U.S. Department of Homeland Security
Region III
One Independence Mall, 6th Floor
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FEMA

MAR 0 1 2018

Nuclear Regulatory Commission Headquarters
Office of Nuclear Security and Incident Response
Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

To Whom It May Concern:

Enclosed is the final After Action Report for the Limerick Generating Station Radiological Emergency Preparedness Plume Exercise that was held on November 14th, 2017. This report also includes the Mass Care Assessments that were conducted on October 30th and 31st, and the Out of Sequence Exercises that were conducted on November 14th and 15th, 2017.

There were no Level 1 Findings identified during the exercise. There were six Level 2 Findings identified, two of which were successfully re-demonstrated during the exercise night on November 14, 2017. The other four Level 2 Findings were re-demonstrated successfully on February 22, 2018. Also, there was one Planning Issue identified.

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.

If you have any questions, please contact Thomas Scardino at (215) 931-5546.

Sincerely,

MaryAnn Tierney
Regional Administrator

Enclosure

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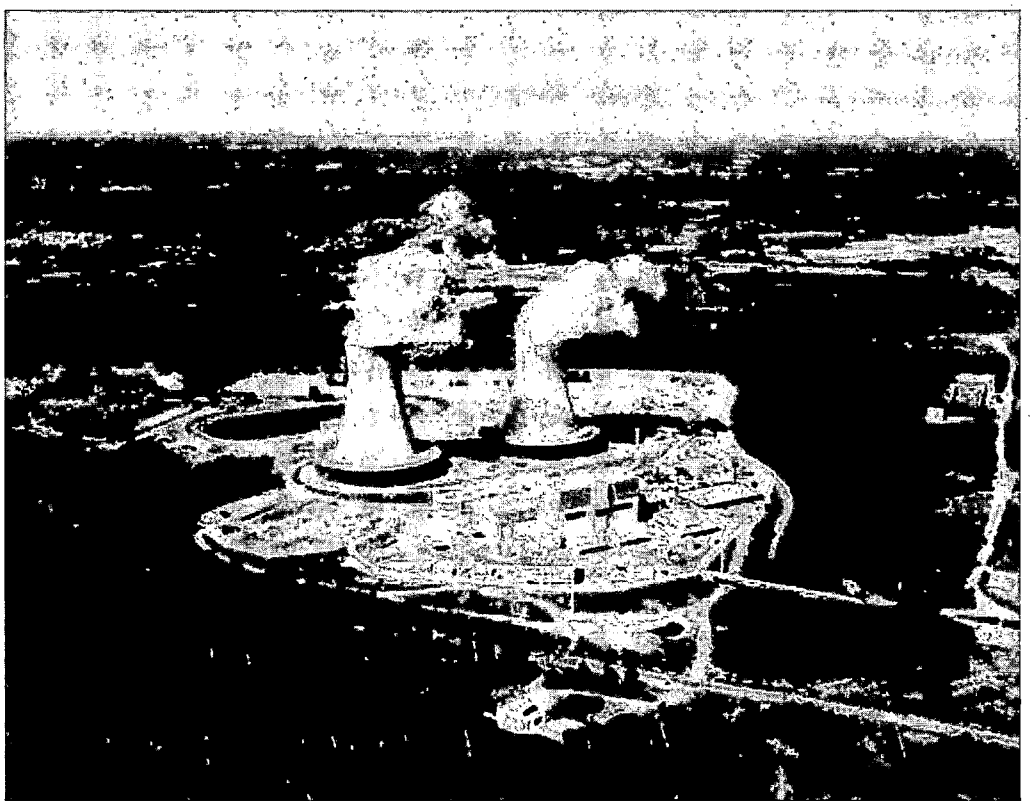
NRR



Limerick Generating Station After Action Report/ Improvement Plan

Exercise Date – November 14, 2017

Radiological Emergency Preparedness (REP) Program

FEMA

Final Published February 26, 2018

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Limerick Generating Station

After Action Report/Improvement Plan

Final Published February 26, 2018

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EXECUTIVE SUMMARY

On November 14, 2017, a full-scale Plume Exposure Pathway exercise was conducted and evaluated for the 10 Mile Emergency Planning Zone (EPZ) around the Limerick Generating Station (LGS) by the Federal Emergency Management Agency (FEMA), Region III. The previous full-scale exercise at this site was evaluated on November 17, 2015.

Out-of-Sequence demonstrations were conducted on November 14 and 15, 2017. 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 Plans and Procedures (RERP) to protect the property and lives of residents and transients in the event of an emergency at 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.

The evaluation of this Exercise determined that there were no Level 1 Findings identified during the exercise. There were six Level 2 Findings identified, two of which were successfully re-demonstrated during the exercise night on November 14, 2017. The other four Level 2 Findings were re-demonstrated successfully on February 22, 2018. Also, there was one Planning Issue identified.

A Level 1 Finding is defined by the FEMA Radiological Emergency Preparedness Program Manual as follows: "An observed or identified inadequacy of 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 the event of a radiological emergency to protect the health and safety of the public living in the vicinity of a Nuclear Power Plant (NPP)." A Level 2 Finding is defined as: "An observed or identified inadequacy of organizational performance in an exercise that is not considered, by itself, to adversely impact public health and safety." Finally, a Planning Issue is: "An observed or identified inadequacy in the ORO's emergency plan/implementing procedures, rather than that of the ORO's performance."

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

SECTION 1: EXERCISE OVERVIEW

1.1 Exercise Details

Exercise Name
Plume 2017-11-14

Type of Exercise
Plume

Exercise Date
November 14, 2017

Program
Department of Homeland Security/FEMA Radiological Emergency Preparedness Program

Scenario Type
Minimal Release

1.2 Exercise Planning Team Leadership

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1.3 Participating Organizations

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

State Jurisdictions

Commonwealth of Pennsylvania/Commonwealth Response Coordination Center (CRCC)

- American Red Cross
- Auxiliary Communication Services (ACS)
- Department of Military and Veteran Affairs
- Pennsylvania Department of Administration
- Pennsylvania Department of Aging
- Pennsylvania Department of Agriculture
- Pennsylvania Department of Conservation and Natural Resources
- Pennsylvania Department of Corrections
- Pennsylvania Department of Education
- 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 Fish and Boat Commission
- Pennsylvania Game Commission
- Pennsylvania State Police
- Pennsylvania Turnpike Commission
- Public Utility Commission
- United States Postal Service (USPS)
- Voluntary Organizations Active in Disasters (VOAD)

PA Joint Information Center/Exelon Joint Information Center

- Exelon Corporation
- Pennsylvania Department of Environmental Protection, Bureau of Radiation Protection
- Pennsylvania Department of Transportation
- Pennsylvania Emergency Management Agency

Accident Assessment Center

- Pennsylvania Department of Environmental Protection, Bureau of Radiation Protection

RISK JURISDICTIONS

Berks County

Berks County Emergency Operations Center (EOC)

- American Red Cross
- Berks County Chief Administration Officer
- Berks County Department of Education
- Berks County Department of Emergency Services
- Berks County Department of Human Resources
- Berks County Department of Mental Health and Developmental Disabilities
- Berks County Department of Purchasing
- Berks County Department of Transportation
- Berks County Information Systems
- Berks County 911
- Berks County Planning Commission
- Berks County Public Works
- Berks County Sheriff's Department
- Civil Air Patrol
- Exelon
- Met Ed Electric
- PPL Electric
- Pennsylvania Department of Transportation
- Radio Amateur Civil Emergency Services (RACES)
- Reading Hospital
- St. Joseph's Hospital

Boyertown-Colebrookdale (EOC)

- Boyertown Fire and Rescue
- Boyertown Department of Transportation
- Boyertown Emergency Medical Agency
- Boyertown Municipal Planning
- Boyertown Police Department
- Pennsylvania Emergency Management Agency
- Radio Amateur Civil Emergency Services (RACES)

Boyertown Borough-Colebrookdale Back-up Route Alerting (1&2)

- Boyertown Fire and Rescue
- Boyertown Police Department

Earl Township (EOC)

- Earl Township Emergency Management Agency
- Earl Township Board of Supervisors
- Berks County RACES/ARES

Berks County Reception Center (Robeson Township Building)

- Gibraltar Fire Company No. 1
- Robeson Police
- Robeson Township

Berks County Emergency Worker Monitoring/Decontamination (Daniel Boone High School)

- Birdsboro Union Fire Department

Berks County Evacuee Monitoring/Decontamination/Mass Care (Schuylkill Valley High School)

- American Red Cross
- Lehigh Valley-Bucks Chapter
- Tri-County Chapter, American Red Cross
- Union Fire Company 1

Chester County

Chester County Emergency Operations Center (EOC)

- Chester City First
- Chester County American Red Cross
- Chester County Department of Emergency Services
- Chester County Department of Human Services
- Chester County Department of Information Services
- Chester County Department of Procurement
- Chester County HAZMAT Team
- Chester County Sheriff's Department
- Knowledge Center
- Pennsylvania Emergency Management Agency
- Pennsylvania State Police
- Philadelphia Police Department Vanguard

Charlestown Township EOC

- Charlestown Township Police and Safety
- Chester County ARES/ Radio Amateur Civilian Emergency Services (RACES)

East Coventry Township EOC

- East Coventry Township Police Department
- East Coventry Township Public Works Departments
- Radio Amateur Civil Emergency Services (RACES)
- Ridge Fire Company

East Pikeland Township EOC

- Chester County ARES/ Radio Amateur Civilian Emergency Services (RACES)
- East Pikeland Emergency Management Agency
- East Pikeland Township Police Department
- East Pikeland Transportation Department
- Kimberton Volunteer Fire Department

Schuylkill Township EOC

- Chester County ARES/RACES
- Chester County Department of Emergency Services
- Pennsylvania Emergency Management Agency
- Schuylkill Township Police Department
- Valley Forge Fire Department

Uwchlan Township EOC

- Chester County ARES/RACES
- Uwchlan Township Police Department
- Uwchlan Ambulance Township
- Lionville Fire Company
- Uwchlan Township Chair
- Uwchlan Township Supervisor
- Uwchlan Township Manager

West Vincent Township EOC

- Chester County ARES/RACES
- Ludwigs Corner Fire Company
- West Vincent Communications
- West Vincent Police Department
- West Vincent Township Emergency Operations Center

Chester County Reception Center/Evacuee Monitoring/Decontamination Station

- Chester County HAZMAT Team
- West Whiteland Fire Department

Chester County Emergency Worker Monitoring/Decontamination Station
(Twin Valley Fire Dept.)

- Chester County HAZMAT Team
- Twin Valley Fire Department

Chester County Schools

- Pennsylvania Emergency Management Agency
- Chester County Department of Emergency Services
- Downingtown Area School District
- Lionville Elementary School
- Uwchlan Hills Elementary School
- Lionville Middle School
- Downingtown High School East
- Great Valley School District
- Great Valley Middle School
- Great Valley High School
- Owen J. Roberts School District
- French Creek Elementary School
- East Vincent Elementary School
- West Vincent Elementary School
- Phoenixville Area School District
- Manavon Elementary School & Phoenixville Area Early Learning Ctr.

Montgomery County

Montgomery County Emergency Operations Center

- American Red Cross Southeast PA Chapter
- Hospital Association of Pennsylvania
- Montgomery County ARES/RACES
- Montgomery County Critical Incident Stress Management Team
- Montgomery County Emergency Communications Division
- Montgomery County Emergency Management
- Montgomery County HAZMAT Response Team
- Montgomery County Health Department
- Montgomery County Office of Emergency Medical Services
- Pennsylvania Emergency Management Agency
- Pennsylvania State Police

Greenlane Borough/Marlborough Township EOC

- Greenlane Borough Council / Board of Supervisors

- Greenlane Fire Department
- Harleysville Area Emergency Medical Services
- Marlborough Police Department
- Marlborough Township
- Pennsylvania Emergency Management Agency
- Radio Amateur Civilian Emergency Services (RACES)

Limerick Township EOC

- ARES/ Radio Amateur Civilian Emergency Services (RACES)
- Friendship Ambulance
- Limerick Fire Company
- Limerick Police Department
- Pennsylvania Emergency Management Agency
- Trappe Emergency Medical Services

Lower Frederick Township EOC

- Lower Frederick Township Fire Service
- Lower Frederick Township Health and Medical Services (EMS)
- Lower Frederick Township Police Department
- Lower Frederick Township Public Works Department
- Radio Amateur Civilian Emergency Services (RACES)

Lower Pottsgrove Township EOC

- ARES/ Radio Amateur Civilian Emergency Services (RACES)
- Lower Pottsgrove Emergency Management
- Lower Pottsgrove Police Department
- Lower Pottsgrove Fire Marshall

New Hanover Township EOC

- New Hanover Police Department

Perkiomen Township EOC

- Perkiomen Township Emergency Management Agency
- Perkiomen Township Fire Department
- Perkiomen Township Public Works

Trappe Borough EOC

- Radio Amateur Civil Emergency Services (RACES)
- Trappe Borough Council

- Trappe Borough Emergency Management Agency
- Trappe Borough Emergency Medical Services
- Trappe Borough Fire Company

Montgomery County Evacuee Monitoring/Decontamination Station (Plymouth)

- Exelon
- Montgomery County HAZMAT Team
- Pennsylvania Emergency Management Agency
- Plymouth Fire Company

Montgomery County EW Monitoring/Decontamination Station (Indian Valley Middle School)

- Montgomery County HAZMAT Team
- Montgomery County Office of Emergency Management
- Telford Volunteer Diving and Rescue Unit

Montgomery County Schools

- Methacton Area School District
- Methacton Senior High School
- Woodland Elementary School
- Eagleville Elementary School
- Perkiomen Valley School District
- Perkiomen Valley Middle School East
- South Elementary School
- Pottsgrove School District
- Pottsgrove High School
- West Pottsgrove Elementary School
- Pottstown Area School District
- Lincoln Elementary School
- Pottstown High School
- Souderton Area School District
- Salford Hills Elementary School
- Spring Ford Area School District
- Spring-Ford Area High School
- Upper Providence Elementary School
- 5th & 6th Grade Center
- 7th Grade Center
- 8th Grade Center
- Upper Perkiomen School District
- Upper Perkiomen High School
- Upper Perkiomen Middle School
- Marlborough Elementary School

SUPPORT JURISDICTIONS

Bucks County

Bucks County Emergency Operations Center (EOC)

- American Red Cross
- Bucks County Board of Commissioners
- Bucks County Department of General Services
- Bucks County Emergency Medical Services
- Bucks County Fire Department
- Bucks County Health Department
- Bucks County Office of Emergency Management
- Bucks County Sheriff's Department
- Bucks County Voluntary Organizations Active in Disasters (VOAD)

Lehigh County

Lehigh County Emergency Operations Center

- American Red Cross
- Catasauqua Fire Department
- Eastern Pennsylvania EMS
- Lehigh County Emergency Management Agency
- Lehigh County Sheriff's Department
- Lehigh Valley Animal Rescue Team
- Lower Macungie Emergency Management Agency
- Radio Amateur Civil Emergency Services (RACES)
- Saint Luke's Hospital

Lehigh County Reception Center/Monitoring/Decontamination/Mass Care Center (Southern Lehigh High School)

- American Red Cross
- Lehigh County Emergency Management Agency
- Lehigh County Special Operations
- Upper Saucon Fire Department
- Upper Saucon Police Department

SECTION 2: EXERCISE DESIGN SUMMARY

2.1 Exercise Purpose and Design

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

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

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

B. Determining whether such plans and procedures can be implemented on the basis of observation and evaluation of exercises 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, and
- U.S. Food and Drug Administration

Representatives of these agencies serve on the Region III Regional Assistance Committee (RAC), which is chaired by FEMA. A REP Plume Exposure Pathway Exercise was conducted

during the week of November 13, 2017, to assess the capabilities of State and local emergency preparedness organizations in implementing their RERPs and procedures to protect the public health and safety during a radiological emergency involving 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;

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", and 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. They include:

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

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 traverses the site about 500 feet from the plant.

2.2 Exercise Objectives, Capabilities and Activities

The objective of the 2017 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 of 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 also evaluated.

2.3 Scenario Summary

DHS/FEMA Region III, Limerick 2017 Plume Exposure pathway Exercise – November 14, 2017

LGS Unit 1 a boiling water reactor was operating at 100 percent power. The wind direction was from 270 degrees (W) into the East at 6 miles per hour. The atmospheric stability class was E, slightly stable. The weather forecast was for the wind direction to be from the south west (SW).

On or before 1620, an Unusual Event was declared based on emergency action level (EAL) RU3, the reactor coolant radioactivity exceeded the technical specification allowable level.

On or before 1705, an ALERT was declared in accordance with EAL MA3, automatic or manual actions in the control room failed to shut the reactor down.

On or before 1815, a Site Area Emergency was declared in accordance with EAL FS1, loss of two fission product barriers, the reactor coolant system and reactor containment.

On or before 1935, a General Emergency was declared based on EAL FG1, loss of any two fission product barriers and the loss or potential loss of the third barrier. **A radiation release from the reactor building to the main stack continued.**

The Commonwealth of Pennsylvania Emergency Management Agency (PEMA), Bureau of Radiation Protection and county and local agencies implemented protective response strategies based on recommendations from utility representatives and State dose/accident assessment teams.

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 14, 2017, biennial Plume Exposure Pathway EPZ Radiological Emergency Preparedness (REP) Exercise, and the Out of Sequence Exercise evaluations on October 30th and 31st, November 14th and 15th, 2017. 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 was evaluated on the basis of its demonstration of the Exercise Evaluation Area Criteria contained in the REP Exercise Evaluation Methodology. Detailed information on the exercise evaluation area criteria and the Extent of Play Agreement 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 by the use of 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 in the vicinity of 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.

Tables 3.1 - Summary of Exercise Evaluation

Table 3.1a - Exercise Evaluation by Classification

Date: November 14, 2017 Site: Limerick Generating Station			
Location Abbreviation	Criteria Title	Criteria	Classification
BrCo UTwp EOC	Implementation of Emergency Worker Exposure Control Re-demonstrated Successfully	3a1	L2
BrCoByrCbrkEOC	Activation of the Back-up ANS	5a3	P
CC ECT EOC	Implementation of Emergency Worker Exposure Control Re-demonstrated Successfully	3a1	L2
CC ECT EOC	Direction and Control Re-demonstrated Successfully	1c1	L2
MC TrpBr EOC	Mobilization Re-demonstrated Successfully	1a1	L2
MC TrpBr EOC	Implementation of Emergency Worker Exposure Control Re-demonstrated Successfully	3a1	L2
MCGLMrlbrTwpEOC	Implementation of Emergency Worker Exposure Control Re-demonstrated Successfully	3a1	L2

Table 3.1b – Exercise Evaluation – Criteria Not Demonstrated

Date: November 14, 2017 Site: Limerick Generating Station		
Location Abbreviation	Criteria Title	Criteria
BRP R3V	Mobilization	1a1
BRP R3V	Communications Equipment	1d1
BRP R3V	Equipment and Supplies to Support Operations	1e1
BRP R3V	Implementation of Emergency Worker Exposure Control	3a1
BRP R3V	Field Team Management	4a2
CC ECT EOC	Implementation of KI PAD for Institutionalized Individuals/Public	3b1
CC WVncntTwp EOC	Implementation of KI PAD for Institutionalized Individuals/Public	3b1
EJIC	Communications Equipment	1d1
EJIC	Equipment and Supplies to Support Operations	1e1
EJIC	Emergency Information & Instructions for the Public/Media	5b1
PA JIC/RumCon	Mobilization	1a1
PA JIC/RumCon	Communications Equipment	1d1
PA JIC/RumCon	Emergency Information & Instructions for the Public/Media	5b1
PAAACSEOCBRP	Mobilization	1a1
PAAACSEOCBRP	Direction and Control	1c1
PAAACSEOCBRP	Communications Equipment	1d1
PAAACSEOCBRP	Equipment and Supplies to Support Operations	1e1
PAAACSEOCBRP	Emergency Worker Exposure Control Decisions	2a1
PAAACSEOCBRP	Accident Assessment and PARs for the Emergency Event	2b1
PAAACSEOCBRP	PAD decision-making process and coordination for the General Public	2b2

PACRCC	Mobilization	1a1
PACRCC	Communications Equipment	1d1
PACRCC	Equipment and Supplies to Support Operations	1e1
SFMT A SER	Mobilization	1a1
SFMT A SER	Communications Equipment	1d1
SFMT A SER	Equipment and Supplies to Support Operations	1e1
SFMT A SER	Implementation of Emergency Worker Exposure Control	3a1
SFMT A SER	Plume Phase Field Measurement, Handling, & Analyses	4a3
SFMT B SER	Communications Equipment	1d1
SFMT B SER	Equipment and Supplies to Support Operations	1e1
SFMT B SER	Implementation of Emergency Worker Exposure Control	3a1
SFMT B SER	Plume Phase Field Measurement, Handling, & Analyses	4a3

Table 3.1c – Exercise Evaluation – Criteria Met

Date: November 14, 2017 Site: Limerick Generating Station		
Location Abbreviation	Criteria Title	Criteria
BkCo EOC (S)	Mobilization	1a1
BkCo EOC (S)	Direction and Control	1c1
BkCo EOC (S)	Communications Equipment	1d1
BkCo EOC (S)	Equipment and Supplies to Support Operations	1e1
BkCo EOC (S)	Emergency Information & Instructions for the Public/Media	5b1
BrCo BASD	Implementation of PADs for Schools	3c2
BrCo BASD ByrtwnSHS	Implementation of PADs for Schools	3c2
BrCo BASD EES	Implementation of PADs for Schools	3c2
BrCo BASD NH/UFES	Implementation of PADs for Schools	3c2
BrCo BASD WES	Implementation of PADs for Schools	3c2
BrCo DBASD	Implementation of PADs for Schools	3c2
BrCo EOC	Implementation of KI PAD for Institutionalized Individuals/Public	3b1
BrCo EOC	Implementation of PADs for disabilities & access/functional needs people	3c1
BrCo EOC	Implementation of PADs for Schools	3c2
BrCo EOC	Implementation of Traffic & Access Control	3d1
BrCo EOC	Impediments to Evacuation	3d2
BrCo EOC	Mobilization	1a1
BrCo EOC	Communications Equipment	1d1
BrCo EOC	Direction and Control	1c1
BrCo EOC	Equipment and Supplies to Support Operations	1e1
BrCo EOC	Implementation of Emergency Worker Exposure Control	3a1
BrCo EOC	Activation of the Prompt Alert & Notification System	5a1
BrCo EOC	Activation of the Back-up ANS	5a3
BrCo EOC	PADs for disabilities & access/functional needs people	2c1
BrCo EOC	Emergency Information & Instructions for the Public/Media	5b1
BrCo ErlTwp EOC	Implementation of KI PAD for Institutionalized Individuals/Public	3b1

BrCo ErlTwp EOC	Mobilization	1a1
BrCo ErlTwp EOC	Communications Equipment	1d1
BrCo ErlTwp EOC	Equipment and Supplies to Support Operations	1e1
BrCo ErlTwp EOC	Implementation of PADs for Schools	3c2
BrCo ErlTwp EOC	Direction and Control	1c1
BrCo ErlTwp EOC	Implementation of PADs for disabilities & access/functional needs people	3c1
BrCo ErlTwp EOC	Implementation of Traffic & Access Control	3d1
BrCo ErlTwp EOC	Impediments to Evacuation	3d2
BrCo ErlTwp EOC	Implementation of Emergency Worker Exposure Control	3a1
BrCo EWMDS DBC	Direction and Control	1c1
BrCo EWMDS DBC	Communications Equipment	1d1
BrCo EWMDS DBC	Implementation of Emergency Worker Exposure Control	3a1
BrCo EWMDS DBC	Equipment and Supplies to Support Operations	1e1
BrCo EWMDS DBC	Monitoring/Decontamination of Emergency Workers/Equipment/Vehicles	6b1
BrCO MDC GMSHS	Direction and Control	1c1
BrCO MDC GMSHS	Communications Equipment	1d1
BrCO MDC GMSHS	Implementation of Emergency Worker Exposure Control	3a1
BrCO MDC GMSHS	Equipment and Supplies to Support Operations	1e1
BrCO MDC GMSHS	Monitoring, Decontamination, & Registration of Evacuees	6a1
BrCo MDC MSHS	Direction and Control	1c1
BrCo MDC MSHS	Communications Equipment	1d1
BrCo MDC MSHS	Equipment and Supplies to Support Operations	1e1
BrCo MDC MSHS	Implementation of Emergency Worker Exposure Control	3a1
BrCo MDC MSHS	Monitoring, Decontamination, & Registration of Evacuees	6a1
BrCo MDC SclklVlySCplx	Direction and Control	1c1
BrCo MDC SclklVlySCplx	Communications Equipment	1d1
BrCo MDC SclklVlySCplx	Equipment and Supplies to Support Operations	1e1
BrCo MDC SclklVlySCplx	Implementation of Emergency Worker Exposure Control	3a1
BrCo MDC SclklVlySCplx	Monitoring, Decontamination, & Registration of Evacuees	6a1
BrCo RC RobTwpBldg	Communications Equipment	1d1
BrCo RC RobTwpBldg	Equipment and Supplies to Support Operations	1e1
BrCo RC RobTwpBldg	Implementation of Emergency Worker Exposure Control	3a1
BrCo RC RobTwpBldg	Monitoring, Decontamination, & Registration of Evacuees	6a1
BrCo UTwp EOC	Mobilization	1a1
BrCo UTwp EOC	Direction and Control	1c1
BrCo UTwp EOC	Implementation of KI PAD for Institutionalized Individuals/Public	3b1
BrCo UTwp EOC	Implementation of PADs for Schools	3c2
BrCo UTwp EOC	Implementation of Traffic & Access Control	3d1
BrCo UTwp EOC	Communications Equipment	1d1
BrCo UTwp EOC	Implementation of PADs for disabilities & access/functional needs people	3c1
BrCo UTwp EOC	Impediments to Evacuation	3d2
BrCo UTwp EOC	Equipment and Supplies to Support Operations	1e1
BrCo UTwp EOC	Implementation of Emergency Worker Exposure Control	3a1
BrCoByrCbrkEOC	Mobilization	1a1

BrCoByrCbrkEOC	Direction and Control	1c1
BrCoByrCbrkEOC	Communications Equipment	1d1
BrCoByrCbrkEOC	Equipment and Supplies to Support Operations	1e1
BrCoByrCbrkEOC	Implementation of Emergency Worker Exposure Control	3a1
BrCoByrCbrkEOC	Implementation of KI PAD for Institutionalized Individuals/Public	3b1
BrCoByrCbrkEOC	Implementation of PADs for disabilities & access/functional needs people	3c1
BrCoByrCbrkEOC	Implementation of PADs for Schools	3c2
BrCoByrCbrkEOC	Implementation of Traffic & Access Control	3d1
BrCoByrCbrkEOC	Impediments to Evacuation	3d2
BrCoByrCbrkEOC	Activation of the Back-up ANS	5a3
BrCoByrCbrkTACP	Communications Equipment	1d1
BrCoByrCbrkTACP	Equipment and Supplies to Support Operations	1e1
BrCoByrCbrkTACP	Implementation of Emergency Worker Exposure Control	3a1
BrCoByrCbrkTACP	Implementation of Traffic & Access Control	3d1
BrCoDBASDBdsbrES	Implementation of PADs for Schools	3c2
BrCoMCCGMSHS	Direction and Control	1c1
BrCoMCCGMSHS	Communications Equipment	1d1
BrCoMCCGMSHS	Equipment and Supplies to Support Operations	1e1
BrCoMCCGMSHS	Temporary Care of Evacuees	6c1
BrCoMCCMSHS	Equipment and Supplies to Support Operations	1e1
BrCoMCCMSHS	Temporary Care of Evacuees	6c1
BrCoMCCMSHS	Direction and Control	1c1
BrCoMCCMSHS	Communications Equipment	1d1
BrCoMCCSVSC	Direction and Control	1c1
BrCoMCCSVSC	Communications Equipment	1d1
BrCoMCCSVSC	Equipment and Supplies to Support Operations	1e1
BrCoMCCSVSC	Temporary Care of Evacuees	6c1
BRP R3V	Mobilization	1a1
BRP R3V	Communications Equipment	1d1
BRP R3V	Equipment and Supplies to Support Operations	1e1
BRP R3V	Implementation of Emergency Worker Exposure Control	3a1
BRP R3V	Field Team Management	4a2
BuCoMDCTFC	Direction and Control	1c1
BuCoMDCTFC	Communications Equipment	1d1
BuCoMDCTFC	Equipment and Supplies to Support Operations	1e1
BuCoMDCTFC	Implementation of Emergency Worker Exposure Control	3a1
BuCoMDCTFC	Monitoring, Decontamination, & Registration of Evacuees	6a1
BuCoRCTFC	Monitoring, Decontamination, & Registration of Evacuees	6a1
BuCoRCTFC	Communications Equipment	1d1
BuCoRCTFC	Equipment and Supplies to Support Operations	1e1
BuCoRCTFC	Implementation of Emergency Worker Exposure Control	3a1
ByrCbrk BURA (1)	Mobilization	1a1
ByrCbrk BURA (1)	Communications Equipment	1d1
ByrCbrk BURA (1)	Equipment and Supplies to Support Operations	1e1

ByrCbrk BURA (1)	Implementation of Emergency Worker Exposure Control	3a1
ByrCbrk BURA (2)	Mobilization	1a1
ByrCbrk BURA (2)	Communications Equipment	1d1
ByrCbrk BURA (2)	Equipment and Supplies to Support Operations	1e1
ByrCbrk BURA (2)	Implementation of Emergency Worker Exposure Control	3a1
CC Ctwn EOC	Mobilization	1a1
CC Ctwn EOC	Equipment and Supplies to Support Operations	1e1
CC Ctwn EOC	Implementation of Emergency Worker Exposure Control	3a1
CC Ctwn EOC	Communications Equipment	1d1
CC Ctwn EOC	Implementation of PADs for Schools	3c2
CC Ctwn EOC	Implementation of PADs for disabilities & access/functional needs people	3c1
CC Ctwn EOC	Direction and Control	1c1
CC Ctwn EOC	Implementation of Traffic & Access Control	3d1
CC Ctwn EOC	Impediments to Evacuation	3d2
CC Ctwn EOC	Implementation of KI PAD for Institutionalized Individuals/Public	3b1
CC DASD	Implementation of PADs for Schools	3c2
CC DASD DHSE	Implementation of PADs for Schools	3c2
CC DASD LES	Implementation of PADs for Schools	3c2
CC DASD LMS	Implementation of PADs for Schools	3c2
CC DASD UHES	Implementation of PADs for Schools	3c2
CC ECT EOC	Implementation of PADs for disabilities & access/functional needs people	3c1
CC ECT EOC	Implementation of Traffic & Access Control	3d1
CC ECT EOC	Implementation of PADs for Schools	3c2
CC ECT EOC	Mobilization	1a1
CC ECT EOC	Implementation of Emergency Worker Exposure Control	3a1
CC ECT EOC	Impediments to Evacuation	3d2
CC ECT EOC	Direction and Control	1c1
CC ECT EOC	Communications Equipment	1d1
CC ECT EOC	Equipment and Supplies to Support Operations	1e1
CC ECT EOC	Implementation of KI PAD for Institutionalized Individuals/Public	3b1
CC ECvntryTwp TACP	Implementation of Traffic & Access Control	3d1
CC ECvntryTwp TACP	Communications Equipment	1d1
CC ECvntryTwp TACP	Equipment and Supplies to Support Operations	1e1
CC ECvntryTwp TACP	Implementation of Emergency Worker Exposure Control	3a1
CC EOC	Implementation of KI PAD for Institutionalized Individuals/Public	3b1
CC EOC	Implementation of PADs for Schools	3c2
CC EOC	Impediments to Evacuation	3d2
CC EOC	Implementation of Traffic & Access Control	3d1
CC EOC	Implementation of PADs for disabilities & access/functional needs people	3c1
CC EOC	Mobilization	1a1
CC EOC	Implementation of Emergency Worker Exposure Control	3a1
CC EOC	Communications Equipment	1d1
CC EOC	Equipment and Supplies to Support Operations	1e1
CC EOC	Activation of the Prompt Alert & Notification System	5a1

CC EOC	Activation of the Back-up ANS	5a3
CC EOC	PADs for disabilities & access/functional needs people	2c1
CC EOC	Emergency Information & Instructions for the Public/Media	5b1
CC EOC	Direction and Control	1c1
CC EPklndTwp TACP	Communications Equipment	1d1
CC EPklndTwp TACP	Equipment and Supplies to Support Operations	1e1
CC EPklndTwp TACP	Implementation of Traffic & Access Control	3d1
CC EPklndTwp TACP	Implementation of Emergency Worker Exposure Control	3a1
CC EWMDS TVFD	Direction and Control	1c1
CC EWMDS TVFD	Communications Equipment	1d1
CC EWMDS TVFD	Equipment and Supplies to Support Operations	1e1
CC EWMDS TVFD	Implementation of Emergency Worker Exposure Control	3a1
CC EWMDS TVFD	Monitoring/Decontamination of Emergency Workers/Equipment/Vehicles	6b1
CC GVSD	Implementation of PADs for Schools	3c2
CC GVSD GVHS	Implementation of PADs for Schools	3c2
CC GVSD GVMS	Implementation of PADs for Schools	3c2
CC MDC WWhtlnd	Communications Equipment	1d1
CC MDC WWhtlnd	Implementation of Emergency Worker Exposure Control	3a1
CC MDC WWhtlnd	Monitoring, Decontamination, & Registration of Evacuees	6a1
CC MDC WWhtlnd	Direction and Control	1c1
CC MDC WWhtlnd	Equipment and Supplies to Support Operations	1e1
CC PASD	Implementation of PADs for Schools	3c2
CC PASD MES & PAELC	Implementation of PADs for Schools	3c2
CC RC WWTwp	Communications Equipment	1d1
CC RC WWTwp	Equipment and Supplies to Support Operations	1e1
CC RC WWTwp	Implementation of Emergency Worker Exposure Control	3a1
CC RC WWTwp	Monitoring, Decontamination, & Registration of Evacuees	6a1
CC SchlkTwp EOC	Mobilization	1a1
CC SchlkTwp EOC	Implementation of PADs for Schools	3c2
CC SchlkTwp EOC	Implementation of Traffic & Access Control	3d1
CC SchlkTwp EOC	Impediments to Evacuation	3d2
CC SchlkTwp EOC	Direction and Control	1c1
CC SchlkTwp EOC	Communications Equipment	1d1
CC SchlkTwp EOC	Equipment and Supplies to Support Operations	1e1
CC SchlkTwp EOC	Implementation of Emergency Worker Exposure Control	3a1
CC SchlkTwp EOC	Implementation of KI PAD for Institutionalized Individuals/Public	3b1
CC SchlkTwp EOC	Implementation of PADs for disabilities & access/functional needs people	3c1
CC SchlkTwp TACP	Communications Equipment	1d1
CC SchlkTwp TACP	Implementation of Emergency Worker Exposure Control	3a1
CC SchlkTwp TACP	Implementation of Traffic & Access Control	3d1
CC SchlkTwp TACP	Equipment and Supplies to Support Operations	1e1
CC UTwp TACP	Communications Equipment	1d1
CC UTwp TACP	Equipment and Supplies to Support Operations	1e1
CC UTwp TACP	Implementation of Traffic & Access Control	3d1

CC UTwp TACP	Implementation of Emergency Worker Exposure Control	3a1
CC WVncntTwp EOC	Implementation of KI PAD for Institutionalized Individuals/Public	3b1
CC WVncntTwp EOC	Mobilization	1a1
CC WVncntTwp EOC	Direction and Control	1c1
CC WVncntTwp EOC	Communications Equipment	1d1
CC WVncntTwp EOC	Implementation of PADs for Schools	3c2
CC WVncntTwp EOC	Implementation of PADs for disabilities & access/functional needs people	3c1
CC WVncntTwp EOC	Equipment and Supplies to Support Operations	1e1
CC WVncntTwp EOC	Implementation of Emergency Worker Exposure Control	3a1
CC WVncntTwp EOC	Implementation of Traffic & Access Control	3d1
CC WVncntTwp EOC	Impediments to Evacuation	3d2
CC WVncntTwp EOC	Activation of the Back-up ANS	5a3
CC WVncntTwp TACP	Equipment and Supplies to Support Operations	1e1
CC WVncntTwp TACP	Communications Equipment	1d1
CC WVncntTwp TACP	Implementation of Emergency Worker Exposure Control	3a1
CC WVncntTwp TACP	Implementation of Traffic & Access Control	3d1
CCEPTEOC	Impediments to Evacuation	3d2
CCEPTEOC	Direction and Control	1c1
CCEPTEOC	Implementation of PADs for Schools	3c2
CCEPTEOC	Implementation of Traffic & Access Control	3d1
CCEPTEOC	Mobilization	1a1
CCEPTEOC	Implementation of KI PAD for Institutionalized Individuals/Public	3b1
CCEPTEOC	Equipment and Supplies to Support Operations	1e1
CCEPTEOC	Implementation of PADs for disabilities & access/functional needs people	3c1
CCEPTEOC	Communications Equipment	1d1
CCEPTEOC	Implementation of Emergency Worker Exposure Control	3a1
CCOJRSD	Implementation of PADs for Schools	3c2
CCOJRSDEVES	Implementation of PADs for Schools	3c2
CCOJRSDFCES	Implementation of PADs for Schools	3c2
CCOJRSDWVES	Implementation of PADs for Schools	3c2
CCUclanTwpEOC	Mobilization	1a1
CCUclanTwpEOC	Implementation of Traffic & Access Control	3d1
CCUclanTwpEOC	Communications Equipment	1d1
CCUclanTwpEOC	Impediments to Evacuation	3d2
CCUclanTwpEOC	Equipment and Supplies to Support Operations	1e1
CCUclanTwpEOC	Implementation of PADs for Schools	3c2
CCUclanTwpEOC	Implementation of PADs for disabilities & access/functional needs people	3c1
CCUclanTwpEOC	Implementation of KI PAD for Institutionalized Individuals/Public	3b1
CCUclanTwpEOC	Direction and Control	1c1
CCUclanTwpEOC	Implementation of Emergency Worker Exposure Control	3a1
EJIC	Communications Equipment	1d1
EJIC	Equipment and Supplies to Support Operations	1e1
EJIC	Emergency Information & Instructions for the Public/Media	5b1
LhCo EOC (S)	Communications Equipment	1d1

LhCo EOC (S)	Equipment and Supplies to Support Operations	1e1
LhCo EOC (S)	Direction and Control	1c1
LhCo EOC (S)	Mobilization	1a1
LhCo EOC (S)	Emergency Information & Instructions for the Public/Media	5b1
LhCo MDC SLHS	Direction and Control	1c1
LhCo MDC SLHS	Communications Equipment	1d1
LhCo MDC SLHS	Equipment and Supplies to Support Operations	1e1
LhCo MDC SLHS	Implementation of Emergency Worker Exposure Control	3a1
LhCo MDC SLHS	Monitoring, Decontamination, & Registration of Evacuees	6a1
LhCo RC SLHS	Communications Equipment	1d1
LhCo RC SLHS	Equipment and Supplies to Support Operations	1e1
LhCo RC SLHS	Implementation of Emergency Worker Exposure Control	3a1
LhCo RC SLHS	Monitoring, Decontamination, & Registration of Evacuees	6a1
LhCoMCCSLHS	Direction and Control	1c1
LhCoMCCSLHS	Communications Equipment	1d1
LhCoMCCSLHS	Equipment and Supplies to Support Operations	1e1
LhCoMCCSLHS	Temporary Care of Evacuees	6c1
LimTown BURA (1)	Mobilization	1a1
LimTown BURA (1)	Communications Equipment	1d1
LimTown BURA (1)	Equipment and Supplies to Support Operations	1e1
LimTown BURA (1)	Implementation of Emergency Worker Exposure Control	3a1
LimTown BURA (1)	Activation of the Back-up ANS	5a3
LimTown BURA (2)	Mobilization	1a1
LimTown BURA (2)	Communications Equipment	1d1
LimTown BURA (2)	Equipment and Supplies to Support Operations	1e1
LimTown BURA (2)	Implementation of Emergency Worker Exposure Control	3a1
LimTown BURA (2)	Activation of the Back-up ANS	5a3
LowPtgv Twn TACP	Communications Equipment	1d1
LowPtgv Twn TACP	Equipment and Supplies to Support Operations	1e1
LowPtgv Twn TACP	Implementation of Emergency Worker Exposure Control	3a1
LowPtgv Twn TACP	Implementation of Traffic & Access Control	3d1
MC EOC	Implementation of Emergency Worker Exposure Control	3a1
MC EOC	Activation of the Prompt Alert & Notification System	5a1
MC EOC	Activation of the Back-up ANS	5a3
MC EOC	Implementation of KI PAD for Institutionalized Individuals/Public	3b1
MC EOC	Implementation of PADs for disabilities & access/functional needs people	3c1
MC EOC	Implementation of PADs for Schools	3c2
MC EOC	Implementation of Traffic & Access Control	3d1
MC EOC	Impediments to Evacuation	3d2
MC EOC	Emergency Information & Instructions for the Public/Media	5b1
MC EOC	Mobilization	1a1
MC EOC	Communications Equipment	1d1
MC EOC	Equipment and Supplies to Support Operations	1e1
MC EOC	PADs for disabilities & access/functional needs people	2c1

MC EOC	Direction and Control	1c1
MC EVMDC PFC	Direction and Control	1c1
MC EVMDC PFC	Communications Equipment	1d1
MC EVMDC PFC	Equipment and Supplies to Support Operations	1e1
MC EVMDC PFC	Implementation of Emergency Worker Exposure Control	3a1
MC EVMDC PFC	Monitoring, Decontamination, & Registration of Evacuees	6a1
MC EWMDS IVMS	Direction and Control	1c1
MC EWMDS IVMS	Communications Equipment	1d1
MC EWMDS IVMS	Implementation of Emergency Worker Exposure Control	3a1
MC EWMDS IVMS	Equipment and Supplies to Support Operations	1e1
MC EWMDS IVMS	Monitoring/Decontamination of Emergency Workers/Equipment/Vehicles	6b1
MC LFTWP EOC	Implementation of KI PAD for Institutionalized Individuals/Public	3b1
MC LFTWP EOC	Implementation of PADs for disabilities & access/functional needs people	3c1
MC LFTWP EOC	Mobilization	1a1
MC LFTWP EOC	Implementation of PADs for Schools	3c2
MC LFTWP EOC	Direction and Control	1c1
MC LFTWP EOC	Communications Equipment	1d1
MC LFTWP EOC	Equipment and Supplies to Support Operations	1e1
MC LFTWP EOC	Implementation of Emergency Worker Exposure Control	3a1
MC LFTWP EOC	Implementation of Traffic & Access Control	3d1
MC LFTWP EOC	Impediments to Evacuation	3d2
MC LmkTwp TACP	Communications Equipment	1d1
MC LmkTwp TACP	Equipment and Supplies to Support Operations	1e1
MC LmkTwp TACP	Implementation of Emergency Worker Exposure Control	3a1
MC LmkTwp TACP	Implementation of Traffic & Access Control	3d1
MC LmrkTwp EOC	Implementation of PADs for Schools	3c2
MC LmrkTwp EOC	Implementation of Traffic & Access Control	3d1
MC LmrkTwp EOC	Impediments to Evacuation	3d2
MC LmrkTwp EOC	Mobilization	1a1
MC LmrkTwp EOC	Direction and Control	1c1
MC LmrkTwp EOC	Communications Equipment	1d1
MC LmrkTwp EOC	Equipment and Supplies to Support Operations	1e1
MC LmrkTwp EOC	Implementation of Emergency Worker Exposure Control	3a1
MC LmrkTwp EOC	Activation of the Back-up ANS	5a3
MC LmrkTwp EOC	Implementation of KI PAD for Institutionalized Individuals/Public	3b1
MC LmrkTwp EOC	Implementation of PADs for disabilities & access/functional needs people	3c1
MC MboroTwp TACP	Communications Equipment	1d1
MC MboroTwp TACP	Equipment and Supplies to Support Operations	1e1
MC MboroTwp TACP	Implementation of Traffic & Access Control	3d1
MC MboroTwp TACP	Implementation of Emergency Worker Exposure Control	3a1
MC MSD	Implementation of PADs for Schools	3c2
MC MSD EES	Implementation of PADs for Schools	3c2
MC MSD MHS	Implementation of PADs for Schools	3c2
MC MSD WES	Implementation of PADs for Schools	3c2

MC PASD	Implementation of PADs for Schools	3c2
MC PASD LES	Implementation of PADs for Schools	3c2
MC PSD	Implementation of PADs for Schools	3c2
MC PSD WPES	Implementation of PADs for Schools	3c2
MC PVSD	Implementation of PADs for Schools	3c2
MC PVSES	Implementation of PADs for Schools	3c2
MC RC PFC	Communications Equipment	1d1
MC RC PFC	Equipment and Supplies to Support Operations	1e1
MC RC PFC	Implementation of Emergency Worker Exposure Control	3a1
MC RC PFC	Monitoring, Decontamination, & Registration of Evacuees	6a1
MC SASD	Implementation of PADs for Schools	3c2
MC SFASD	Implementation of PADs for Schools	3c2
MC SFASD 567GC	Implementation of PADs for Schools	3c2
MC SFASD SFAHS	Implementation of PADs for Schools	3c2
MC SFASD UPES	Implementation of PADs for Schools	3c2
MC TrpBr EOC	Communications Equipment	1d1
MC TrpBr EOC	Implementation of KI PAD for Institutionalized Individuals/Public	3b1
MC TrpBr EOC	Implementation of PADs for disabilities & access/functional needs people	3c1
MC TrpBr EOC	Implementation of PADs for Schools	3c2
MC TrpBr EOC	Implementation of Traffic & Access Control	3d1
MC TrpBr EOC	Impediments to Evacuation	3d2
MC TrpBr EOC	Mobilization	1a1
MC TrpBr EOC	Facilities	1b1
MC TrpBr EOC	Direction and Control	1c1
MC TrpBr EOC	Equipment and Supplies to Support Operations	1e1
MC TrpBr EOC	Implementation of Emergency Worker Exposure Control	3a1
MC UPSD	Implementation of PADs for Schools	3c2
MC UPSD MES	Implementation of PADs for Schools	3c2
MC UPSD UPHS	Implementation of PADs for Schools	3c2
MCGLMrlbrTwpEOC	Implementation of PADs for Schools	3c2
MCGLMrlbrTwpEOC	Implementation of KI PAD for Institutionalized Individuals/Public	3b1
MCGLMrlbrTwpEOC	Communications Equipment	1d1
MCGLMrlbrTwpEOC	Equipment and Supplies to Support Operations	1e1
MCGLMrlbrTwpEOC	Impediments to Evacuation	3d2
MCGLMrlbrTwpEOC	Implementation of Traffic & Access Control	3d1
MCGLMrlbrTwpEOC	Implementation of PADs for disabilities & access/functional needs people	3c1
MCGLMrlbrTwpEOC	Direction and Control	1c1
MCGLMrlbrTwpEOC	Implementation of Emergency Worker Exposure Control	3a1
MCGLMrlbrTwpEOC	Mobilization	1a1
MCLrPgrvTwpEOC	Mobilization	1a1
MCLrPgrvTwpEOC	Direction and Control	1c1
MCLrPgrvTwpEOC	Implementation of PADs for Schools	3c2
MCLrPgrvTwpEOC	Implementation of Traffic & Access Control	3d1
MCLrPgrvTwpEOC	Impediments to Evacuation	3d2

MCLrPgrvTwpEOC	Communications Equipment	1d1
MCLrPgrvTwpEOC	Equipment and Supplies to Support Operations	1e1
MCLrPgrvTwpEOC	Implementation of Emergency Worker Exposure Control	3a1
MCLrPgrvTwpEOC	Implementation of PADs for disabilities & access/functional needs people	3c1
MCLrPgrvTwpEOC	Implementation of KI PAD for Institutionalized Individuals/Public	3b1
MCNHvrTwpEOC	Mobilization	1a1
MCNHvrTwpEOC	Impediments to Evacuation	3d2
MCNHvrTwpEOC	Direction and Control	1c1
MCNHvrTwpEOC	Communications Equipment	1d1
MCNHvrTwpEOC	Implementation of Traffic & Access Control	3d1
MCNHvrTwpEOC	Implementation of PADs for Schools	3c2
MCNHvrTwpEOC	Equipment and Supplies to Support Operations	1e1
MCNHvrTwpEOC	Implementation of Emergency Worker Exposure Control	3a1
MCNHvrTwpEOC	Implementation of KI PAD for Institutionalized Individuals/Public	3b1
MCNHvrTwpEOC	Implementation of PADs for disabilities & access/functional needs people	3c1
MCNHvrTwpTACP	Implementation of Traffic & Access Control	3d1
MCNHvrTwpTACP	Implementation of Emergency Worker Exposure Control	3a1
MCNHvrTwpTACP	Equipment and Supplies to Support Operations	1e1
MCNHvrTwpTACP	Communications Equipment	1d1
MCPASDPHS	Implementation of PADs for Schools	3c2
MCPrkmnTwp EOC	Implementation of KI PAD for Institutionalized Individuals/Public	3b1
MCPrkmnTwp EOC	Implementation of PADs for disabilities & access/functional needs people	3c1
MCPrkmnTwp EOC	Implementation of PADs for Schools	3c2
MCPrkmnTwp EOC	Implementation of Traffic & Access Control	3d1
MCPrkmnTwp EOC	Impediments to Evacuation	3d2
MCPrkmnTwp EOC	Mobilization	1a1
MCPrkmnTwp EOC	Direction and Control	1c1
MCPrkmnTwp EOC	Communications Equipment	1d1
MCPrkmnTwp EOC	Equipment and Supplies to Support Operations	1e1
MCPrkmnTwp EOC	Implementation of Emergency Worker Exposure Control	3a1
MCPSDPgrvHS	Implementation of PADs for Schools	3c2
MCPVSDPVMSE	Implementation of PADs for Schools	3c2
MCSASDSHES	Implementation of PADs for Schools	3c2
MCSFASD7GC	Implementation of PADs for Schools	3c2
MCSFASD8GC	Implementation of PADs for Schools	3c2
MCUPSDUPMS	Implementation of PADs for Schools	3c2
PA JIC/RumCon	Mobilization	1a1
PA JIC/RumCon	Communications Equipment	1d1
PA JIC/RumCon	Emergency Information & Instructions for the Public/Media	5b1
PA TACP SPB TROOP J	Mobilization	1a1
PA TACP SPB TROOP J	Communications Equipment	1d1
PA TACP SPB TROOP J	Equipment and Supplies to Support Operations	1e1
PA TACP SPB TROOP J	Implementation of Emergency Worker Exposure Control	3a1
PA TACP SPB TROOP J	Implementation of Traffic & Access Control	3d1

PA TACP SPB TROOP J	Impediments to Evacuation	3d2
PAAACSEOCBRP	Mobilization	1a1
PAAACSEOCBRP	Direction and Control	1c1
PAAACSEOCBRP	Communications Equipment	1d1
PAAACSEOCBRP	Equipment and Supplies to Support Operations	1e1
PAAACSEOCBRP	Emergency Worker Exposure Control Decisions	2a1
PAAACSEOCBRP	Accident Assessment and PARs for the Emergency Event	2b1
PAAACSEOCBRP	PAD decision-making process and coordination for the General Public	2b2
PACRCC	Mobilization	1a1
PACRCC	Communications Equipment	1d1
PACRCC	Equipment and Supplies to Support Operations	1e1
PACRCC	Direction and Control	1c1
PACRCC	Emergency Worker Exposure Control Decisions	2a1
PACRCC	Accident Assessment and PARs for the Emergency Event	2b1
PACRCC	Implementation of KI PAD for Institutionalized Individuals/Public	3b1
PACRCC	Activation of the Prompt Alert & Notification System	5a1
SFMT A SER	Mobilization	1a1
SFMT A SER	Communications Equipment	1d1
SFMT A SER	Equipment and Supplies to Support Operations	1e1
SFMT A SER	Implementation of Emergency Worker Exposure Control	3a1
SFMT A SER	Plume Phase Field Measurement, Handling, & Analyses	4a3
SFMT B SER	Mobilization	1a1
SFMT B SER	Communications Equipment	1d1
SFMT B SER	Equipment and Supplies to Support Operations	1e1
SFMT B SER	Implementation of Emergency Worker Exposure Control	3a1
SFMT B SER	Plume Phase Field Measurement, Handling, & Analyses	4a3
WV BURA	Mobilization	1a1
WV BURA	Communications Equipment	1d1
WV BURA	Equipment and Supplies to Support Operations	1e1
WV BURA	Implementation of Emergency Worker Exposure Control	3a1
WV BURA	Activation of the Back-up ANS	5a3
WV BURA (2)	Communications Equipment	1d1
WV BURA (2)	Activation of the Back-up ANS	5a3
WV BURA (2)	Equipment and Supplies to Support Operations	1e1
WV BURA (2)	Mobilization	1a1
WV BURA (2)	Implementation of Emergency Worker Exposure Control	3a1
WV BURA (3)	Communications Equipment	1d1
WV BURA (3)	Equipment and Supplies to Support Operations	1e1
WV BURA (3)	Mobilization	1a1
WV BURA (3)	Implementation of Emergency Worker Exposure Control	3a1
WV BURA (3)	Activation of the Back-up ANS	5a3

3.3 Criteria Evaluation Summaries

3.3.1 State Jurisdictions

3.3.1 PA **State Field Monitoring Team A, South East Region**
In summary, the status of DHS/FEMA criteria for the State jurisdiction is as follows:
Criteria Not Demonstrated Observed only

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, South East Region**
In summary, the status of DHS/FEMA criteria for the State jurisdiction is as follows:
Criteria Not Demonstrated Observed only

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 Barracks, Troop J, Embreeville**
In summary, the status of DHS/FEMA criteria for the State jurisdiction is as follows:

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

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

In summary, the status of DHS/FEMA criteria for the State jurisdiction is as follows:

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**

In summary, the status of DHS/FEMA criteria for the State jurisdiction is as follows:

Criteria Not Demonstrated Observed only

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**

In summary, the status of DHS/FEMA criteria for the State jurisdiction is as follows:

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**
In summary, the status of DHS/FEMA criteria for the State jurisdiction is as follows:
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, 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

3.3.2 Risk Jurisdictions

3.3.2. 1 Berks County Emergency Operation Center
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.c.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.a.1, 5.a.3, 5.b.1

b. 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 and Decontamination Station, Daniel Boone Complex
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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 Mass Care Center, Governor Mifflin Senior High School

In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 4 Berks County Mass Care Center, Muhlenberg Senior High School

In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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 Mass Care Center, Schuylkill Valley School Complex

In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 6 Berks County Monitoring and Decontamination Center, Schuylkill Valley High School

In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 7 Berks County Monitoring and Decontamination Center, Governor Mifflin Senior High School

In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 8 Berks County Mass Care Center, Governor Mifflin Senior High School

In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 9 Berks County Monitoring and Decontamination Station, Muhlenberg Senior High School

In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 10 Berks County Mass Care Center, Muhlenberg Senior High School

In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 11 Berks County Reception Center, Robeson Township Building

In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

a. MET: 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. 12 Berks County, Boyertown Area School District

In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 13 Berks County, Boyertown Area School District, Boyertown Senior High School

In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 14 Berks County, Boyertown Area School District, Earl Elementary School

In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 15 Berks County, Boyertown Area School District, New Hanover/Upper Frederick ES

In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 16 Berks County, Boyertown Area School District, Washington Elementary School

In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 17 Berks County, Boyertown Borough/Colebrookdale Township Emergency Operations Center

In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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

b. LEVEL 1 FINDINGS: NONE

c. LEVEL 2 FINDINGS: NONE

b. PLAN ISSUES: 1

e. PRIOR ISSUES: RESOLVED: NONE

f. PRIOR ISSUES: UNRESOLVED: NONE

ISSUE FOR CRITERION: 5.a.3

CONDITION:

At 1901, the EOC was informed that Siren Number 105 had failed and the Back-Up Route Alerting Team for Route 16D should immediately be dispatched. Upon notice of the siren failure the Fire Chief directed the Fire Captains to report to the EOC. The Fire Captains arrived at 1920. The Fire Captains then received an Emergency Worker briefing, dosimetry kits and instructions for route alerting for Route 16D. The Fire Captains left the EOC and returned to their respective Fire Companies at 1930. After arriving at the Fire Companies, the Captains conducted an Emergency Worker briefing, distributed dosimetry kits and instructions for route alerting for Route 16D. The Back-Up Route Alerting Teams reported to the EOC that it had completed its route at 2015, 75 minutes after the notification of the failed siren.

POSSIBLE CAUSE:

The procedure for Back-Up Route Alerting Teams to report to their fire companies to receive an Emergency Worker briefing, Dosimetry Kits, and back-up route alerting procedures at the Site Area Emergency ECL were not followed.

REFERENCE:

- ***NUREG0654/FEMA-REP-1, E.6, Appendix 3.B.2.c***
- Radiological emergency Response Plan for Boyertown Borough Colebrookdale Township, Firefighting Limerick Support Annex, January 2017, page 3: SITE AREA EMERGENCY.
- Radiological Emergency Preparedness Manual, January 2016, page 45: Backup Systems; page 199, Criterion 5.a.3.

EFFECT:
Notification to the public to evacuate was not received in a timely manner following a siren failure.

RECOMMENDATION:
Ensure personnel strictly adhere to the procedures for mobilization of back up route alert teams. Consider amending procedures for mobilization of back up route alert teams to first report to the Emergency Operations Center (EOC) at Emergency Classification Level (ECL) of Site Area Emergency (SAE) or sooner, receive an Emergency Worker Radiological Officer's Briefing, issue of dosimetry, Potassium Iodide (KI), Emergency Worker Exposure Cards, and back-up route alerting procedures and maps. Back-Up route alert teams can then be placed on stand-by, prepared and ready for a rapid deployment in the event of a siren failure.

3.3.2. 18 Berks County, Boyertown Borough/Colebrookdale Township Traffic and Access Control

In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 19 Berks County, Daniel Boone Area School District

In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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 Berks County, Daniel Boone Area School District, Birdsboro Elementary

In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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 Berks County, Earl Township Emergency Operations Center
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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

b. 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 Berks County, Union Township Emergency Operations Center
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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

b. LEVEL 1 FINDINGS: NONE

c. LEVEL 2 FINDINGS: 1 Re-demonstrated Successfully

d. PLAN ISSUES: NONE

e. PRIOR ISSUES: RESOLVED: NONE

f. PRIOR ISSUES: UNRESOLVED: NONE

ISSUE FOR CRITERION: 3.a.1

CONDITION:
The Radiological Officer at the Union Township Emergency Operations Center (EOC) did not give a radiological briefing to EOC staff at Site Area Emergency ECL, as indicated in the Union Township Radiological Emergency Response Plan (RERP). When asked to do so, his briefing was incomplete and contained inaccurate information.

POSSIBLE CAUSE:

The Radiological Officer may have needed refresher training. There was not a clear radiological briefing sheet included in the Union Township RERP.

REFERENCE:
1. NUREG-0654/FEMA-REP-1, K.3.a, b; K.4
2. Demonstration Criterion 3.a.1; Union Township Radiological Emergency Response Plan
3. Limerick Generating Station Support Annex, ESF #10-Hazardous Materials, Page 3 (Site Area Emergency Checklist), Items 5-11.

EFFECT:
Without a clear radiological briefing, emergency workers could have misunderstandings about the importance and use of dosimetry and Potassium Iodide (KI), putting their own health and safety at risk. Since the EOC also briefs those emergency workers going into the Emergency Planning Zone (EPZ) for traffic and access control duties, it is especially important to have a clear briefing.

REDEMONSTRATION:
The Radiological Officer from Berks County did re-training on dosimetry and KI with Union Township staff. Through interview, the Union Township staff and Radiological Officer indicated an understanding on the uses and importance of dosimetry and KI. It is recommended that staff be provided further training on dosimetry, and be provided a clear briefing sheet to read to emergency workers.

3.3.2. 23 Boyertown/Colebrookdale Back up Route Alerting (1)
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 24 Boyertown/Colebrookdale Back up Route Alerting (2)
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 25 Chester County Emergency Operations Center

In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.c.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.b.1, 3.c.1 3.c.2, 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. 26 Chester County Monitoring and Decontamination Center, West Whiteland

In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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

3.3.2.27 Chester County Phoenixville Area School District, Manavon Elementary School & Phoenixville Area Early Learning Center

In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 28 Chester County Reception Center, West Whiteland Township

In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

a. MET: 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. 29 Chester County, Charlestown Township Emergency Operations Center

In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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

b. 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, Downingtown Area School District

In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 31 Chester County, Downingtown Area School District, Downingtown High School East

In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 32 Chester County, Downingtown Area School District, Lionville Elementary School
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 33 Chester County, Downingtown Area School District, Lionville Middle School
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 34 Chester County, Downingtown Area School District, Uwchlan Hills Elementary School
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 35 Chester County, East Coventry Township Emergency Operations Center
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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

b. LEVEL 1 FINDINGS: NONE

c. LEVEL 2 FINDINGS: 2
Successfully Re-Demonstrated

d. PLAN ISSUES: NONE

e. PRIOR ISSUES: RESOLVED: NONE

f. PRIOR ISSUES: UNRESOLVED: NONE

ISSUE FOR CRITERION: 1.c.1

CONDITION:
The EMC did not demonstrate the ability to carry out the essential functions required for response. Required actions and requests were not properly processed and completed.

POSSIBLE CAUSE:
Lack of detailed training to include: understanding Radiological Emergency Preparedness plans and procedures and procedures to brief staff with situational awareness information. Position task and exercise experience knowledge should have a position evaluated competency.

REFERENCE:
NUREG-0654/FEMA-REP-1, A.1.d; A.2.a, b; A.3; C.4, 6

EFFECT:
The Emergency Management Coordination did not know, initially, to contact the Chester County Emergency Operations Center if there were issues or questions concerning the response he could not correct. If allowed to progress the township residents would have been placed in un-do risk.

RECOMMENDATION:
Provide detailed training on the Radiological Incidents plan and procedures to key East Coventry Township Emergency Operations Center. Provide exercise simulations for practice.

RE-DEMONSTRATION:
On February 22, 2018, the East Coventry Township Emergency Operations Center (ECTEOC) successfully demonstrated the ability to provide direction and control during

the Re-demonstration exercise for the November 14, 2017 Limerick Generating Station (LGS) Biennial Plume Exercise.

At the ECTEOC, the individual in charge of the emergency response was the Township Emergency Management Coordinator. The Emergency Management Coordinator held frequent briefings to the EOC staff on the status of the incident; including but not limited to all changes of plant Emergency Classification Levels (ECL), direction to initiate position specific ECL Checklists, plant events prompting specific ECLs, and briefings on Protective Action Recommendations and Decisions from Pennsylvania Bureau of Radiation Protection (BRP).

Briefings to the ECTEOC staff included the following key items:

- 1833 initial EOC briefing following Alert ECL and EOC Activation
- 1839 facility reported operational to Chester County and second shift roster developed to support 24 hour operations
- 1936 following escalation to Site Area Emergency
- 1945 on first siren sounding
- 1948 on the Governor's Declaration and precautionary actions of sheltering livestock, placing livestock on stored feed and water, and restrictions of air, rail, and river traffic in the ten mile plume exposure Emergency Planning Zone (EPZ)
- 2011 directing EOC staff to disseminate livestock and agricultural precautionary information to farmers via reverse 911
- 2028 on escalation to General Emergency
- 2040 on direction from BRP via Chester County for Emergency Workers and the general public to ingest potassium iodide, and direction of general evacuation of the entire EPZ

The EOC staff assistant also ensured that a detailed event log was maintained on a large dry erase board readily visible to the entire EOC.

At 1741, positive communication checks were conducted with Chester County via a dedicated land line and by the county wide 800 MHZ public safety radio system. Positive communications through these systems and by email were maintained throughout the exercise, and notifications of ECL changes, significant events, and precautionary and protective actions were promulgated successfully by all three means. Additionally, following the escalation to Alert and the activation of the EOC, Chester County posted a liaison officer with a county 800MHZ radio and mobile device with access to county email alerts in the EOC. In one instance in which the full ECL change sheet was not attached to an email as a PDF, based on accurate information received by the email text, 800 MHZ radio, dedicated land line, and discussions with the Chester County Liaison Officer, the ECT Emergency Management Coordinator called back to the county for clarification and was provided with the correct sheet.

Response activities with other organizations were coordinated by respective Emergency Support Function (ESF) leads, who were very familiar with each other's' organizations, personnel, and resources to support the Township's actions. ESF leads were proactive

and forward leaning with actions. Following EOC activation, the Township Police Chief serving as law enforcement services ESF lead obtained a weather report and report from his department regarding any traffic accidents that might impede evacuation, and began discussions with the firefighting and emergency services ESF lead regarding potential need for fire police personnel to support traffic and access control points. Immediately following the notification that sirens would be sounded, the firefighting and emergency services ESF lead began review of pre-printed siren coverage charts and back up route alerting procedures in the event any sirens should fail.

In accordance with Pennsylvania's Radiological Emergency Response Plan (RERP), Protective Action Decisions (PADs) were made by the State of Pennsylvania; specifically BRP, and risk counties and municipalities may add additional precautionary actions. The Emergency Management Coordinator received accurate information and inputs from his supporting staff regarding actions necessary to effectively implement PADs directed by the state, made timely decisions on this information, and provided clear guidance to the ECTEOC staff.

The ECTEOC staff all had folders of position specific ECL checklists and procedures for radiological emergencies at their stations, as well as accurate and updated contact information for their respective counterpart agencies. All participants in the ECTEOC were familiar with internal and external communication systems and procedures, and provided forceful backup to each other to ensure the development of an accurate common operating picture.

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

ISSUE FOR CRITERION: 3.a.1

CONDITION: Exposure control equipment and procedures were not adequately demonstrated. The Oil and Hazardous Materials Coordinator (OHMC) zeroed the Area Kit dosimetry twice during the exercise. No Area Kit record was created by the OHMC for the EOC, 30 minute DRD readings were not taken or recorded. No Emergency Working briefing or exposure control equipment and KI were provided to a Patrol Officer who was dispatched to staff a traffic control post.

POSSIBLE CAUSE:
Lack of detailed training to include: hands on equipment and form completion experience. Position task and exercise experience needs to have position evaluated competency.

REFERENCE:
NUREG-0654/FEMA-REP-1, J.10e; K.3.a, b; K.4

EFFECT:
Both the East Coventry Township Emergency Operations Center staff and an EW in the field would have been placed at risk for exposure to radiation without knowing.

RECOMMENDATION:

Provide detailed training on radiological exposure control and related plan and procedures to key East Coventry Township Emergency Operations Center key staff.

RE-DEMONSTRATION:
On February 22, 2018, the East Coventry Township Emergency Operations Center (ECTEOC) successfully issued appropriate dosimetry, Potassium Iodide (KI) as well as managed radiological exposure to emergency workers during the Re-demonstration Exercise for the November 14, 2017 Limerick Generating Station (LGS) Biennial Plume Exercise. The Radiological Officer (RO) was responsible for issuing exposure control equipment, forms and describing procedures, as well as maintaining appropriate record-keeping of the administration of KI to Emergency Workers (EW).

The East Coventry Township EOC is located at 855 Ellis Woods Road, Pottstown, PA.

All equipment assigned to the East Coventry EOC was in the EOC in a sealed yellow pelican case with an inventory sheet attached to the top outside. The inventory matched what was in the plan and the seal to the case had not been opened. There was a set of exercise demonstration radiological exposure equipment available. It contained two Direct-Reading Dosimeters (DRD) range 0-20R, one DRD range 0-200R, a DRD charger, a sheet simulating 10 Permanent Record Dosimeters (PRD) and a photocopy of KI tablets for simulated.

At 1834, an Alert was declared at LGS and the East Coventry Emergency Management Coordinator (EMC) notified the RO to report to the EOC. The RO arrived at the EOC at 1837. The RO prepared the control PRD for transport to the County. At 1850, the EMC requested a radiological briefing for all emergency workers in the EOC. The RO conducted the briefing from the worksheet provided and all required elements where discussed. The radiological briefing explained that workers undertaking life-saving missions or protecting valuable property or large populations may face increased risk from radiation. The RO identified the equipment that will be distributed and used such as a PRD, a 0-20R and a 0-200R DRD, and four 65mg KI tablets. The EWs were instructed where to place the equipment and to report the readings on the DRD every thirty minutes to the RO. The DRD's were zeroed utilizing the CDV-750. The EW were instructed that when the level reaches 5 Rem they would be pulled from duty and sent to the monitoring and decontamination center at the Twin Valley Fire Department. It was explained that KI was a thyroid blocking agent and taking KI protects the thyroid by filling it with non-ionized iodine. They were told to only take the KI if directed to do so by the Secretary of the Department of Health. When told to do so emergency workers were to take two 65mg tablets in a 24 hour period.

An inventory check was conducted and DRDs in use for the exercise where zeroed. At 1937, the East Coventry EOC was notified of a Site Area Emergency at Limerick Generating Station. At 1945, an Area Kit was placed in the EOC and two emergency workers where issued a PRD, a DRD and KI. These individuals where briefed, subsequently interviewed and knew how to use the equipment, take KI and the reporting values.

At 2025, the EMC reported a General Emergency had been declared at the Limerick Generating Station. Though not demonstrated during this exercise, any EW that would have been deployed for route alerting or traffic and access control would have been issued Category A equipment and briefed by the RO. The RO did inform the EWs to read their dosimeters every 30 mins and at the end of their shifts. All equipment was to be returned to the RO who would then process the PRDs through Chester County Health Department for readings.

The exercise was terminated at 2054 and all equipment was returned to the RO.

All activities where demonstrated in accordance with plans and procedures or as directed in the extent-of-play agreement.

3.3.2. 36 Chester County, East Coventry Township Traffic and Access Control
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 37 Chester County, East Pikeland Township Emergency Operations Center
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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

b. 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, East Pikeland Township Traffic and Access Control
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 39 Chester County, Emergency Worker Monitoring and Decontamination Station Twin Valley FD

In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 40 Chester County, Great Valley School District, Great Valley Middle School

In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 41 Chester County, Owen J. Roberts School District

In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 42 Chester County, Owen J. Roberts School District, East Vincent Elementary School
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 43 Chester County, Owen J. Roberts School District, French Creek Elementary School
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 44 Chester County, Owen J. Roberts School District, West Vincent Elementary School
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 45 Chester County, Phoenixville Area School District
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 46 Chester County, Schuylkill Township Emergency Operations Center
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.a.1

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 Chester County, Schuylkill Township Traffic and Access Control
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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

3.3.2.46 Chester County, Uwchlan Township Emergency Operations Center
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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

b. 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 Chester County, Uwchlan Township Traffic and Access Control
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 49 Chester County, West Vincent Township Emergency Operations Center
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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

b. 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 Chester **County, West Vincent Township Traffic and Access Control**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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

3.3.2.50 Chester **County, West Vincent Township Back Up Route Alerting (1)**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 500 Chester **County, West Vincent Township Back Up Route Alerting (2)**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 510 Chester **County, West Vincent Township Back Up Route Alerting (3)**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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

3.3.2.51 Chester **County, Great Valley School District**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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 Chester **County, Great Valley School District, Great Valley High School**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 523 Montgomery **County Emergency Operations Center**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.c.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.a.1, 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. 534 Montgomery **County Emergency Worker Monitoring and Decontamination Station, Indian Valley Middle School**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 545 Montgomery **County, Evacuee Monitoring/Decontamination Center, Plymouth Fire Company**

In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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

3.3.2.56 Montgomery County, New Hanover Township Emergency Operations Center

In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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

b. 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. 557 Montgomery **County, Green Lane Borough/Marlboro Township Emergency Operations Center**

In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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

b. LEVEL 1 FINDINGS: NONE

c. LEVEL 2 FINDINGS: 1 Re-demonstrated Successfully

d. PLAN ISSUES: NONE

e. PRIOR ISSUES: RESOLVED: NONE

f. PRIOR ISSUES: UNRESOLVED: NONE

ISSUE FOR CRITERION: 3.a.1

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

CONDITION:
The Radiological Officer (RO) provided an insufficient briefing to Emergency Workers (EWs). When interviewed, the EWs were unfamiliar with dosimetry, dose limits, KI, and documentation.

POSSIBLE CAUSE:
The Radiological Officer did not follow the checklist for the briefing.

REFERENCE:
NUREG-0654/FEMA-REP-1, J.10.e; K.3.a, b; K.4

EFFECT:
Without the proper training and understanding of dose limits and equipment operation, Emergency Workers entering a radiation area would risk unnecessary exposure.

RECOMMENDATION:
Ensure the RO is provided with up to date checklists to use when providing a dosimetry brief. The checklist should be annotated as to which statements must be read to the EWs receiving the brief, what documentation must be distributed to the EWs, and what dosimetry they must receive.

REDEMONSTRATION:
Following the initial RO briefing, the Pennsylvania Emergency Management Agency (PEMA) Observer/Controller provided just-in-time training to the RO. The training consisted of reminding the RO to use his checklist and procedures to perform the brief. Additionally to actually pass out all of the documentation and complete the forms. Following this, the RO re-demonstrated successfully by providing another brief. The two EWs were again interviewed and knew both the answers to those questions missed previously plus additional questions when asked.

3.3.2. 568 Montgomery **County, Greenlane Borough/Marlboro Township Traffic and Access Control**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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

b. LEVEL 1 FINDINGS: NONE

a. LEVEL 2 FINDINGS: 1 Re-demonstrated Successfully

d. PLAN ISSUES: NONE

e. PRIOR ISSUES: RESOLVED: NONE

f. PRIOR ISSUES: UNRESOLVED: NONE

3.3.2. 579 Montgomery **County, Limerick Township Emergency Operations Center**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.a.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

3.3.2.60 Montgomery **County, Limerick Township Traffic and Access Control**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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

3.3.2.61 Montgomery **County, Limerick Township Back Up Route Alerting (1)**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

a. MET: 1.a.1, 1.c.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

3.3.2.62 Montgomery **County, Limerick Township Back Up Route Alerting (2)**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

a. MET: 1.a.1, 1.c.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

3.3.2.63 Montgomery **County, Lower Frederick Township Emergency Operations Center**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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

b. LEVEL 1 FINDINGS: NONE

c. LEVEL 2 FINDINGS: NONE

d. PLAN ISSUES: NONE

e. PRIOR ISSUES: RESOLVED: NONE

f. PRIOR ISSUES: UNRESOLVED: NONE

3.3.2.64 Montgomery **County, Lower Pottsgrove Township Emergency Operations Center**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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

b. 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, Lower Pottsgrove Township Traffic and Access Control Point**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 586 Montgomery **County, Marlborough Township Traffic and Access Control**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 59 Montgomery County, Methacton School District,
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 608 Montgomery **County, Methacton School District, Eagleville Elementary School**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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, Methacton School District, Methacton High School
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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, Methacton School District, Woodland Elementary School
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 631 Montgomery **County, New Hanover Township Traffic and Access Control**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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

3.3.2.72 Montgomery **County, Perkiomen Township Emergency Operations Center**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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

b. 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, Perkiomen Valley School District**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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

3.3.2.74 Montgomery **County, Perkiomen Valley School District, Perkiomen Middle School East**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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

3.3.2.75 Montgomery **County, Perkiomen Valley South Elementary School**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 646 Montgomery **County, Pottsgrove School District**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 657 Montgomery **County, Pottsgrove School District, Pottsgrove High School**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 668 Montgomery **County, Pottsgrove School District, West Pottsgrove Elementary School**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 679 Montgomery **County, Pottstown Area School District**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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

3.3.2.80 Montgomery **County, Pottstown Area School District, Lincoln Elementary School**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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

3.3.2.81 Montgomery **County, Pottstown Area School District, Pottstown High School**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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

3.3.2.82 Montgomery **County, Reception Center Plymouth Fire Company**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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

3.3.2.83 Montgomery **County, Souderton Area School District**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 68 Montgomery County, Souderton Area School District, Salford Hills Elementary School
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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

3.3.2.85 Montgomery **County, Spring-Ford Area School District**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 69 Montgomery County, Spring-Ford Area School District, 5th & 6th Grade Center
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 70 Montgomery County, Spring-Ford Area School District, 7th Grade Center
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 71 Montgomery County, Spring-Ford Area School District, 8th Grade Center (Old Middle School)
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 72 Montgomery County, Spring-Ford Area School District, Spring-Ford Area High School
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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

3.3.2.90 Montgomery **County, Spring-Ford Area School District, Upper Providence Elementary**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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

3.3.2.91 Montgomery **County, Trappe Borough Emergency Operations Center**

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

b. LEVEL 1 FINDINGS: NONE

b. LEVEL 2 FINDINGS: 2
Successfully Re-Demonstrated

d. PLAN ISSUES: NONE

e. PRIOR ISSUES: RESOLVED: NONE

f. PRIOR ISSUES: UNRESOLVED: NONE

ISSUE FOR CRITERION: 1.a.1

CONDITION:
The Trappe Borough EOC does not have adequate personnel to staff positions or maintain 24-hour operations.

POSSIBLE CAUSE:
Inability to recruit and/or maintain staff for emergency management operations.

REFERENCE:
NUREG0654/FEMA-REP-1, A.1.a, e; A.3, 4; C.1, 4, 6; D.4; E.1, 2; G.3.a; H.3, 4

EFFECT:
The lack of sufficient personnel to staff critical positions within the EOC could result in an inability to implement precautionary/protective actions, therefore placing the public at risk.

RECOMMENDATION:
Implement compensatory measures that provide staffing solutions and/or recruit adequate personnel.

RE-DEMONSTRATION:
On February 22, 2018, the Trappe Borough Emergency Operations Center (EOC) located at 25 West 5th Avenue, Trappe, Pennsylvania 19426, Trappe Borough successfully demonstrated the use of effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner during Re-demonstration exercise for the November 14, 2017 Limerick Generating Station (LGS) Biennial Plume Exercise.

The Trappe Borough EOC was authorized to pre-stage during this re-demonstration in accordance with the Extent of Play Agreement and received an initial notification of an Alert from Montgomery County Emergency Management Agency (EMA) at 1832 via 800 MHz radio and verified the Alert with Montgomery County EMA at 1833. The Trappe Borough EMC simulated a digital page notification to Borough elected officials and other staff and declared the EOC operational at 1834. Other notification systems available to the Trappe Borough EOC include cell phone, land line, Knowledge Center, and Radio Amateur Civil Emergency Service (RACES). At 1840, the Trappe Borough EMC established a 24-hour staffing roster and began an initial briefing to the EOC Staff concerning the Alert at LGS. The EMC directed the establishment of Knowledge Center, staff to review their Alert checklist, inventory of dosimetery, placed traffic control personnel on stand-by, and identified special needs facilities and citizens within the borough in the event the incident escalated. At 1841, the Trappe Borough EMC communicated an unmet need with the Montgomery County EMA via 800 MHz radio requesting a RACES team. In addition, a notification was simulated to the Pennsylvania State Police at Skippack Barracks Troop K, requesting traffic control be placed on standby per Memorandum of Agreement for the purpose of covering a portion of the Trappe Borough Traffic Control Points (TCPs). At 1845, the Trappe Borough EMC directed the Radiological Officer (RO) conduct a briefing to EOC staff.

At 1935, a notification of a Site Area Emergency (SAE) was received and verified by the Trappe Borough EMC via 800 MHz radio from Montgomery County EMA. Follow up electronic copies of notification forms along with precautionary actions such as placing livestock on stored feed and water, air, rail, and water restrictions were received via Knowledge Center. The Trappe Borough conducted a briefing to the EOC staff and directed them to review their SAE checklist in addition to feedback from each Emergency Support Function (ESF) position. At 1940, a notification from Montgomery

County EMA was received via 800 MHz radio announcing the sounding of sirens at 1945 and an Emergency Alert Broadcast (EAS) at 1948. There were no Protective Action Decisions (PADs) communicated at this time however a report of a radiological release in progress was reported at 1940. Trappe Borough reported no unmet needs. In addition, it was simulated at 1840 that the RACES team requested at 1841 had arrived on site at the EOC. At 1942, the Trappe Borough EMC verified that all dosimetery had been issued to staff to include Traffic Control Personnel, Route Alerting Teams, hearing impaired teams, and the placement of a dosimetry area kit within the EOC. It was noted by the Trappe Borough EMC that in an event of an evacuation of the EOC due to radiation hazard, the alternate facility located at the Montgomery County Library in Norristown, Pennsylvania would be occupied.

At 2026, a report of a General Emergency (GE) was received by Trappe Borough and verified via 800 MHz radio from Montgomery County EMA. At 2033, Montgomery County EMA notified Trappe Borough that sirens would be sounded at 2035 followed by and EAS message at 2038. In addition, the EAS message included a recommendation to evacuate the 10-mile Emergency Planning Zone (EPZ) by the Governor of Pennsylvania, and the recommendation by the Pennsylvania Secretary of Heath for Emergency Workers, institutionalized individuals, and the general public ingest Potassium Iodide (KI). The Trappe Borough EMC ensured regular briefings occurred and included follow ups with staff on ensuring KI was ingested by Emergency Workers, the opening of shelters, and that the redeployment requirements for Emergency Workers including traffic control, and alerting teams were followed. A notification of termination of the exercise was received by Trappe Borough EMC at 2055 from Montgomery County EMA via 800 MHz radio. The Trappe Borough EMC ensured that all checklists were completed with no unmet needs prior to releasing EOC staff.

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

ISSUE FOR CRITERION: 3.a.1

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

CONDITION:
The Radiological Officer (RO) provided an insufficient briefing to Emergency Workers (EWs). When interviewed, the EWs were unfamiliar with dosimetry, dose limits, KI, and documentation.

POSSIBLE CAUSE:
The Trappe Borough Radiological Officer (RO) provided a shortened version of a Radiological Officer's Briefing to the Trappe Borough Emergency Operations Center (EOC) staff which resulted in critical protective measures for emergency responders not

being delivered. Missing information from the RO briefing checklist included identification of the location of Emergency Worker Monitoring Decontamination Station, exposure and reporting limits, location of Permanent Record Dosimeters (PRDs), contamination thresholds, information concerning the ingestion of Potassium Iodide (KI), use of Area dosimetry, issue of dosimetry kits to emergency workers, and management of emergency workers in the field. The Trappe Borough was declared operational at 1715 which permitted adequate time to mobilize and conduct a thorough RO briefing. The RO briefing did not begin until 1823, one minute following the declaration of a Site Area Emergency (SAE).

REFERENCE: NUREG-0654/FEMA-REP-1, J.10.e; K.3.a, b; K.4

EFFECT:
Without the proper training and understanding of dose limits and equipment operation, Emergency Workers entering a radiation area would risk unnecessary exposure.

RECOMMENDATION:
Ensure the Trappe Borough Radiological Officer has sufficient training to perform the duties of an RO such as the State Radiological Officer's Course, along with a current and adequate RO Briefing Checklist, knowledge of exposure limits, KI, dosimetry equipment issue, use and location of where dosimetry is stored, and the ability to manage emergency workers assigned within the 10-mile Emergency Planning Zone (EPZ). Ensure the RO is provided with up to date checklists to use when providing a Radiological Officer's dosimetry brief. The checklist should be annotated as to which statements must be read to the EWs receiving the brief, what documentation must be distributed to the EWs, and what dosimetry they must receive.

RE-DEMONSTRATION:
On February 22, 2018, the Trappe Borough Emergency Operations Center (EOC) successfully demonstrated the issue of appropriate dosimetry, Potassium Iodide (KI) and procedures, and management of radiological exposure control to Emergency Workers (EWs) during the Re-demonstration Exercise for the November 14, 2017 Limerick Generating Station (LGS) Biennial Plume Exercise.

For the purpose of this re-demonstration exercise, the staff at the Trappe Borough EOC was pre-positioned. At 1832, the Emergency Management Coordinator (EMC) received notification from the Montgomery County EOC that the Limerick Generating Station had declared an Alert Emergency Classification Level (ECL) and at 1834 the EMC declared the EOC operational.

At 1836, the Radiological Officer began preparing (8) Emergency Worker (EW) Exposure Kits and (1) Area Kit. Each kit contained a Dosimetry/KI Report Form, an Acknowledgment of Receipt Form, a 0-20R Direct Reading Dosimeter (DRD), a Personal Record Dosimeter (PRD) and four 65mg Potassium Iodide (KI) tablets. At 1845, the Radiological Officer (RO) conducted a thorough briefing for EOC staff utilizing the Radiological Officer Briefing Checklist.

The briefing included zeroing out DRDs, reading dosimeters every 30 minutes, instructions to contact him to report readings or any increases in 1R increments, filling out the Dosimetry-KI Report Forms with required information and how to wear the PRD and DRD. Radiation exposure limits were explained as 10R for protecting valuable property; 25R for lifesaving or protection of large populations, and greater than 25R for lifesaving or protection of large populations (must be a volunteer). Exposures greater than 20R would require the issuance of a higher range dosimeter to the emergency worker. (10) 0-200R DRDs were available for this purpose. He explained the procedure on changing emergency workers based on their exposure levels and the approval process for authorizing lifesaving missions. Information on when to take KI, why it is taken, as well as contraindications were discussed. The RO also explained that at the end of their mission, Emergency Workers should report to the Monitoring and Decontamination Center located at Methacton High School.

The RO explained that emergency workers are grouped into categories A, B or C depending on their assignments and locations, and that an Area Kit would be used for all EOC staff remaining in the building. Emergency Worker categories were explained as:

Category A – Mobile Emergency Workers located in or entering the 10-mile Emergency Planning Zone (EPZ) (e.g., Route Alerting, Traffic Control); receive (1) PRD per worker, (1) 0-20R DRD per worker, Standard KI Issue – 2 day dosage and (1) Dosimetry/KI Report Form.

Category B – Collectively grouped persons in the EPZ will have at least one area kit (e.g., EOCs, hospitals, nursing homes); receive (1) PRD per worker, Standard KI Issue – 2 day dosage, (1) Dosimetry/KI Report Form.

Category C - Emergency workers located outside the EPZ that may come in contact with potentially contaminated persons/equipment (e.g., monitoring and decontamination centers, reception centers); receive (1) PRD per worker and (1) Dosimetry/KI Report Form.

The RO stated that a similar briefing would be conducted for any emergency workers dispatched from the EOC that had not been present for the first briefing.

At 1935, the EMC received notification from the Montgomery County EOC that the Limerick Generating Station had declared a Site Area Emergency (SAE). Following the notification, the Radiological Officer conducted another thorough Radiological Briefing to the EOC staff. Following the second RO briefing, an EOC staff member was interviewed and demonstrated an adequate knowledge of the information covered in the briefing. They were specifically asked about dosimetry and KI usage and recordkeeping, dose limits, KI precautions, and authorizations for exposure extensions.

At 2026, the EMC received notification that the LGS had declared a General Emergency (GE) ECL. Notification was also received stating the Governor of Pennsylvania recommends the evacuation of all persons within the Emergency Planning Zone of Berks, Chester and Montgomery counties and that the Secretary of Health has advised that

emergency workers, special populations and the general public should take Potassium Iodide (KI).

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

3.3.2. 733 Montgomery **County, Upper Perkiomen School District**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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. 74 Montgomery County, Upper Perkiomen School District, Marlborough Elementary School
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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

3.3.2.95 Montgomery **County, Upper Perkiomen School District, Upper Perkiomen Middle School**
In summary, the status of DHS/FEMA criteria for the Risk Jurisdiction is as follows:

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

3.3.3 Support Jurisdictions

3.3.3.1 Bucks County Emergency Operations Center

In summary, the status of DHS/FEMA criteria for the Support Jurisdiction is as follows:

a. MET: 1.a.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 Monitoring and Decontamination Center, Neshaminy Mall (at. Trevose Fire Company)

In summary, the status of DHS/FEMA criteria for the Support Jurisdiction is as follows:

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 Reception Center, Neshaminy Mall (at. Trevose Fire Company)

In summary, the status of DHS/FEMA criteria for the Support Jurisdiction is as follows:

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

In summary, the status of DHS/FEMA criteria for the Support Jurisdiction is as follows:

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

3.3.3.5 Lehigh **County Mass Care Center, Southern Lehigh High School**

In summary, the status of DHS/FEMA criteria for the Support Jurisdiction is as follows:

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

3.3.3.6 Lehigh **County Monitoring and Decontamination Center, Southern Lehigh High School**

In summary, the status of DHS/FEMA criteria for the Support Jurisdiction is as follows:

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

3.3.3.7 Lehigh **County Reception Center, Southern Lehigh High School**

In summary, the status of DHS/FEMA criteria for the Support Jurisdiction is as follows:

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

3.3.4 Private Jurisdictions

3.3.4. 1 Exelon Joint Information Center

Criteria Not Demonstrated Observed only

In summary, the status of DHS/FEMA criteria for the Private Jurisdiction is as follows:

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

SECTION 4: DEMONSTRATED STRENGTHS

State Jurisdictions

4.1 Commonwealth Response Coordination Center (CRCC)

- CRCC leadership and staff remained fully engaged in exercise play Excellent Direction and Control
- Protection of the public remained as a constant priority

Risk Jurisdictions

4.2 Berks County Worker Mon/Decon Center – Daniel Boone Jr. /Sr. High School

- The Birdsboro Union Fire Department demonstrated good team work, and adherence to procedures.
- Good teamwork and adherence to procedures by the Birdsboro Union Fire Department.

4.3 Chester County

- The Chester County EOC utilized the Computer Aided Dispatch System which enabled the EOC to monitor the fire department during the backup route alerting.
- Great use of the Integrated Public Alert and Warning System (IPAWS).

4.3.1 Charlestown Township EOC

- Throughout the exercise, the Charlestown Township EMC coordinated and implemented local decision making, ensuring EOC staff had good situational awareness of response activities. Charlestown Township EOC staff understood the goals and objectives for the exercise, trusted each other's feedback; listening and collaborating while planning for the next steps were commendable.

4.3.2 Schuylkill Township EOC

- The participants from the Schuylkill Township Emergency Operating Center, Police Department, and ARES/RACES, along with the Valley Forge Fire Department, were prepared and professional in their actions and responsibilities of managing the Limerick Generating Station Plume emergency during the Tuesday, November 14, 2017, exercise. They all communicated well with each other and were dedicated in providing protective actions, correct instructions to the agencies they represented, and current information to the public and to those calling in for assistance.

4.3.3 Downingtown Area School District

- Downingtown Area School District personnel provided excellent knowledge on their plan and procedures.

4.3.4 Great Valley School District

- Great Valley School District utilized Skype to simultaneously communicate with the individual schools for briefing and updates using a grant from Exelon Corporation.

4.4 Montgomery County EOC

- The Radiological Officer delivered an outstanding clear, concise, and factual dosimetry and KI briefing such that all EOC staff who were interviewed about exposure control understood exposure limits and how to use dosimetry and KI should they have to.

4.4.1 Spring-Ford Area School District

- The participants from Spring-Ford Area School District (SFSD), Intermediate Grades were prepared and professional in their actions and responsibilities of managing the protective actions taken for the SFSD students during the Limerick Generating Station Plume Exercise on November 14, 2017. The Principal communicated well with her staff and teachers as she and her Secretary demonstrated how dedicated they were in implementing those protective actions for their students.

Support Jurisdictions

4.5 Lehigh County Reception Center –Southern Lehigh High School

- Outstanding community involvement with this operation. There were approximately 20 volunteer evacuee actors which added to the realism of demonstrating registration and monitoring/decontamination. Local police, fire police, and multiple fire companies all supported this event to the extent that traffic control was among the best ever observed and all stations were manned with back up.

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 were adequately implemented during the Limerick Generating Station Plume exercise evaluated on November 14, 2017.

Federal Emergency Management Agency (FEMA) evaluators assessed 441 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

There were no Level 1 Findings identified during the exercise. There were six Level 2 Findings identified, two of which were successfully re-demonstrated during the exercise night on November 14, 2017. The other four Level 2 Findings were re-demonstrated successfully on February 22, 2018. Also, there was one Planning Issue identified.

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 not be developed as part of this report.

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AENDIX A: EXERCISE TIMELINE

TABLE 1: EXERCISE TIMELINE **DATE: November 14, 2017** **SITE: Limerick Generating Station**

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

Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received at the Listed Location								
		PA CRCC	PA AAC	Exelon JIC	Berks County	Boyertown Bro/Colebrookdale Township	Earl Township	Union Township	Chester County	Charlestown Township
Unusual Event	1609	1645	1619	N/A	1645	N/A			1618	1710
Alert	1658	1725	1713	1725	1727	1742	1736	1735	1715	1747
SAE	1802	1818	1818	1820	1824	1834	1841	1839	1818	1823
GE	1917	1947	1936	1920	1947	2020	2013	2009	1953	1933
Start of Simulated Radiation Release	1609	1645	1619	1749	1645	1742	1736	1735	1618	1709
Termination of Simulated Radiation Release	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Facility Declared Operational		1700	N/A	1823	1730	1748	1759	1801	1629	1705
Governor's Declaration of State of Emergency		1849		1913	1908	2020			1911	1941
Exercise Terminated		2055	2100	2055	2057	2035	2102	2058	2100	2052

First Precautionary/Protective Actions: Describe: Airspace restriction, 3K feet, 3 miles, Boating and fishing restriction, Water/rail restriction, 10 miles and Shelter and place livestock on stored feed	1845	1835	1859	1831	1904	1904		1832	1827 (W) 1916 (R) 1916 (S)
Siren Sounding	1855		1855	1855	1855	1855	1855	1855	1855
EAS Broadcast time	1858		1858	1858	1858	1858	1858	1858	1903
Second Precautionary/Protective Actions. Describe: Recommend population within 10 miles to evacuate. Special Population shelter in place and ingest KI Air Restriction, 10 miles, 10K feet	1955	1941	1958	1955	2020	2025	2022	1955	2007
Siren Sounding	2000		2000	2000	2000			2000	1955
EAS Message Broadcast	2003		2003	2003	2003			2003	2003
KI Decision (YES) EWs	1955	1941	1958	1955	2020	2025	2022	2003	2020
KI Decision (YES) General Public	1955	1941	1958	1955	2020	2025	2022	2003	2020
KI Decision (YES) Persons with Disabilities or Access Functional needs	1955	1941	1958	1955	2020	2025	2022	2003	2020

Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received at the Listed Location								
		East Coventry Township	East Pikeland	Schuylkill Township	Uwchlan Township	West Vincent Township	Montgomery County	Greenlane Bor/Marlborough Township		
Unusual Event		1625	1633	1623	1630	1623	1622	1627		
Alert		1745	1743	1745	1835	1744	1707	1717		
SAE		1829	1833	1829	1839	1833	1815	1821		
GE		1948	1951	1946	2008	1934	1930	1982		
Start of Simulated Radiation Release		1829	1833	1829	1839	1744	1622	1627		
Termination of Simulated Radiation Release		N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Facility Declared Operational		1659	1648	1639	1710	1635	1640	1700		
Governor's Declaration of State of Emergency		1916	1939	1918	2040	1915	1915			
Exercise Terminated		2102	2041		2049	2050	2107	2050		
First Precautionary/Protective Actions: Describe: Airspace restriction, 3K feet, 3 miles. Boating and fishing restriction, Water/rail restriction, 10 miles and Shelter and place livestock on stored feed		1850 (W) 1843 (R) 1838 (S)	1847	1848 (A) 1834 (W) 1842 (R)	1932 (A) 1921 (W) 1936 (R)	1836 (W) 1842 (R) 1839 (S)	1820	2013		
Siren Sounding		1907	1855	1909	1856	1856	1855	1855		
EAS Broadcast time		1910	1855	1912	1856	1858	1858			

Second Precautionary/Protective Actions. Describe: Recommend population within 10 miles to evacuate. Special Population shelter in place and ingest KI. Air Restriction, 10 miles, 10K feet	2008 (E) 1920 (R) 1859 (A)	2027	1953 (KI)	2010	Evac, KI	1952	2012 2013		
Siren Sounding		2027	2000	2010	2000	2000			
EAS Message Broadcast		2027	2003	2010	2003	2003			
KI Decision (YES) EWs	2019	2027		2010	2018	1952	2012		
KI Decision (YES) General Public	2019	2027	1953	2040	2018	1952	2012		
KI Decisions (YES) Persons with Disabilities or Access/Functional needs	2019	2027		N/A	2018	1952	2012		

Emergency Classification Level or Event	**Time Utility Declared**	**Time That Notification Was Received at the Listed Location**							
		Limerick Township	**Lower Frederick Township**	**Lower Pottsgrove Township**	**New Hanover Township**	**Perkiomen Township**	**Trappe Township**	**Bucks County**	**Lehigh County**
Unusual Event		1627	1626	1646	1630	1627	1626	1701	N/A
Alert		1716	1715	1714	1715	1713	1715	1728	1729
SAE		1821	1817	1822	1822	1821	1822	1824	1827
GE		1932	1932	1933	1932	1931	1933	1947	1947
Start of Simulated Radiation Release				2005		1627		1824	1834
Termination of Simulated Radiation Release		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Facility Declared Operational	1802	1720	1701	1642	1740	1715	1730	1829	
Governor's Declaration of State of Emergency			1916	2000	1916	2007	1917	1915	
Exercise Terminated	2057	2100	2048	2103	2050	2052	2100	2100	
First Precautionary/Protective Actions: Describe: Airspace restriction, 3K feet, 3 miles. Boating and fishing restriction, Water/rail restriction, 10 miles and Shelter and place livestock on stored feed	2007		2004	1846	1848		1830	1832	
Siren Sounding	1855	1855	1855	1855	1855	1855	1855	1855	
EAS Broadcast time	1858	1858	1858	1858	1858	1858	1858	1858	
Second Precautionary/Protective Actions. Describe: Recommend population within 10 miles to evacuate. Special Population shelter in place and ingest KI. Air Restriction, 10 miles, 10K feet			2005	2005	2007	2009	1915 (R) 1952 (KI, S)	1915 (R) 1952 (KI, S)	
Siren Sounding		2000		2005	2000	2000	2000	2000	
EAS Message Broadcast		2003			2003	2003	2003	2003	
KI Decision (YES) EWs	2007	2005	2005	2005	2007	2010	1953	1953	
KI Decision (YES) General Public, specify if restricted to sectors	2007	2005	2005		2007		1953	1953	
KI Decisions (YES) Persons with Disabilities or Access/Functional needs	2007	2005	2005		2007		1953	1953	

APPENDIX B: EXERCISE EVALUATORS AND TEAM LEADERS

The following is the list of Evaluators and Team Leaders for the Limerick Generating Station 2017 Radiological Emergency Preparedness Plume Exercise evaluated on November 14. The following constitutes the managing staff for the Exercise Evaluation:

- Thomas Scardino, DHS/FEMA, Regional Assistance Committee (RAC) Chairman
- Tina Thomas, DHS/FEMA, Project Officer and Site Specialist
- Roger Kowieski, Regional Coordinator

DATE: November 14, 2017

SITE: Limerick Generating Station

LOCATION	TEAM LEADER	AGENCY
Berks County Emergency Operation Center	Nicholas Buls	FEMA RIII
Berks County Emergency Worker Monitoring and Decontamination Station, Daniel Boone Complex	Nicholas Buls	FEMA RIII
Berks County Mass Care Center, Governor Mifflin Senior High School	Nicholas Buls	FEMA RIII
Berks County Mass Care Center, Muhlenberg Senior High School	Nicholas Buls	FEMA RIII
Berks County Mass Care Center, Schuylkill Valley School Complex	Nicholas Buls	FEMA RIII
Berks County Monitoring and Decontamination Center, Schuylkill Valley School Co	Nicholas Buls	FEMA RIII
Berks County Monitoring and Decontamination Center, Governor Mifflin Senior HS	Nicholas Buls	FEMA RIII
Berks County Monitoring and Decontamination Station, Muhlenberg Senior High School	Nicholas Buls	FEMA RIII
Berks County Reception Center, Robeson Township Building	Nicholas Buls	FEMA RIII
Berks County, Boyertown Area School District	Patricia Gardner	FEMA RIII
Berks County, Boyertown Area School District, Boyertown Senior High School	Patricia Gardner	FEMA RIII
Berks County, Boyertown Area School District, Earl Elementary School	Patricia Gardner	FEMA RIII
Berks County, Boyertown Area School District, New Hanover/Upper Frederick ES	Patricia Gardner	FEMA RIII
Berks County, Boyertown Area School District, Washington Elementary School	Patricia Gardner	FEMA RIII
Berks County, Boyertown Borough/Colebrookdale Township Emergency Operations Center	Nicholas Buls	FEMA RIII

Berks County, Boyertown Borough/Colebrookdale Township Traffic and Access Control	Nicholas Buls	FEMA RIII
Berks County, Daniel Boone Area School District	Patricia Gardner	FEMA RIII
Berks County, Daniel Boone Area School District, Birdsboro Elementary	Patricia Gardner	FEMA RIII
Berks County, Earl Township Emergency Operations Center	Nicholas Buls	FEMA RIII
Berks County, Union Township Emergency Operations Center	Nicholas Buls	FEMA RIII
Boyertown/Colebrookdale Back up Route Alerting (1)	Nicholas Buls	FEMA RIII
Boyertown/Colebrookdale Back up Route Alerting (2)	Nicholas Buls	FEMA RIII
Bucks County Emergency Operations Center	William McDougall	FEMA RIII
Bucks County Monitoring and Decontamination Center, Trevose Fire Company	William McDougall	FEMA RIII
Bucks County Reception Center, Trevose Fire Company	William McDougall	FEMA RIII
Chester County Emergency Operations Center	John Price	FEMA RIII
Chester County Monitoring and Decontamination Center, West Whiteland	John Price	FEMA RIII
Chester County Phoenixville Area School District, Manavon Elementary School & Phoenixville Area Early Learning Center	Patricia Gardner	FEMA RIII
Chester County Reception Center, West Whiteland Township	John Price	FEMA RIII
Chester County, Charlestown Emergency Operations Center	John Price	FEMA RIII
Chester County, Downingtown Area School District	Patricia Gardner	FEMA RIII
Chester County, Downingtown Area School District, Downingtown High School East	Patricia Gardner	FEMA RIII
Chester County, Downingtown Area School District, Lionville Elementary School	Patricia Gardner	FEMA RIII
Chester County, Downingtown Area School District, Lionville Middle School	Patricia Gardner	FEMA RIII
Chester County, Downingtown Area School District, Uwchlan Hills Elementary School	Patricia Gardner	FEMA RIII
Chester County, East Coventry Township Emergency Operations Center	John Price	FEMA RIII
Chester County, East Coventry Township Traffic and Access Control	John Price	FEMA RIII
Chester County, East Pikeland Township Emergency Operations Center	John Price	FEMA RIII
Chester County, East Pikeland Township Traffic and Access Control	John Price	FEMA RIII
Chester County, Emergency Worker Monitoring and Decontamination Station Twin Valley FD	John Price	FEMA RIII
Chester County, Great Valley School District	Patricia Gardner	FEMA RIII
Chester County, Great Valley School District, Great Valley High School	Patricia Gardner	FEMA RIII
Chester County, Great Valley School District, Great Valley Middle School	Patricia Gardner	FEMA RIII

Chester County, Owen J. Roberts School District	Patricia Gardner	FEMA RIII
Chester County, Owen J. Roberts School District, East Vincent Elementary School	Patricia Gardner	FEMA RIII
Chester County, Owen J. Roberts School District, French Creek Elementary School	Patricia Gardner	FEMA RIII
Chester County, Owen J. Roberts School District, West Vincent Elementary School	Patricia Gardner	FEMA RIII
Chester County, Phoenixville Area School District	Patricia Gardner	FEMA RIII
Chester County, Schuylkill Township Emergency Operations Center	John Price	FEMA RIII
Chester County, Schuylkill Township Traffic and Access Control	John Price	FEMA RIII
Chester County, Uwchlan Township Emergency Operations Center	John Price	FEMA RIII
Chester County, Uwchlan Township Traffic and Access Control	John Price	FEMA RIII
Chester County, West Vincent Township Emergency Operations Center	John Price	FEMA RIII
Chester County, West Vincent Township Traffic and Access Control	John Price	FEMA RIII
Exelon Joint Information Center	Joseph Suders	FEMA R III
Lehigh County Emergency Operations Center	William McDougall	FEMA RIII
Lehigh County Mass Care Center, Southern Lehigh High School	William McDougall	FEMA RIII
Lehigh County Monitoring and Decontamination Center, Southern Lehigh High School	William McDougall	FEMA RIII
Lehigh County Reception Center, Southern Lehigh High School	William McDougall	FEMA RIII
Limerick Township Back Up Route Alerting	Lee Torres	FEMA RIII
Limerick Township Back Up Route Alerting (2)	Lee Torres	FEMA RIII
Lower Pottsgrove Township Traffic and Access Control Point	Lee Torres	FEMA RIII
Montgomery County Emergency Operations Center	Lee Torres	FEMA RIII
Montgomery County Emergency Worker Monitoring and Decontamination Station, Indian Valley MS	Lee Torres	FEMA RIII
Montgomery County, Evacuee Monitoring/Decontamination Center, Plymouth Fire Company	Lee Torres	FEMA RIII
Montgomery County, Green Lane Borough/Marlboro Township Emergency Operations Center	Lee Torres	FEMA RIII
Montgomery County, Limerick Township Emergency Operations Center	Lee Torres	FEMA RIII
Montgomery County, Limerick Township Traffic and Access Control	Lee Torres	FEMA RIII
Montgomery County, Lower Frederick Township Emergency Operations Center	Lee Torres	FEMA RIII
Montgomery County, Lower Pottsgrove Township Emergency Operations Center	Lee Torres	FEMA RIII

Montgomery County, Marlborough Township Traffic and Access Control	Lee Torres	FEMA RIII
Montgomery County, Methacton School District,	Patricia Gardner	FEMA RIII
Montgomery County, Methacton School District, Eagleville Elementary School	Patricia Gardner	FEMA RIII
Montgomery County, Methacton School District, Methacton High School	Patricia Gardner	FEMA RIII
Montgomery County, Methacton School District, Woodland Elementary School	Patricia Gardner	FEMA RIII
Montgomery County, New Hanover Township Emergency Operations Center	Lee Torres	FEMA RIII
Montgomery County, New Hanover Township Traffic and Access Control	Lee Torres	FEMA RIII
Montgomery County, Perkiomen Township Emergency Operations Center	Lee Torres	FEMA RIII
Montgomery County, Perkiomen Valley School District	Patricia Gardner	FEMA RIII
Montgomery County, Perkiomen Valley School District, Perkiomen Middle School East	Patricia Gardner	FEMA RIII
Montgomery County, Perkiomen Valley South Elementary School	Patricia Gardner	FEMA RIII
Montgomery County, Pottsgrove School District	Patricia Gardner	FEMA RIII
Montgomery County, Pottsgrove School District, Pottsgrove High School	Patricia Gardner	FEMA RIII
Montgomery County, Pottsgrove School District, West Pottsgrove Elementary School	Patricia Gardner	FEMA RIII
Montgomery County, Pottstown Area School District	Patricia Gardner	FEMA RIII
Montgomery County, Pottstown Area School District, Lincoln Elementary School	Patricia Gardner	FEMA RIII
Montgomery County, Pottstown Area School District, Pottstown High School	Patricia Gardner	FEMA RIII
Montgomery County, Reception Center Plymouth Fire Company	Lee Torres	FEMA RIII
Montgomery County, Souderton Area School District	Patricia Gardner	FEMA RIII
Montgomery County, Souderton Area School District, Salford Hills Elementary School	Patricia Gardner	FEMA RIII
Montgomery County, Spring-Ford Area School District	Patricia Gardner	FEMA RIII
Montgomery County, Spring-Ford Area School District, 5th & 6th Grade Center	Patricia Gardner	FEMA RIII
Montgomery County, Spring-Ford Area School District, 7th Grade Center	Patricia Gardner	FEMA RIII
Montgomery County, Spring-Ford Area School District, 8th Grade Center (Old Middle School)	Patricia Gardner	FEMA RIII
Montgomery County, Spring-Ford Area School District, Spring-Ford Area High School	Patricia Gardner	FEMA RIII
Montgomery County, Spring-Ford Area School District, Upper Providence Elementary	Patricia Gardner	FEMA RIII
Montgomery County, Trappe Borough Emergency Operations Center	Lee Torres	FEMA RIII
Montgomery County, Upper Perkiomen School District, Upper Perkiomen High School	Patricia Gardner	FEMA RIII

Montgomery County, Upper Perkiomen School District	Patricia Gardner	FEMA RIII
Montgomery County, Upper Perkiomen School District, Marlborough Elementary School	Patricia Gardner	FEMA RIII
Montgomery County, Upper Perkiomen School District, Upper Perkiomen Middle School	Patricia Gardner	FEMA RIII
PA State Field Monitoring Team A, South East Region	Michael Shuler	FEMA RIII
PA State Field Monitoring Team B, South East Region	Michael Shuler	FEMA RIII
PA State Traffic and Access Control Points, State Police Barracks, Troop J, Embreeville	Joseph Suders	FEMA R III
Pennsylvania Accident Assessment Center, State EOC-Bureau of Radiation Protection	Michael Shuler	FEMA RIII
Pennsylvania Bureau of Radiation Protection, Radiological Rapid Response Vehicle	Michael Shuler	FEMA RIII
Pennsylvania Commonwealth Response Coordination Center	Joseph Suders	FEMA R III
Pennsylvania Joint Information Center/Rumor Control	Joseph Suders	FEMA R III
West Vincent Township Back Up Route Alerting	John Price	FEMA RIII
West Vincent Township Back Up Route Alerting (2)	John Price	FEMA RIII
West Vincent Township Back Up Route Alerting (3)	John Price	FEMA RIII
LOCATION	EVALUATOR	AGENCY
Berks County Emergency Operation Center	Barbara Thomas	FEMA Region 1
Berks County Emergency Operation Center	John Rice	FEMA Region 1
Berks County Emergency Operation Center	Taneeka Hollins	FEMA Region 1
Berks County Emergency Operation Center	Nicholas Buls	FEMA RIII
Berks County Emergency Worker Monitoring and Decontamination Station, Daniel Boone Complex	Reggie Rodgers	ICFI
Berks County Mass Care Center, Governor Mifflin Senior High School	Brian Clark	ICFI
Berks County Mass Care Center, Muhlenberg Senior High School	Michael Henry	ICFI
Berks County Mass Care Center, Schuylkill Valley School Complex	Bruce Swiren	ICFI
Berks County Monitoring and Decontamination Center, Schuylkill Valley School	Paul Nied	ICFI
Berks County Monitoring and Decontamination Center, Governor Mifflin Senior High School	Thomas Hegele	ICFI
Berks County Monitoring and Decontamination Station, Muhlenberg Senior High School	Brad McRee	ICFI
Berks County Reception Center, Robeson Township Building	Roy Smith	ICFI
Berks County, Boyertown Area School District	Barbara Thomas	FEMA Region 1

Berks County, Boyertown Area School District, Boyertown Senior High School	Taneeka Hollins	FEMA Region 1
Berks County, Boyertown Area School District, Earl Elementary School	David Kayen	ICFI
Berks County, Boyertown Area School District, New Hanover/Upper Frederick ES	William McDougall	FEMA RIII
Berks County, Boyertown Area School District, Washington Elementary School	John Rice	FEMA Region 1
Berks County, Boyertown Borough/Colebrookdale Township Emergency Operations Center	Clark Duffy	ICFI
Berks County, Boyertown Borough/Colebrookdale Township Emergency Operations Center	Danny Loomis	ICFI
Berks County, Boyertown Borough/Colebrookdale Township Traffic and Access Control	Clark Duffy	ICFI
Berks County, Daniel Boone Area School District	Nicholas Buls	FEMA RIII
Berks County, Daniel Boone Area School District, Birdsboro Elementary	Clark Duffy	ICFI
Berks County, Earl Township Emergency Operations Center	Gary Bolender	ICFI
Berks County, Earl Township Emergency Operations Center	Rosemary Samsel	ICFI
Berks County, Union Township Emergency Operations Center	Ingrid Pierce	Region 01
Berks County, Union Township Emergency Operations Center	Rebecca Thomson	ICFI
Boyertown/Colebrookdale Back up Route Alerting (1)	Gary Goldberg	ICFI
Boyertown/Colebrookdale Back up Route Alerting (2)	Deborah Blunt	ICFI
Bucks County Emergency Operations Center	William McDougall	FEMA RIII
Bucks County Monitoring and Decontamination Center, Trevose Fire Company	John Wiecjorek	ICFI
Bucks County Reception Center, Trevose Fire Company	Roger Jobe	ICFI
Chester County Emergency Operations Center	Miriam Weston	FEMA Region 2
Chester County Emergency Operations Center	John Price	FEMA RIII
Chester County Emergency Operations Center	Patricia Gardner	FEMA RIII
Chester County Emergency Operations Center	Clayton Spangenberg	ICFI
Chester County Monitoring and Decontamination Center, West Whiteland	Deborah Blunt	ICFI

Chester County Phoenixville Area School District, Manavon Elementary School & Phoenixville Area Early Learning Center	Roger Kowieski	ICFI
Chester County Reception Center, West Whiteland Township	Gary Goldberg	ICFI
Chester County, Charlestown Emergency Operations Center	Lisa Rink	FEMA HQ
Chester County, Charlestown Emergency Operations Center	Alonzo McSwain	Headquarters
Chester County, Downingtown Area School District	John Price	FEMA RIII
Chester County, Downingtown Area School District, Downingtown High School East	Lenora Borchardt	ICFI
Chester County, Downingtown Area School District, Lionville Elementary School	Patricia Gardner	FEMA RIII
Chester County, Downingtown Area School District, Lionville Middle School	Lisa Rink	FEMA HQ
Chester County, Downingtown Area School District, Uwchlan Hills Elementary School	John Zeidler	ICFI
Chester County, East Coventry Township Emergency Operations Center	Kevin Reed	ICFI
Chester County, East Coventry Township Emergency Operations Center	Ronald Bonner	ICFI
Chester County, East Coventry Township Traffic and Access Control	Ronald Bonner	ICFI
Chester County, East Pikeland Township Emergency Operations Center	Brian Hasemann	FEMA Region 2
Chester County, East Pikeland Township Emergency Operations Center	Ryan Jones	Region 01
Chester County, East Pikeland Township Traffic and Access Control	Ryan Jones	Region 01
Chester County, Emergency Worker Monitoring and Decontamination Station Twin Valley FD	James Hickey	ICFI
Chester County, Great Valley School District	Michael Shuler	FEMA RIII
Chester County, Great Valley School District, Great Valley High School	Ingrid Pierce	Region 01
Chester County, Great Valley School District, Great Valley Middle School	Clayton Spangenberg	SLS Enterprises, Inc.
Chester County, Owen J. Roberts School District	Kent Tosch	ICFI
Chester County, Owen J. Roberts School District, East Vincent Elementary School	Ryan Jones	Region 01
Chester County, Owen J. Roberts School District, French Creek Elementary School	Gary Bolender	ICFI
Chester County, Owen J. Roberts School District, West Vincent Elementary School	Richard Smith	ICFI

Chester County, Phoenixville Area School District	Roger Kowieski	ICFI
Chester County, Schuylkill Township Emergency Operations Center	Lynn Steffensen	ICFI
Chester County, Schuylkill Township Emergency Operations Center	Meg Swearingen	ICFI
Chester County, Schuylkill Township Traffic and Access Control	Lynn Steffensen	ICFI
Chester County, Uwchlan Township Emergency Operations Center	James Greer	ICFI
Chester County, Uwchlan Township Emergency Operations Center	Thomas Gahan	ICFI
Chester County, Uwchlan Township Traffic and Access Control	James Greer	ICFI
Chester County, West Vincent Township Emergency Operations Center	David Kayen	ICFI
Chester County, West Vincent Township Emergency Operations Center	Michael Meshenberg	ICFI
Chester County, West Vincent Township Traffic and Access Control	Michael Meshenberg	ICFI
Exelon Joint Information Center	Roger Kowieski	ICFI
Lehigh County Emergency Operations Center	Richard Smith	ICFI
Lehigh County Mass Care Center, Southern Lehigh High School	Michael Meshenberg	ICFI
Lehigh County Monitoring and Decontamination Center, Southern Lehigh High School	Michael Howe	Headquarters
Lehigh County Reception Center, Southern Lehigh High School	Carol D. Shepard	ICFI
Limerick Township Back Up Route Alerting	Roger Jobe	ICFI
Limerick Township Back Up Route Alerting (2)	Carol D. Shepard	ICFI
Lower Pottsgrove Township Traffic and Access Control Point	Carl Wentzell	ICFI
Montgomery County Emergency Operations Center	Lee Torres	FEMA RIII
Montgomery County Emergency Operations Center	Megean Brown	FEMA RIII
Montgomery County Emergency Operations Center	Bruce Swiren	ICFI
Montgomery County Emergency Operations Center	Paul Nied	ICFI
Montgomery County Emergency Worker Monitoring and Decontamination Station, Indian Valley MS	Bart Ray	ICFI

Montgomery County, Evacuee Monitoring/Decontamination Center, Plymouth Fire Company	Thomas Essig	ICFI
Montgomery County, Green Lane Borough/Marlboro Township Emergency Operations Center	Brian Clark	ICFI
Montgomery County, Green Lane Borough/Marlboro Township Emergency Operations Center	Michael Burriss	ICFI
Montgomery County, Limerick Township Emergency Operations Center	Robert Duggleby	ICFI
Montgomery County, Limerick Township Emergency Operations Center	Robert Lemeshka	ICFI
Montgomery County, Limerick Township Traffic and Access Control	Robert Lemeshka	ICFI
Montgomery County, Lower Frederick Township Emergency Operations Center	Michael Henry	ICFI
Montgomery County, Lower Frederick Township Emergency Operations Center	James Hickey	ICFI
Montgomery County, Lower Pottsgrove Township Emergency Operations Center	Carl Wentzell	ICFI
Montgomery County, Lower Pottsgrove Township Emergency Operations Center	Robert Walker	ICFI
Montgomery County, Marlborough Township Traffic and Access Control	Brian Clark	ICFI
Montgomery County, Methacton School District,	Henry Christiansen	ICFI
Montgomery County, Methacton School District, Eagleville Elementary School	Lee Torres	FEMA RIII
Montgomery County, Methacton School District, Methacton High School	Megean Brown	FEMA RIII
Montgomery County, Methacton School District, Woodland Elementary School	Robert Lemeshka	ICFI
Montgomery County, New Hanover Township Emergency Operations Center	Henry Christiansen	ICFI
Montgomery County, New Hanover Township Emergency Operations Center	John Zeidler	ICFI
Montgomery County, New Hanover Township Traffic and Access Control	Henry Christiansen	ICFI
Montgomery County, Perkiomen Township Emergency Operations Center	Brad McRee	ICFI
Montgomery County, Perkiomen Township Emergency Operations Center	Dennis Wilford	ICFI
Montgomery County, Perkiomen Valley School District	Miriam Weston	FEMA Region 2
Montgomery County, Perkiomen Valley School District, Perkiomen Middle School East	Bart Ray	ICFI
Montgomery County, Perkiomen Valley South Elementary School	Carl Wentzell	ICFI

Montgomery County, Pottsgrove School District	Christopher Nemcheck	FEMA RIII
Montgomery County, Pottsgrove School District, Pottsgrove High School	Christopher Nemcheck	FEMA RIII
Montgomery County, Pottsgrove School District, West Pottsgrove Elementary School	Rosemary Samsel	ICFI
Montgomery County, Pottstown Area School District	Alonzo McSwain	Headquarters
Montgomery County, Pottstown Area School District, Lincoln Elementary School	Alonzo McSwain	Headquarters
Montgomery County, Pottstown Area School District, Pottstown High School	Joseph Suders	FEMA R III
Montgomery County, Reception Center Plymouth Fire Company	Dennis Wilford	ICFI
Montgomery County, Souderton Area School District	Ronald Bonner	ICFI
Montgomery County, Souderton Area School District, Salford Hills Elementary School	Kevin Reed	ICFI
Montgomery County, Spring-Ford Area School District	Rebecca Thomson	ICFI
Montgomery County, Spring-Ford Area School District, 5th & 6th Grade Center	Meg Swearingen	ICFI
Montgomery County, Spring-Ford Area School District, 7th Grade Center	Thomas Gahan	ICFI
Montgomery County, Spring-Ford Area School District, 8th Grade Center (Old Middle School)	James Greer	ICFI
Montgomery County, Spring-Ford Area School District, Spring-Ford Area High School	Robert Walker	ICFI
Montgomery County, Spring-Ford Area School District, Upper Providence Elementary	Lynn Steffensen	ICFI
Montgomery County, Trappe Borough Emergency Operations Center	Lenora Borchardt	ICFI
Montgomery County, Trappe Borough Emergency Operations Center	Thomas Essig	ICFI
Montgomery County, Upper Perkiomen School District, Upper Perkiomen High School	Brian Hasemann	FEMA Region 2
Montgomery County, Upper Perkiomen School District	Brenda Rembert	ICFI
Montgomery County, Upper Perkiomen School District, Marlborough Elementary School	Thomas Hegele	ICFI
Montgomery County, Upper Perkiomen School District, Upper Perkiomen Middle School	Robert Duggleby	ICFI
PA State Field Monitoring Team A, South East Region	Cristina Schulingkamp	ICFI
PA State Field Monitoring Team B, South East Region	Reggie Rodgers	ICFI

PA State Traffic and Access Control Points, State Police Barracks, Troop J, Embreeville	Kent Tosch	ICFI
Pennsylvania Accident Assessment Center, State EOC-Bureau of Radiation Protection	Michael Howe	Headquarters
Pennsylvania Bureau of Radiation Protection, Radiological Rapid Response Vehicle	Michael Shuler	FEMA RIII
Pennsylvania Commonwealth Response Coordination Center	Joseph Suders	FEMA R III
Pennsylvania Commonwealth Response Coordination Center	Christopher Nemcheck	FEMA RIII
Pennsylvania Joint Information Center/Rumor Control	Christopher Nemcheck	FEMA RIII
West Vincent Township Back Up Route Alerting	Brenda Rembert	ICFI
West Vincent Township Back Up Route Alerting (2)	Roy Smith	ICFI
West Vincent Township Back Up Route Alerting (3)	John Wiecjorek	ICFI

APPENDIX C: ACRONYMS AND ABBREVIATIONS

ACS	Auxiliary Communications Service
AO	Agriculture Officer
AP	Assistant Principal
ARC	American Red Cross
ARRA	Area Requiring Corrective Action
ARES	Amateur Radio Emergency Services
BCEOC	Berks County Emergency Operations Center
CCEOC	Chester County Emergency Operations Center
CCEPRS	Chester County Emergency Preparedness Radio System
CERT	Crisis Emergency Response Team
CRCC	Commonwealth Response Coordination Center
DRD	Direct Reading Dosimeter
DT	Douglass Township
EAL	Emergency Action Level
EAS	Emergency Alert System
ECC	Emergency Communications Center
ECL	Emergency Classification Level
EDO	Emergency Duty Officer
EMA	Emergency Management Agency
EMC	Emergency Management Coordinator
EMD	Emergency Management Director
EMS	Emergency Medical Services
EOC	Emergency Operations Center
EOCD	Emergency Operations Center Director
EPLO	Emergency Preparedness Liaison Officer
EPT	Emergency Preparedness Team
EPZ	Emergency Planning Zone
ERP	Emergency Response Procedure
ERT	Emergency Response Team
ESF	Emergency Support Function
EW	Emergency Workers
FAA	Federal Aviation Authority
FCP	Forward Command Post
FEMA	Federal Emergency Management Agency
FRT	Facility Response Team
GE	General Emergency
GIS	Geospatial Information System
JIC	Joint Information Center
LGS	Limerick Generating Station
LSC	Logistic Section Chief
MC	Montgomery County
MCCEOC	Montgomery County Emergency Operations Center

MCT	Mobile Computer Terminal
MDC	Mobile Data Computer
MDT	Mobile Data Terminal
MERT	Medical Emergency Response Team
MPS	Municipal Planner Specialist
MTFD	Montgomery Township Fire Department
NARS	Nuclear Accident Reporting System
ORO	Offsite Response Organization
PAD	Protective Action Decision
PBEMA	Phoenixville Borough Emergency Management Agency
PBEOC	Phoenixville Borough Emergency Operations Center
PCS	Personal Communications Services
PEIRS	Pennsylvania Emergency Incident Reporting System
PEMA	Pennsylvania Emergency Management Agency
PIO	Public Information Officer
PM	Portal Monitor
PRD	Permanent Radiation Dosimeter
PSP	Pennsylvania State Police
PWD	Public Works Department
RACES	Radio Amateur Civil Emergency Services
RAT	Route Alerting Teams
REOP	Radiological Emergency Operations Plan
REP	Radiological Emergency Preparedness
RERP	Radiological Emergency Response Plan
RO	Radiological Officer
RSAN	Roam Secure Alert Network
RSO	Radiation Safety Officer
SAC	Staging Area Commander
SAE	Site Area Emergency
SEOC	State Emergency Operations Center
SEVAN	Statewide Emergency Voice Activation Network
SSL	School Services Liaison
TCP	Traffic Control Points
TEDE	Total Effective Dose Equivalent
TLD	Thermos Luminescent Dosimeter

APPENDIX D: EXTENT OF PLAY AGREEMENT

The 2017 Limerick Generating Station Plume Exercise Extent-of-Play was negotiated and agreed upon by FEMA Region III, Pennsylvania Emergency Management Agency, and the Emergency Management Agencies of the Risk Counties.

LIMERICK PLUME EXPOSURE PATHWAY EXERCISE

By signing this Extent of Play Agreement the Commonwealth of Pennsylvania and the FEMA Region III exercise planning team confirm 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 14, 2017 Limerick 2017 Plume Exposure Pathway Exercise.

11/2/17

FEMA SITE SPECIALIST

11/3/17

LEAD STATE PLANNER

11/2/17

FEMA TEAM LEADER

LIMERICK GENERATING STATION

EXTENT OF PLAY

2017 RADIOLOGICAL EMERGENCY PREPAREDNESS EXERCISE

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Table of Contents

LIMERICK GENERATING STATION
2017 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 Bureau of Radiation Protection and Risk Counties of emergency classifications.

II. Bureau of Radiation Protection (BRP)

BRP personnel will be present at the CRCC, the nuclear facility EOF, Branch and field locations; BRP field teams will **NOT** be evaluated during this exercise. BRP field teams will perform air sampling out-of-sequence, preferably before they deploy to the plume area. This is for observation only by FEMA.

III. PEMA Operations at the CRCC

This "Method of Operation" Document includes activities for the Full-Scale Plume Exercise (November 14, 2017), and the "Out-of-sequence" Activities (November 15, 2017).

A. Plume Exercise – November 14, 2017

PEMA staff, augmented by designated PEMA personnel from the Fire Commissioner's Office, the Bureau of Administration, Technical Services, Planning, Training, and Exercise, plus Agency Representatives (AREPs) with accompanying response team members from designated state departments/agencies, including representatives from the USDA State Emergency Board will comprise initial operations at the CRCC. The CRCC will not be evaluated during this exercise.

B. Plume Exercise – "Out-of-Sequence" Activities – November 14, 2017

PEMA staff, augmented by designated PEMA personnel will disseminate exercise related messages to the participating Counties for dissemination to the participating School Districts during the morning of November 14, 2017. The CRCC and County EOCs will NOT be evaluated during the "Out-of-Sequence" component. PEMA personnel will serve as "Observers" at the identified School Districts.

C. "Out-of-Sequence" Activities – November 15, 2017

PEMA personnel will serve as "Observers" at the various field exercise locations during the evening "Out-of-Sequence" component November 15, 2017. 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 J – Embreeville Barracks, 997 Lieds Road, Coatesville, Chester County. The PSP briefing will be performed out-of-sequence in a demonstration window of 10:00 a.m. to 12:00 noon on November 15, 2017.

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 Office 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 Emergency Operations Centers and implement emergency response operations to include sheltering and/or evacuation. County government will provide direction and coordination to risk municipalities. The two support counties (Bucks and Lehigh) will participate in their assigned support roles. Actual sheltering or evacuation of the general public will be simulated.

VI. PEMA Liaison Officers

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

VII. Controllers

A lead controller will be present in the CRCC on November 14, 2017. Controllers will be present at the emergency worker monitoring/decontaminating stations and the mass care monitoring/decontamination centers (November 15, 2017). 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 XIII)

IX. 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 approximately one-fourth of the risk municipalities in Berks, Chester, and Montgomery Counties.

Out-of-Sequence Period (November 14 and 15, 2017): On November 14, Federal evaluators will be present at the identified "out-of-sequence" demonstration sites per Attachment A, Section I.A.1. These include the identified Public School Districts and participating school buildings. On November 15, Federal evaluators will also be present at identified Reception Centers, Emergency Worker Monitoring and Decontamination Stations, Mass Care Centers and Mass Care Monitoring and Decontamination Centers, as identified in Attachment A, Sections I.B.1, I.B.2, I.B.3, and I.B.4.

Plume Phase Exercise (November 14, 2017): 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, approximately one-third of the risk municipalities will be federally evaluated.

X. 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 28, 2017.

Twenty-five mass care centers (0 in Berks, 18 in Bucks, 0 in Chester, 3 in Lehigh, and 4 in Montgomery) will receive "assessment" baseline evaluations on October 30 and 31, 2017. *These 25 mass care centers will not be evaluated during the evening of November 15. There are three co-located Mass Care/Monitoring and Decontamination Centers in Berks and one in Lehigh that will be evaluated on the evening of November 15. (Please refer to the Extent-of-Play Demonstration Tables, Attachment A)*

The mass care assessment 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. An assessment of mass care facilities scheduled for evaluation will be accomplished to satisfy FEMA's evaluation process.

The out-of-sequence exercise window for school demonstrations will be on November 14, 2017 from 9:00 – 11:00 a.m.

County and municipal EOC operations will be conducted on November 14, 2017 with exercise period from approximately 4:00 – 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 15, 2017 from 10:00 a.m. – 12:00 p.m.

The out-of-sequence demonstration of reception centers, mass care centers (as indicated), monitoring/decontamination centers and emergency worker stations will be conducted on November 15, 2017 from 7:00 – 9:30 p.m. Locations are specified within Attachment A, Sections I.B.1, I.B.2, I.B.3, and I.B.4.

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.

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

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

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

XII. General Concepts

An emergency plan is drafted to address the generally expected conditions of an emergency. Not everything in the emergency plan may be applicable for a given scenario. The main purpose of an emergency plan is to assemble sufficient expertise and officials so as to properly react to the events as they occur. The responders should not be so tied to a

plan that they cannot take actions that are more protective of the public. Furthermore, if, by following the plan there is a failure to protect the public health and safety, it should be noted so that the plan can be modified and the appropriate negative assessment applied.

XIII. Re-demonstrations

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

LIMERICK GENERATING STATION
2017 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 county/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 inventory (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:

None

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:

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

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

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

INTENT

This Sub-element 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:

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 DRD and KI quantities will be verified using inventory sheets. DRDs and KI will not be removed from storage locations and boxes/packages will not be opened. KI questions will be addressed through interviews.

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

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

EVALUATION AREA 2

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:

None

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 PARs can be addressed through an interview.

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:

None

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 PARs can be addressed through an interview.

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 and procedures to replace those approaching limits and how permission to exceed limits is obtained from the municipality and county. Emergency workers will also be briefed on when to take KI and on whose authority. Distribution of KI will be simulated. A maximum of six (6) Dosimetry-KI report forms will be demonstrated.

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

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

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

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

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

Category A: 1 PRD, 1 DRD, and 1 unit of KI
Category B: 1 PRD and 1 unit of KI
Category C: 1 PRD

All locations that have dosimetry equipment indicated within their Radiological Emergency Response Plan (RERP), will make the dosimetry equipment (and KI) available for inspection by the Federal Evaluator. Simulation PRDs with mock serial numbers will be used.

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

Sub-element 3.b – Implementation of KI Decision 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 maximum of six PRDs will be issued.

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 identified special needs are maintained on a list at their respective municipal EOC (based upon residential jurisdiction). Copies of these lists will not be provided to the evaluators; however, evaluators will be allowed to inspect the lists during the exercise.

NOTE: *Berks County maintains a countywide special needs list for individuals requiring assistance. This list may be viewed at the county as it will not be disseminated for exercise purposes.*

Evaluators may ask, by interview, 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 and the County. Evacuation of students will be conducted through an interview process with School District personnel or the building principal.

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

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

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

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

INTENT

This Sub-element 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.

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 observers will meet the field teams at the R3V staging area at Wilson Farm Park, 500 Lee Road in Wayne, Pennsylvania 19087 at 1:30 p.m. on November 14, 2017 to observe instrumentation checks and equipment inventory verification.

Field Team Control will be performed within or near the 10 mile EPZ using the DEP Radiological Rapid Response Vehicle (R3V). Field Team control is expected to initially be out-of-sequence with the plume timeline. During the exercise the field teams will be directed to take measurements in locations to provide information sufficient to characterize the plume and impacts. In addition to field team measurements, remote detectors will be placed by the field teams near the expected plume pathway. These detectors will automatically transmit data to the R3V and the CRCC. Field teams will follow ALARA principles in the deployment of these detectors.

*Field teams will **NOT** 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 Department of Environmental Protection (DEP), Bureau of Radiation Protection (BRP), in accordance with the State Annex E, Appendix 6, and BRP Standard Implementing Procedures (IPs). Two mobile monitoring teams from BRP DEP South East Regional Office will demonstrate ambient radiation monitoring and radioiodine and particulate sampling. Field teams will be equipped with appropriate dosimetry and KI. ***Field teams will NOT be evaluated by FEMA.*** *Each team will be directed to monitoring locations and perform actual radiation measurements at each location. Measurements may consist of truck installed radiation monitor or hand-held radiation instruments. An actual air sample will be taken at the R3V staging area prior to field team departure to LGS. Field teams will discuss air sample counting procedures via an interview process. Teams will then take additional simulated air samples, as directed, at additional locations, if conditions are appropriate for radioiodine sampling and relay information to the Radiological Rapid Response Vehicle (R3V). In place of silver zeolite cartridges, charcoal cartridges will be used for the exercise. All measurements will be forwarded to theR3V immediately upon obtaining data.*

FEMA observers will meet the field teams at the R3V staging area at Wilson Farm Park, 500 Lee Road in Wayne, Pennsylvania 19087 at 1:30 p.m. on November 14, 2017.

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 3 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 ORO's 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 I.A.4.) County liaisons will give an inject to the county siren

dispatcher, upon confirmation that sirens were sounded, that a particular siren has failed in the municipalities scheduled to demonstrate back-up route alerting. Notice of the siren failure will then be communicated to the appropriate municipalities/locations so they can demonstrate their recommended goal of 45 minute per-identified back-up route alert run as per Attachment A, Section I.A.4. Pennsylvania does not have any "exception areas." The 45-minute clock starts 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 (10) public inquiry calls from the State Exercise cell assigned this responsibility. Counties will be expected to receive and log the calls, identify any trends and take appropriate actions to include follow-up message development, distributions and/or briefings.

EVALUATION AREA 6

Support 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 (6) volunteer evacuees will be monitored (or one volunteer evacuee may be monitored six times). **Centers using portal monitors are only required to demonstrate three (3) 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 not be able to be decontaminated. Discussions concerning the processing of contaminated personnel will include capabilities and written procedures for showering females separate from males. Showering will be simulated, water will not be used. **Note: If portal monitors are used, see below.***

*At the **emergency worker monitoring/decontamination stations**, two (2) emergency workers will be monitored. Discussions concerning processing of contaminated personnel will include capabilities and written procedures for showering females separate from males. Showering will be simulated, water will not be used. Suitable radiological monitoring instruments will be issued to the initial monitoring team. **Note: If portal monitors are used, the Portal Monitor Extent-of-Play described below shall be used.***

***Portal Monitor Use:** Risk and Support counties may, during this exercise, utilize portal monitors to monitor simulated evacuees and/or emergency workers. The monitoring/decontamination team requirements will be based on the portal monitor capabilities as applicable based on the procedure/guidelines, and the recommendations of the manufacturer. **Note:** PEMA Interim Annex E letter, April 2009 or superseding document shall apply.*

Monitoring/decontamination centers and Emergency Worker monitoring and decontamination station personnel are not issued DRDs or KI since the centers and stations are outside the EPZ. Category "C" Dosimetry applies. Simulated 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.

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.

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 the operation of mass care centers during the out-of-sequence window (Berks and Lehigh Counties) will provide floor plans of the mass care centers to show organization

Personnel, at a minimum, will consist of one manager and one assistant for each mass care center opened during the out-of-sequence window. The responsible American Red Cross chapter will show the source and quantities, by job functional description, to be provided to mass care centers to support the 24-hour operation. The responsible Red Cross Chapter(s) will be visited, or telephonically contacted during business hours on November 15, 2017, 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 November 15, 2017 from 7:00 PM – 9:30 PM.

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

AMERICAN RED CROSS RISK AND SUPPORT COUNTY CHAPTERS:

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

Greater Lehigh Valley 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 will be evaluated at Brandywine Hospital, Chester County, on September, 28, 2017.

NOTE: Responding EMS crew does not monitor nor decontaminate the injured patient. The injured patient will be monitored at the hospital. If found contaminated, the patient will be decontaminated at the hospital as well.

ATTACHMENT A

LIMERICK GENERATING STATION
EXTENT OF PLAY DEMONSTRATION TABLES

I. Plume Phase Exercice

A. Activities – November 14, 2017

1. School Districts – Out-of-Sequence Exercise

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

Time: Out-of-sequence – 9:00 – 11:00 AM

Asterisks (*) items indicate buildings not in EPZ – students may live in the EPZ

COUNTY	SCHOOL DISTRICT	SCHOOLS (approx. 1/4th evaluated)
Berks	**Boyertown Area**	1. Boyertown Senior High School 2. New Hanover/Upper Frederick Elementary School 3. Earl Elementary School* 4. Washington Elementary School*
	Daniel Boone Area	1. Birdsboro Elementary *
Chester	**Downingtown Area**	1. Lionville Elementary School* 2. Uwchlan Hills Elementary School* 3. Lionville Middle School* 4. Downingtown High School East*
	Great Valley	1. Great Valley Middle School* 2. Great Valley High School*
	Owen J. Roberts	1. French Creek Elementary School 2. East Vincent Elementary 3. West Vincent Elementary
	Phoenixville Area	1. Manavon Elementary School & Phoenixville Area Early Learning Center (new for 2017)

Montgomery	**Methacton Area**	1. Woodland Elementary 2. Eagleville Elementary* 3. Methacton Senior High School*
	Perkiomen Valley	1. South Elementary School 2. Perkiomen Valley MS – East
Montgomery cont'd	**Pottsgrove**	1. Pottsgrove High School 2. West Pottsgrove Elementary
	Pottstown Area	1. Lincoln Elementary School 2. Pottstown High School
	Souderton Area	1. Salford Hills Elementary
	Spring-Ford Area	1. Upper Providence Elementary 2. 5th & 6th Grade Center 3. 7th Grade Center 4. 8th Grade Center 5. Spring-Ford Area High School
	Upper Perkiomen	1. Marlborough Elementary 2. Upper Perkiomen High School* 3. Upper Perkiomen Middle School*

2. County Emergency Operations Center (EOCs)

   Time: Per Exercise Scenario

DEMONSTRATION FOR EOC MOBILIZATION FOR COUNTIES		
COUNTY	**DATE**	**Time**
Berks	November 14, 2017	Exercise Scenario
Bucks	November 14, 2017	Exercise Scenario
Chester	November 14, 2017	Exercise Scenario
Montgomery	November 14, 2017	Exercise Scenario
Lehigh	November 14, 2017	Exercise Scenario

3. BRP field teams will be **OBSERVED** at the R3V staging area located at Wilson Farm Park, 500 Lee Road, Wayne, Pennsylvania 19087 on November 14, 2017 at 1:30 p.m.

4. Municipal Emergency Operations Center (EOCs)

   Time: Per Exercise Scenario

   Asterisks (*) items indicate joint EOCs.

DEMONSTRATION FOR EOC MOBILIZATION FOR MUNICIPALITIES

RISK COUNTY	MUNICIPALITY	DATE
Berks	*Boyertown Borough/Colebrookdale Twp - RA	November 14, 2017
	Earl Twp	November 14, 2017
	Union Twp	November 14, 2017

Chester	Charlestown Twp	November 14, 2017
	East Coventry Twp	November 14, 2017
	East Pikeland Twp	November 14, 2017
	Schuylkill Twp	November 14, 2017
	Uwchlan Twp	November 14, 2017
	West Vincent Twp – RA	November 14, 2017
Montgomery	*Greenlane Borough/Marlborough Twp	November 14, 2017
	Limerick Twp –RA	November 14, 2017
	Lower Frederick Twp	November 14, 2017
	Lower Pottsgrove Twp	November 14, 2017
	New Hanover Twp	November 14, 2017
	Perkiomen Twp	November 14, 2017
	Trappe Borough	November 14, 2017

5. 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	Boyertown Borough/Colebrookdale Twp 16D / #105 (2 teams)	November 14, 2017
Chester	West Vincent Township East End of 73C / #92 (3 teams)	November 14, 2017
Montgomery	Limerick Township 84A / #32 (2 teams)	November 14, 2017

6. Traffic and Access Control Points

   a. The Pennsylvania State Police will brief at the PSP Troop J – Embreeville Barracks, 997 Lieds Road, Coatesville, Chester 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. – 12:00 p.m. on November 15, 2017.

   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. – 10:00 p.m. on November 14, 2017.

Berks	Chester	Montgomery
*Boyertown Borough/Colebrookdale Township	East Coventry Township	Marlborough Township
--	East Pikeland Township	Limerick Township
--	Schuylkill Township	Lower Pottsgrove Township
--	Uwchlan Township	New Hanover Township
--	West Vincent Township	--

*Joint EOCs

B. Activities – November 15, 2017

1. Reception Centers

Time: Out-of-sequence – 7:00 p.m. – 9:30 p.m.

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

RECEPTION CENTERS LOCATIONS		
COUNTY	**LOCATION**	**Quantity**
Berks	Robeson Township Building	1
Bucks*	Trevose Fire Company	1
Chester*	West Whiteland Township Building	1
Lehigh*	Southern Lehigh High School	1
Montgomery*	Plymouth Fire Company	1

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

EMERGENCY WORKER MONITORING/DECONTAMINATION STATION		
COUNTY	**LOCATION**	**DATE**
Berks	Daniel Boone Area High School	November 15, 2017
Chester	Twin Valley Fire Department	November 15, 2017
Montgomery	Indian Valley Middle School	November 15, 2017

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*	Schuylkill Valley High School	November 15, 2017
	Governor Mifflin Senior High School	November 15, 2017

	Muhlenberg Senior High School	November 15, 2017
Bucks	Neshaminy Mall (alt. Trevose Fire Company)	November 15, 2017
Chester	West Whiteland Township Building	November 15, 2017
Lehigh*	Southern Lehigh High School	November 15, 2017
Montgomery	Plymouth Fire Company	November 15, 2017

4. Mass Care Centers for risk and support counties.

MASS CARE CENTER		
COUNTY	**LOCATION**	**DATE**
Berks	Schuylkill Valley High School	November 15, 2017
	Governor Mifflin Senior High School	November 15, 2017
	Muhlenberg Senior High School	November 15, 2017
Lehigh	Southern Lehigh High School	November 15, 2017

II. Mass Care Center Assessment

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 (21/0)	Twenty-five Assessment are scheduled for October 30-31, 2017 See schedule below	
Bucks (61/18)		
Chester (10/0)		
* Lehigh (15/3)		
Montgomery (13/4)		

MASS CARE CENTER LOCATIONS		
COUNTY	**LOCATION**	**Quantity**
* Berks	No Assessment	**0**
Bucks **RED TEAM** **OCTOBER 30, 2017** **9:00 AM** *Montgomery Mall Reception Center	<u>Upper Bucks</u> 1. Pennridge High School 2. Pennridge South Jr. School 3. Pennridge Central Middle School 4. Palisades Sr. High School 5. Central Bucks West High School 6. New Hope-Solebury Complex* 7. Palisades Middle School* 8. Central Bucks East High School* 9. Holicong Middle School* 10. Unami Jr. High School* <u>Lower Bucks</u> 11. Maple Point Middle School	**18**

MASS CARE CENTER LOCATIONS		
COUNTY	**LOCATION**	**Quantity**
RED TEAM OCTOBER 31, 2017 9:00 AM	12. Bristol Boro Jr/Sr School 13. Pennwood Middle School 14. Council Rock North High School 15. Bucks County Community College* 16. William Tennet Complex* 17. Log College Jr. High School* 18. Klinger Middle High School*	
Chester	No Assessment	**0**
* Lehigh **BLUE TEAM OCTOBER 30, 2017 9:00 AM**	1. Troxell Jr. High School 2. Salisbury High School 3. Salisbury Middle School	**3**
Montgomery **BLUE TEAM OCTOBER 30, 2017 1:00 PM**	1. Sandy Run Middle School 2. Upper Dublin Sr. High School 3. Upper Moreland High School 4. Upper Moreland Middle School	**4**

NOTE: The mass care assessment 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. An Assessment of mass care facilities scheduled for evaluation will be accomplished to satisfy FEMA's evaluation process.

ATTACHMENT B

LIMERICK GENERATING STATION
PREVIOUS ISSUES

WE DID NOT HAVE ANY ISSUES FROM THE LGS PLUME EXERCISE HELD ON NOVEMBER 17, 2015.