberts 1 FEMA & PEMA	1. Owen J. Roberts S.D. Admin. Office 2. Owen J. Roberts Middle School
	Phoenixville Area 1 FEMA & PEMA	1. Phoenixville Area S.D. Admin. Office 2. Phoenixville Middle School
Montgomery	**Methacton**	1. Methacton S.D. Admin Office^ 2. Arrowhead Elementary School
	Perkiomen Valley	1. Perkiomen Valley S.D. Admin. Office 2. Evergreen Elementary School 3. Perkiomen Valley Middle School – West 4. Skippack Elementary School
	Pottsgrove 1 FEMA & PEMA for Ringing Rocks	1. Pottsgrove S.D. Admin. Office 2. Pottsgrove Middle School 3. Ringing Rocks Elementary School
	Pottstown	1. Pottstown S.D. Admin. Office 2. EB Barth Elementary School 3. Rupert Elementary School
	Souderton Area 1 PEMA	1. Souderton Area S.D. Admin. Office* 2. Souderton Area Senior High School*
	Spring-Ford Area 1 FEMA & PEMA for Brooks Elementary	1. Spring-Ford Area S.D. Admin. Office 2. Brooke Elementary School 3. Oaks Elementary School 4. Spring-City Elementary School
	Upper Perkiomen 1 PEMA	1. Upper Perkiomen S.D. Admin. Office* 2. Hereford Elementary School*
	Technical Schools 1 FEMA & PEMA	Technical Schools S.D. Admin. Office Western Center Technical Studies

II. Plume Phase Exercice

Activities – **November 19, 2019**

Time: 4:00 p.m. – 10:00 p.m.

6. BRP field teams will be **EVALUATED** at the R3V staging area located at Wilson Farm Park, 500 Lee Road, Chesterbrook, Pennsylvania on November 19, 2019 at 1:30 p.m.

7. Pennsylvania Emergency Management Agency (PEMA) Headquarters at Harrisburg, Pennsylvania ***(observed only)***
   - Commonwealth Response Coordination Center (CRCC)
   - Joint Public Information Center
   - Accident Assessment Center (BRP)

8. Exelon's Emergency Operations Facility (EOF)/Joint Information Center

9. County Emergency Operations Center (EOCs)

DEMONSTRATION FOR EOC MOBILIZATION FOR COUNTIES		
COUNTY	**DATE**	**TIME**
Berks	November 19, 2019	4:00 p.m. to 10:00 p.m.
Bucks		
Chester		
Montgomery		
Lehigh		

10. Municipal Emergency Operations Center (EOCs)

FEMA Evaluated Municipalities

DEMONSTRATION FOR EOC MOBILIZATION FOR MUNICIPALITIES (FEMA EVALUATED)		
RISK COUNTY	**MUNICIPALITY**	**DATE**
Berks (3/6)	Amity Township	November 19, 2019
	Douglass Township	
	Washington Township – ***RA***	
Chester (8/15)	East Nantmeal Township	
	North Coventry Township – ***RA***	
	Phoenixville Borough	
	South Coventry Township	
	Spring City Borough	
	Upper Uwchlan Township (demonstrate at UUT Public Works Building)	
	Warwick Township	
	West Pikeland Township	
Montgomery (10/20)	Collegeville Borough	
	Douglass Township – ***RA***	
	Lower Providence Township	
	Lower Salford Township	
	Royersford Borough	
	Schwenksville Borough (demonstrate at Perkiomen Valley Library)	
	Skippack Township	
	Upper Providence Township	
	Upper Salford Township	
	West Pottsgrove Township	

PEMA Observed Municipalities

Asterisks (*) items indicate joint EOCs.

DEMONSTRATION FOR EOC MOBILIZATION FOR MUNICIPALITIES (PEMA OBSERVED)		
RISK COUNTY	**MUNICIPALITY**	**DATE**
Berks	*Boyertown Borough/Colebrookdale Township	November 19, 2019
	Earl Township	
	Union Township	
Chester	Charlestown Township	
	East Coventry Township	
	East Pikeland Township	
	East Vincent Township	
	Schuylkill Township	
	Uwchlan Township	
	West Vincent Township	
Montgomery	*Greenlane Borough/Marlborough Township	
	Limerick Township	
	Lower Frederick Township	
	Lower Pottsgrove Township	
	New Hanover Township	
	Perkiomen Township	
	Pottstown Borough	
	Trappe Borough	
	Upper Frederick Township	
	Upper Pottsgrove Township	

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

BACK-UP ROUTE ALERTING		
COUNTY	**MUNICIPALITY / ROUTE / SIREN**	**DATE**
Berks	Washington Township (1 teams)	November 19, 2019
Chester	North Coventry Township (2 teams)	
Montgomery	Douglass Township (2 teams)	

12. Traffic and Access Control Points

    a. The Pennsylvania State Police (PSP) will brief at the PSP Troop L – Reading Barracks, 600 Kenhorst Boulevard, Berks 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 p.m. on November 20, 2019.

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 4:00 p.m. to 10:00 p.m. on November 19, 2019.

Berks	Chester	Montgomery
Amity Township	North Coventry Township	Collegeville Borough
Douglass Township	Phoenixville Borough	Douglass Township
	Spring City Borough	Lower Providence Township
	Upper Uwchlan Township	Lower Salford Township
	West Pikeland Township	Royersford Borough
		Upper Providence Township
		West Pottsgrove Township

III. Mass Care Center Walkdowns

Berks and Lehigh Counties (*) conduct monitoring/decontamination center activities at their mass care centers.

DEMONSTRATION OF MASS CARE CENTERS / HOST SCHOOL		
COUNTY	**DATE**	**TIME**
*Berks (3/22)	Nine walkdowns are scheduled for Friday, September 13, 2019 See schedule below	
Bucks (5/58)		
Chester (0/10)		
*Lehigh (0/15)		
Montgomery (1/13)		

MASS CARE CENTER LOCATIONS		
COUNTY	**LOCATION**	**Quantity**
*Berks **BLUE TEAM** **8:00 A.M.**	1. Tulpehocken Junior – Senior High School 2. Hamburg Area High School 3. Brandywine Heights High School	**3**
Bucks **RED TEAM** **8:00 A.M.**	1. William Penn Middle School 2. Neshaminy Senior High School 3. Bensalem High School 4. Cecilia Snyder Middle School 5. Robert Shafer Middle School	**5**
Chester	No Walk Downs	**0**

MASS CARE CENTER LOCATIONS		
COUNTY	**LOCATION**	**Quantity**
*Lehigh	No Walk Downs	**0**
Montgomery **BLUE TEAM** **1:30 P.M.**	1. Cedarbrook Middle School	**1**

NOTE: The mass care walkdown will have team(s) consisting of a FEMA Evaluator, PEMA, County Representative, ARC Representative, and Exelon Representative (optional). The mass care centers mentioned will have a team enter the facility to verify layout, usable common areas, square footage estimate, and capability of being used as a mass care facility. A walkdown assessment of mass care facilities scheduled for evaluation will be accomplished to satisfy FEMA's evaluation process.

ATTACHMENT B

LIMERICK GENERATING STATION
PREVIOUS ISSUES

COUNTY	Criteria	FINDING NUMBER	FACILITY EVALUATED	RE-DEMONSTRATION COMPLETE
Berks	5.a.3	Planning Issue 3.3.2.17	Boyertown Borough/Colebrookdale Township – took 75 minutes after the notification of the failed siren.	N/A – has updated plan
Berks	3.a.1	Level 2 3.3.2.22	Union Township – Radiological Officer (RO) did not give the radiological briefing at Site Area Emergency. RO was retrained and through interview indicated an understanding on the uses and importance of dosimetry and KI.	Successfully – November 14, 2017
Chester	1.c.1	Level 2 3.3.2.35	East Coventry Township – The EMC did not demonstrate the ability to carry out essential functions required for response. Re-demonstration done and successfully demonstrated the ability to provide direction and control during the exercise.	Successfully – February 22, 2018
Chester	3.a.1	Level 2 3.3.2.35	East Coventry Township – Exposure control equipment and procedures were not adequately demonstrated, no area kit, no 30-minute DRD reading check was done nor recorded, no briefing given to the Officer dispatched to the TCP. Re-demonstration performed successfully by issuing appropriate dosimetry and KI, and managed radiological exposure to emergency workers (EWs).	Successfully – February 22, 2018
Montgomery	3.a.1	Level 2 3.3.2.557	Greenlane Borough/Marlboro Township – The RO provided an insufficient briefing to EWs. When interviewed, the EWs were unfamiliar with dosimetry, dose limits, KI, and documentation. After just in time training, re-demonstration was performed successfully with RO brief, documentation, and interview.	Successfully – November 14, 2017
Montgomery	1.a.1	Level 2 3.3.2.91	Trappe Borough – Did not have adequate personnel to staff positions or maintain 24-hour operations. Re-demonstration	Successfully – February 22, 2018

COUNTY	Criteria	FINDING NUMBER	FACILITY EVALUATED	RE-DEMONSTRATION COMPLETE
			performed successfully with the use of effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner.	
Montgomery	3.a.1 –	Level 2 3.3.2.91	Trappe Borough – The RO provided insufficient briefing to EWs. When interviewed, the EWs were unfamiliar with dosimetry, dose limits, KI, and documentation. Re-demonstrated performed successfully with the issuance of appropriate dosimetry, KI, procedures, and management of radiological exposure control to EWs.	Successfully – February 22, 2018