Peach Bottom Atomic Power Station
Delta, Pennsylvania
After Action Report/Improvement Plan

Exercise Date – April 16, 2024

Radiological Emergency Preparedness (REP) Program

FEMA

Published June 30, 2024

This page is intentionally blank.

Peach Bottom Atomic Power Station

After Action Report/Improvement Plan

Published June 30, 2024

EXECUTIVE SUMMARY 5

SECTION 1: EXERCISE OVERVIEW 7
1.1 Exercise Details 7
1.2 Exercise Planning Team Leadership 7
1.3 Participating Organizations 8

SECTION 2: EXERCISE DESIGN SUMMARY 13
2.1 Exercise Purpose and Design 13
2.2 Exercise Objectives, Capabilities and Activities 15
2.3 Scenario Summary 16

SECTION 3: ANALYSIS OF CAPABILITIES 17
3.1 Exercise Evaluation and Results 17
3.2 Summary Results of Exercise Evaluation 17
3.3 Criteria Evaluation Summaries 32
3.3.1.1 Commonwealth of Pennsylvania Jurisdictions 32
3.3.1.2 Maryland State Jurisdictions 34
3.3.2 Pennsylvania Risk Jurisdictions 37
3.3.3 Maryland Risk Jurisdictions 41
3.3.4 Peach Bottom Medical Services Assessments 45

SECTION 4: DEMONSTRATED STRENGTHS 47

SECTION 5: CONCLUSION 49

APPENDIX A: EXERCISE TIMELINE 50

APPENDIX B: EXERCISE EVALUATORS AND TEAM LEADERS 56

APPENDIX C: ACRONYMS AND ABBREVIATIONS 61

APPENDIX D: EXTENT OF PLAY AGREEMENT 64

This page is intentionally blank.

EXECUTIVE SUMMARY

On April 16, 2024, a full participation Hostile Action Based Plume Exposure Pathway exercise was conducted and evaluated for the 10-Mile Emergency Planning Zone (EPZ) around the Peach Bottom Atomic Power Station (PBAPS) by the U.S. Department of Homeland Security (DHS) Federal Emergency Management Agency (FEMA), Region 3. The previous full-participation Plume Exercise at this site was evaluated on April 26, 2022.

Out-of-Sequence demonstrations were conducted on March 26-27, April 17, and May 8, 2024. The purpose of the Exercise and Out-of-Sequence demonstrations was to assess the capabilities of State, counties, and local jurisdictions to implement Radiological Emergency Response Plans (RERP) and Procedures to protect the property and lives of residents and transients in the event of an emergency at the Peach Bottom Atomic Power Station. The findings in this report are based on the evaluations of the Federal evaluation team, with final determinations made by the FEMA, Region 3 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, no Level 2 Findings, and six Planning Issues. Four of the Plan Issues were resolved prior to the publishing of this report after FEMA received updated plans. The four resolved plan issues were assessed to the Harford County Department of Emergency Services, Harford County Emergency Medical Services, Maryland Department of Emergency Management, and Maryland Department of Environmental.

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 assessment activity 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 assessment activity that is not considered, by itself, to adversely impact public health and safety."

Finally, a Plan Issue is: "An observed or identified inadequacy in the offsite response organization's (ORO) 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 and the State of Maryland; the five risk county jurisdictions of Chester County, Lancaster County, York County, Cecil County, and Harford County; and the municipal jurisdictions within Chester County, Lancaster, and York County. Protecting the public health and safety is the full-time job of some of the exercise participants and an additional assigned responsibility for others. Still others have willingly sought this responsibility by

volunteering to provide vital emergency services to their communities. Cooperation and teamwork of all the participants were evident during the exercise.

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

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

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

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

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

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

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

SECTION 1: EXERCISE OVERVIEW

1.1 Exercise Details

Exercise Name
Peach Bottom Atomic Power Station Plume Exercise

Type of Exercise
Plume

Exercise Date
April 16, 2024

Program
Department of Homeland Security/FEMA Radiological Emergency Preparedness Program

Scenario Type
Hostile Action

1.2 Exercise Planning Team Leadership

Taylor Griffiths
Emergency Management Specialist
DHS/FEMA Region 3
One Independence Mall, 6th Floor
615 Chestnut Street
Philadelphia, PA, 19106-4404
(202) 735-6823
taylor.griffiths@fema.dhs.gov

Joe Suders
Senior Technological Hazards Program Specialist
DHS/FEMA Region Three
One Independence Mall, 6th Floor
615 Chestnut Street
Philadelphia, PA, 19106-4404
(215) 478-2925
Joseph.suders@fema.dhs.gov

Laurin Fleming
Emergency Management Specialist
Pennsylvania Emergency Management Agency
1310 Elmerton Avenue
Harrisburg, PA 17110
717-651-2119
lauflemimg@pa.gov

Marci Catlett
Senior Technological Hazards Preparedness Specialist
State Radiological Emergency Program Coordinator
Consequence Management Directorate
Maryland Department of Emergency Management
5401 Rue Saint Lo Drive
Reisterstown, MD 21136
Marci.catlett@maryland.gov
(443) 379-7891

Sara Schmidt
Offsite Coordinator
Constellation
200 Energy Way
Kennett Square, Pennsylvania, 19348
(267)-533-1426
sara.schmidt@constellation.com

1.3 Participating Organizations

Agencies and organizations of the following jurisdictions participated in the Peach Bottom Atomic Power Station (PBAPS) exercise:

State Jurisdictions

Commonwealth of Pennsylvania

- Pennsylvania Emergency Management Agency
- Pennsylvania Fish and Boat Commission
- Pennsylvania Governor's Office
- Pennsylvania Liquor Control Board
- Pennsylvania Office of Administration
- Pennsylvania Public Utility Commission
- Pennsylvania State Police
- Pennsylvania Auxiliary Communications Service
- Pennsylvania Department of Corrections
- Pennsylvania Department of Drug and Alcohol Programs
- Pennsylvania Department of Environmental Protection
- Pennsylvania Department of Environmental Protection, Bureau of Radiation Protection
- Pennsylvania Department of Health
- Pennsylvania Department of Homeland Security
- Pennsylvania Department of Human Services
- Pennsylvania Department of Labor and Industry
- Pennsylvania Department of Military and Veterans Affairs
- Pennsylvania National Guard
- Pennsylvania Department of Revenue
- Pennsylvania Department of Transportation

Risk Jurisdictions

Chester County

- Chester County Department of Emergency Services
- Chester County HazMat
- Chester County Sheriff's Office
- West Nottingham Township
- West Nottingham Township Communications
- West Nottingham Township PIO
- West Nottingham Township Police Department
- West Nottingham Township Supervisor
- Union Fire Company #1 Station 21

Lancaster County

- Lancaster County Emergency Management Agency
- Lancaster County Commissioner's Office
- Lancaster Countywide Communications
- Lancaster County Hazmat 2
- Lancaster Sheriff's Office
- Lancaster County Auxiliary Communications Services
- Drumore Road Crew
- Drumore Township
- Drumore Township Constable's Office
- Drumore Township Resident
- Drumore Township Secretary Treasure
- Eden Township
- Fulton Township
- Fulton Township Ambulance
- Little Britain Township
- Martic Township
- Quarryville Township
- Quarryville Township Fire Department
- Rawlinsville Fire Department
- Robert Fulton Fire Department
- Solanco Regional Emergency Management Agency

York County

- York County Department of Emergency Services
- York County 9-1-1
- York County Commissioners
- York County GIS
- York County HazMat
- York County Planning Commission
- York County Sheriff's Office
- Airville Volunteer Fire Company
- Citizens Volunteer Fire Company, Station 56

- Delta/Cardiff Volunteer Fire Department
- Delta Peach Bottom Township
- Delta Peach Bottom Township Board Members and Volunteers
- Fawn Grove Township/Borough
- Lower Chanceford Public Works
- Lower Chanceford Township
- Lower Chanceford Township Chairman of the Board of Supervisors
- Southern York County Emergency Medical Service

State Jurisdictions

State of Maryland

- Maryland Department Emergency Management
- Maryland Coordination and Analysis Center
- Maryland Department of Agriculture
- Maryland Department of Disabilities
- Maryland Department of Environment
- Maryland Department of General Services
- Maryland Department of Health
- Maryland Department of Human Services
- Maryland Department of Information Technologies
- Maryland Department of Natural Resources
- Maryland Department of Planning
- Maryland Department of Transportation
- Maryland Energy Administration
- Maryland Environmental Administration
- Maryland Institute of Emergency Medical Services Systems
- Maryland Military Department
- Maryland Public Service Commission
- Maryland State Department of Education
- Maryland State Highway Administration
- Maryland State Police

Risk Jurisdictions

Cecil County

- Cecil County Department of Public Works
- Cecil County Department of Public Works, Sewer Waste Management
- Cecil County Department of Social Services
- Cecil County Fire/Rescue
- Cecil County Hazmat
- Cecil County Sheriff's Office
- Cecil County Government
- Cecil County Health Department
- Cecil County Agriculture Division
- Cecil County Department of Emergency Services
- Cecil County Information Technology Department

- Cecil County Parks and Recreation
- Radio Amateur Civil Emergency Service (RACES)
- Rising Sun Emergency Medical Services
- Rising Sun Fire Station 8

Harford County

- Harford County Department of Emergency Services
- Harford County Department of Public Works
- Harford County Department of Public Works, Division of Highways
- Harford County Department of Public Works, Division of Water & Sewer
- Harford County Executive
- Harford County Government, Department of Governmental & Community Relations (HCG-GCR)
- Harford County Health Department
- Harford County Human Resources
- Harford County Law Department
- Harford County Office of Information and Communications Technology (OICT)
- Harford County Office of Mental Health/Core Services Agency
- Harford County Parks and Recreation
- Havre De Grace Police Department
- Harford County Public Safety
- Harford County Public Schools Transportation
- Harford County Sheriff's Office
- Harford County Social Services
- Harford County Transit
- Harford County Transportation Department Bel Air Police Department
- Harford County Administration
- Harford County Agriculture Division
- Harford County Community Services
- Harford County Department of Community and Economic Development, Harford Transit Link

School/School Districts

- Cecil County Public Schools
- Conowingo Elementary School
- Harford County Public Schools
- Dublin Elementary School
- Darlington Elementary School
- Harford Christian Elementary School
- Penn Manor School District
- Marticville Middle School
- Solanco School District
- Clermont Elementary School
- Solanco High School
- Southeastern School District

- Delta/Peach Bottom Elementary

Private/Volunteer Organizations

- American Red Cross
- Cecil County Radio Amateur Civil Emergency Services
- Constellation Energy
- Christiana Care Union Hospital
- Upper Chesapeake Medical Center
- Delmarva Power
- Delta Peach Bottom ARES/RACES
- Drumore Township ACS/ARES
- Constellation – Conowingo Dam
- Harford County Amateur Radio ARES/RACES
- Lancaster County Amateur Radio Emergency Services Group (ARES)
- York County Radio Amateur Civil Emergency Service (RACES)

Federal Organizations

- Federal Bureau of Investigation
- Federal Emergency Management Agency
- Nuclear Regulatory Commission
- United States Coast Guard Capital Region
- USDA Natural Resources Conservation Services (NRCS)

SECTION 2: EXERCISE DESIGN SUMMARY

2.1 Exercise Purpose and Design

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

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

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

B. Determining whether such plans and procedures can be implemented based on observation and evaluation of exercises conducted by State and local governments.

C. Responding to requests by the U.S. Nuclear Regulatory Commission (NRC) pursuant to the Memorandum of Understanding between the NRC and FEMA dated December 7, 2015 (Federal Register, Vol. 81, No. 57, March 24, 2016); and

D. Coordinating the activities of the following Federal agencies with responsibilities in the radiological emergency planning process:
- U.S. Department of Commerce
- U.S. Nuclear Regulatory Commission
- U.S. Environmental Protection Agency
- U.S. Department of Energy
- U.S. Department of Health and Human Services
- U.S. Department of Transportation
- U.S. Department of Agriculture
- U.S. Department of the Interior
- U.S. Food and Drug Administration

Representatives of these agencies serve on the Region 3 Regional Assistance Committee (RAC), which is Chaired by FEMA. A Radiological Emergency Preparedness (REP) Plume Exposure Pathway Exercise was conducted during the week of April 16, 2024, 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 Peach Bottom Atomic Power Station (PBAPS). 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 3 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. 2, December 2019
- Radiological Emergency Preparedness Program Manual, January 2019

Emergency Planning Zone Description:
Constellation owns and operates the Peach Bottom Atomic Power Station (PBAPS). The station consists of one 40-megawatt (MW), high-temperature, gas-cooled reactor (Unit 1), decommissioned in October 1974, and two operating boiling water reactors (Units 2 and 3) rated at 1,065 MW per unit. The operating licenses for the facility were granted in October 1973 (Unit 2) and July 1974 (Unit 3); commercial operation began at the site in July 1974 (Unit 2) and December 1974 (Unit 3).

The coordinates of the plant site are 39°45’32” north (latitude) by 76°16’9” west (longitude). The site consists of 620 acres located on the west shore of Conowingo Pond; a reservoir formed by the backwater of the Conowingo Dam on the Susquehanna River. The site is primarily in Peach Bottom Township, York County, Pennsylvania; a small portion of the property lies in Lancaster County in southeastern Pennsylvania near the mouth of Rock Run Creek. The minimum exclusion distance (distance from the center point of the reactor vessel to the site area boundary) specified for the PBAPS is 2,700 feet. Constellation owns all the land within the exclusion area; there are no private residences on site.

The plant is located about 38 miles north-northeast of Baltimore, Maryland; 45 miles southeast of Harrisburg, Pennsylvania; and 20 miles south-southeast of Lancaster, Pennsylvania. The nearest communities are Delta, Pennsylvania, and Cardiff, Maryland, which are located approximately four and five miles west-southwest of the site, respectively. There are 97 sirens providing coverage for the 10-mile Emergency Planning Zone (EPZ); 65 are in Pennsylvania. Soils of the Manor-Glenelg Association predominate in the site area. These soils, which are generally underlain by schist or phyllite, are shallow to moderately deep and are found on moderate to very steep slopes. The general topography of the site is hilly, with elevations ranging from 110 feet to over 460 feet above mean sea level (MSL); the plant is 116 feet above MSL.

The site is characterized by broad ridge tops and steep hillsides along the river. The climate in this area of York County is mild but humid. Prevailing winds are from the west. The average rainfall is approximately 40.5 inches, and the average annual temperature is 52.8° Fahrenheit. The area in the immediate vicinity of the plant is mostly agricultural. There are no commercial airports within a 10-mile radius. The closest major airport is in Harrisburg, about 50 miles northwest of the site. A smaller airport servicing commuter and private aircraft is located in Lancaster, about 25 miles north of the site. No public highways pass through the plant, and no major arterial highways pass near it. Access to the plant is by two

roads: one, from the nearby town of Delta, leads to the decommissioned Unit 1 area and Information Center; the other passes north of Delta and enters the plant area near Units 2 and 3.

2.2 Exercise Objectives, Capabilities and Activities

The objectives of the 2024 Peach Bottom Atomic Power Station (PBAPS) Hostile Based 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).

Core capabilities-based planning allowed the exercise planning team to develop the objective and observe associated outcomes through a framework of specific action items. Additionally, the objective and capability target assessed met Radiological Emergency Preparedness Program Manual guidance.

The core capabilities demonstrated during this exercise were:

A. Operational Coordination
B. Planning
C. Environmental Response/Health and Safety
D. Public Information and Warning
E. Mass Care Services
F. Public Health
G. Healthcare and Emergency Medical Services
H. Situational Assessment
I. Critical Transportation
J. Operational Communications
K. Access Control/Identity Verification
L. On-Scene Security
M. Protection
N. Law Enforcement

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

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

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

2.3 Scenario Summary

The scenario for this exercise, developed by Constellation Energy, with input provided by the exercise planning team, involved several required scenario elements. This scenario included the hostile action based (HAB) scenario element. The HAB scenario element is required at least once in the 8-year exercise cycle and entails hostile actions directed at the Peach Bottom Atomic Power Station and involves the integration of offsite response organizations with onsite response. This HAB scenario included a radiological release. The release did not exceed the EPA Protective Action Guidelines (PAGs) for evacuation downwind three miles from the Peach Bottom Atomic Power Station.

This scenario also included the resource integration scenario element. The resource integration scenario element is required at least once in the 8-year exercise cycle and may be combined with other scenario elements. The resource integration element entails demonstrating the integration of offsite resources with onsite response efforts. While commonly combined with the HAB scenario element, this scenario element may be combined with any other scenario elements or utilized on its own.

This scenario included the rapid escalation scenario element. The rapid escalation scenario element is required at least once in the 8-year exercise cycle. Rapid escalation is defined as an initial classification of or rapid escalation, within 30 minutes, to a Site Area Emergency (SAE) or General Emergency (GE).

Initial Conditions

The simulated scenario started with sunny skies and a light breeze from the north. The crew will take the shift with both units operating at 100% power. At 1601, a Security Officer in will call to inform the Central Alarm Station (CAS) that potential security breach occurred.

1620 the SHIFT MANAGER will declare an ALERT Emergency Classification Level (ECL)

At 1647 the Shift Manager declares a SITE AREA EMERGENCY

At approximately 1803 the SHIFT EMERGENCY DIRECTOR will declare a GENERAL EMERGENCY resulting from the hostile based incident. The Licensee makes a Protective Action Recommendation (PAR) to the Commonwealth of Pennsylvania and the State of Maryland. Decision makers consider the Licensee PAR and other factors and OROs make protective actions based on plans and procedures.

Approximately 30 minutes later, conditions changed, and the licensee makes an upgraded PAR to the Commonwealth of Pennsylvania and the State of Maryland.

At 2045 the exercise was terminated

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 April 16, 2024, Biennial Plume Exposure Pathway 10-mile Emergency Planning Zone (EPZ) Radiological Emergency Preparedness (REP) Exercise. These exercises were 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 EPZ surrounding the Peach Bottom Atomic Power Station.

Each jurisdiction and functional entity were evaluated based on its demonstration of the Exercise Evaluation Area Criteria contained in the REP Exercise Evaluation Methodology. Detailed information on the exercise evaluation area criteria and the Extent of Play Agreement can be found in the Exercise Plan.

3.2 Summary Results of Exercise Evaluation

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

- (D) Demonstrated Strength: an observed action, behavior, procedure, and/or practice that is worthy of special notice and positive recognition, note: this is already a common practice that many Regions employ when identifying demonstrated strengths.
- (L1) Level 1 Finding: an observed or identified inadequacy or organizational performance in an assessment activity that could cause a determination that offsite emergency preparedness is not adequate to provide reasonable assurance that appropriate protective measures can be taken in event of a radiological emergency to protect the health and safety of the public living near a Nuclear Power Plant (NPP).
- (L2) Level 2 Finding: an observed or identified inadequacy of organizational performance in an assessment activity 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 Findings and Issues by Classification

Location	Target	Capability Target Description	Status
Commonwealth Response Coordination Center (CRCC)	2.1	Emergency Worker Exposure Control Decision Making Process	P- Open
Maryland Department of Emergency Management	3.3	Emergency Information and Instructions for the Public and News Media.	Closed
Cecil County, Emergency Operations Center	3.3	Emergency Information and Instructions for the Public and News Media.	P- Open
Maryland Field Monitoring Management - State Field Monitoring Team	4.1	Field Monitoring Teams Management	Closed
Harford County Harford County Emergency Medical Services	2.2	Emergency Worker Exposure Control	Closed
Harford County, Backup Route Alerting	3.2	Alert and Notification of the Public	Closed

Table 3.1b Exercise Evaluation Assessments Met

Location	Capability Target	Capability Target Description	Status
Objective 1: Emergency Operations Management			
Commonwealth Response Coordination Center (CRCC) Pennsylvania Emergency Management Agency (PEMA)	1.1	Mobilization	M
Lancaster County Public Safety Training Center (LCPSTC) - Monitoring and Decontamination Station	1.1	Mobilization	M
Fulton Township Emergency Operation Center - Emergency Operations Center, Municipal, Risk, PA	1.1	Mobilization	M
Drumore Township Emergency Operation Center - Emergency Operations Center, Municipal, Risk, PA	1.1	Mobilization	M
Lancaster County Emergency Operation Center - Emergency Operations Center, County, Risk	1.1	Mobilization	M
West Nottingham Township Emergency Operations Center - Emergency Operations Center	1.1	Mobilization	M
Chester County Emergency Operations Center - Emergency Operations Center	1.1	Mobilization	M
Pennsylvania State Police (ICP) Peach Bottom - Incident Command Post (ICP)	1.1	Mobilization	M

Pennsylvania State Police York Station (Dispatch) - State Police Dispatch	1.1	Mobilization	M
State Field Monitoring Team B (BRP) - State Field Monitoring Team	1.1	Mobilization	M
State Field Monitoring Team A (BRP) - State Field Monitoring Team	1.1	Mobilization	M
Radiological Rapid Response Vehicle (R3V) - Field Team Management	1.1	Mobilization	M
Constellation Media Operations Center - Joint Information Center	1.1	Mobilization	M
Constellation Emergency Operations Facility - Emergency Operating Facility	1.1	Mobilization	M
Pennsylvania Accident Assessment Center (BRP) - State Accident Assessment Center	1.1	Mobilization	M
Commonwealth Joint Information Center (at the CRCC) - Joint Information Center	1.1	Mobilization	M
Martic Township Emergency Operation Center - Emergency Operations Center	1.1	Mobilization	M
Little Britain Township Emergency Operation Center - Emergency Operations Center	1.1	Mobilization	M
Lower Chanceford Township Emergency Operations Center - Emergency Operations Center	1.1	Mobilization	M
Delta-Peach Bottom Emergency Operations Center - Emergency Operations Center	1.1	Mobilization	M
Fawn Grove Township/ Fawn Borough Emergency Operations Center - Emergency Operations Center	1.1	Mobilization	M
York County Office of Emergency Management - Emergency Operations Center	1.1	Mobilization	M
E. Drumore Twp/Providence Twp/Quarryville Twp/Solenco Twp combined Emergency Operation Center	1.1	Mobilization	M
Maryland Joint Operations Center (MJOC COOP) MD State Highway - Emergency Operating Facility	1.1	Mobilization	M
Maryland Joint Information Center - Joint Information Center	1.1	Mobilization	M
Harford County Emergency Operations Center - Route Alerting	1.1	Mobilization	M
Harford County Emergency Operations Center - Emergency Operations Center	1.1	Mobilization	M
Rising Sun Community Fire Company - Route Alerting - Back-Up	1.1	Mobilization	M
Cecil County EOC - Emergency Operations Center, County, Risk	1.1	Mobilization	M

MDE Accident Assessment Center - State Accident Assessment Center	1.1	Mobilization	M
Rising Sun High School - Monitoring and Decontamination Center, General Public	1.1	Mobilization	M
Harford Technical High School - Mass Care Center	1.1	Mobilization	M
Harford County Emergency Worker Monitor-Decon/Vehicle - Monitoring and Decontamination Station	1.1	Mobilization	M
Maryland Field Monitoring Team B - State Field Monitoring Team	1.1	Mobilization	M
Maryland Field Monitoring Team A - State Field Monitoring Team	1.1	Mobilization	M
PSP TCP/ACP and ICP to Plant - Traffic and Access Control (TCP/ACP)	1.1	Mobilization	M
Commonwealth Response Coordination Center (CRCC) Pennsylvania Emergency Management Agency (PEMA)	1.2	Direction and Control	M
Alliance Fire Rescue - Monitoring and Decontamination Center, General Public	1.2	Direction and Control	M
Lancaster County Public Safety Training Center (LCPSTC) - Monitoring and Decontamination Station	1.2	Direction and Control	M
Fulton Township Emergency Operation Center - Emergency Operations Center	1.2	Direction and Control	M
Drumore Township Emergency Operation Center - Emergency Operations Center	1.2	Direction and Control	M
Lancaster County Emergency Operation Center - Emergency Operations Center	1.2	Direction and Control	M
West Nottingham Township Emergency Operations Center - Emergency Operations Center	1.2	Direction and Control	M
Chester County Emergency Operations Center - Emergency Operations Center	1.2	Direction and Control	M
Pennsylvania State Police (ICP) Peach Bottom - Incident Command Post (ICP)	1.2	Direction and Control	M
State Field Monitoring Team B (BRP) - State Field Monitoring Team	1.2	Direction and Control	M
State Field Monitoring Team A (BRP) - State Field Monitoring Team	1.2	Direction and Control	M
Radiological Rapid Response Vehicle (R3V) - Field Team Management	1.2	Direction and Control	M
Constellation Media Operations Center - Joint Information Center	1.2	Direction and Control	M
Constellation Emergency Operations Facility - Emergency Operating Facility	1.2	Direction and Control	M
Pennsylvania Accident Assessment Center (BRP) - State Accident Assessment Center	1.2	Direction and Control	M

Commonwealth Joint Information Center (at the CRCC) - Joint Information Center	1.2	Direction and Control	M
Martic Township Emergency Operation Center - Emergency Operations Center	1.2	Direction and Control	M
Little Britain Township Emergency Operation Center - Emergency Operations Center, Municipal, Risk, P	1.2	Direction and Control	M
Lower Chanceford Township Emergency Operations Center - Emergency Operations Center	1.2	Direction and Control	M
Lower Chanceford Township Emergency Operations Center - Emergency Operations Center	1.2	Direction and Control	M
Delta-Peach Bottom Emergency Operations Center - Emergency Operations Center	1.2	Direction and Control	M
Fawn Grove Township/ Fawn Borough Emergency Operations Center - Emergency Operations Center	1.2	Direction and Control	M
York County Office of Emergency Management - Emergency Operations Center	1.2	Direction and Control	M
E. Drumore Twp/Providence Twp/Quarryville Twp/Solenco Twp combined Emergency Operation Center	1.2	Direction and Control	M
Maryland Joint Operations Center (MJOC COOP) MD State Highway - Emergency Operating Facility	1.2	Direction and Control	M
Maryland Department of Emergency Management (MDEM) - Emergency Operations Center, State	1.2	Direction and Control	M
Harford County Emergency Operations Center - Route Alerting - Back-Up	1.2	Direction and Control	M
Harford County Emergency Operations Center - Emergency Operations Center, County, Risk	1.2	Direction and Control	M
Rising Sun Community Fire Company - Route Alerting - Back-Up	1.2	Direction and Control	M
Cecil County EOC - Emergency Operations Center	1.2	Direction and Control	M
MDE Accident Assessment Center - State Accident Assessment Center	1.2	Direction and Control	M
Rising Sun High School - Monitoring and Decontamination Center, General Public	1.2	Direction and Control	M
Harford Technical High School - Mass Care Center	1.2	Direction and Control	M
Harford County Emergency Worker Monitor-Decon/Vehicle - Monitoring and Decontamination Station	1.2	Direction and Control	M

Maryland Field Monitoring Team B - State Field Monitoring Team	1.2	Direction and Control	M
Maryland Field Monitoring Team A - State Field Monitoring Team	1.2	Direction and Control	M
PSP TCP/ACP and ICP to Plant - Traffic and Access Control (TCP/ACP)	1.2	Direction and Control	M
Solanco Regional EOC Back up Route Alerting - Route Alerting - Back-Up	1.2	Direction and Control	M
Constellation Emergency Operations Facility - Emergency Operating Facility	1.3	Protective Action Recommendations	M
Pennsylvania Accident Assessment Center (BRP) - State Accident Assessment Center	1.3	Protective Action Recommendations	M
MDE Accident Assessment Center - State Accident Assessment Center	1.3	Protective Action Recommendations	M
Pennsylvania State Police (ICP) Peach Bottom - Incident Command Post (ICP)	1.4	Protective Action Decisions for the Plume Phase	M
Pennsylvania Accident Assessment Center (BRP) - State Accident Assessment Center	1.4	Protective Action Decisions for the Plume Phase	M
Maryland Department of Emergency Management (MDEM) - Emergency Operations Center, State	1.4	Protective Action Decisions for the Plume Phase	M
Harford County Emergency Operations Center - Emergency Operations Center, County, Risk	1.4	Protective Action Decisions for the Plume Phase	M
Cecil County EOC - Emergency Operations Center, County, Risk	1.4	Protective Action Decisions for the Plume Phase	M
MDE Accident Assessment Center - State Accident Assessment Center	1.4	Protective Action Decisions for the Plume Phase	M
Marticville Middle School - Schools	1.5	Protective Action Decision Implementation for the Plume Phase	M
Penn Manor District Office - School Districts	1.5	Protective Action Decision Implementation for the Plume Phase	M
Delta/Peach Bottom Elementary	1.5	Protective Action Decision Implementation for the Plume Phase	M
South Eastern District Office	1.5	Protective Action Decision Implementation for the Plume Phase	M
Clermont Elementary School	1.5	Protective Action Decision Implementation for the Plume Phase Action Decision	M
Solanco High School	1.5	Protective Action Decision Implementation for the Plume Phase	M

Solanco School District Office - School Districts	1.5	Protective Action Decision Implementation for the Plume Phase	M
Fulton Township Emergency Operation Center - Emergency Operations Center	1.5	Protective Action Decision Implementation for the Plume Phase	M
Drumore Township Emergency Operation Center - Emergency Operations Center	1.5	Protective Action Decision Implementation for the Plume Phase	M
Lancaster County Emergency Operation Center - Emergency Operations Center	1.5	Protective Action Decision Implementation for the Plume Phase	M
West Nottingham Township Emergency Operations Center - Emergency Operations Center	1.5	Protective Action Decision Implementation for the Plume Phase	M
Chester County Emergency Operations Center - Emergency Operations Center	1.5	Protective Action Decision Implementation for the Plume Phase	M
Pennsylvania State Police (ICP) Peach Bottom - Incident Command Post (ICP)	1.5	Protective Action Decision Implementation for the Plume Phase	M
Martic Township Emergency Operation Center - Emergency Operations Center, Municipal, Risk, PA	1.5	Protective Action Decision Implementation for the Plume Phase	M
Little Britain Township Emergency Operation Center - Emergency Operations Center	1.5	Protective Action Decision Implementation for the Plume Phase	M
Lower Chanceford Township Emergency Operations Center - Emergency Operations Center	1.5	Protective Action Decision Implementation for the Plume Phase	M
Delta-Peach Bottom Emergency Operations Center - Emergency Operations Center	1.5	Protective Action Decision Implementation for the Plume Phase	M
Fawn Grove Township/ Fawn Borough Emergency Operations Center - Emergency Operations Center	1.5	Protective Action Decision Implementation for the Plume Phase	M
York County Office of Emergency Management - Emergency Operations Center	1.5	Protective Action Decision Implementation for the Plume Phase	M
E. Drumore Twp/Providence Twp/Quarryville Twp/Solenco Twp combined Emergency Operation Center	1.5	Protective Action Decision Implementation for the Plume Phase	M
Maryland Department of Emergency Management (MDEM) - Emergency Operations Center, State	1.5	Protective Action Decision Implementation for the Plume Phase	M
Harford County Emergency Operations Center - Emergency Operations Center	1.5	Protective Action Decision Implementation for the Plume Phase	M

Cecil County EOC - Emergency Operations Center	1.5	Protective Action Decision Implementation for the Plume Phase	M
Harford Christian Elementary School	1.5	Protective Action Decision Implementation for the Plume Phase	M
Darlington Elementary School	1.5	Protective Action Decision Implementation for the Plume Phase	M
Dublin Elementary School - Schools	1.5	Protective Action Decision Implementation for the Plume Phase	M
Conowingo Elementary School - Schools	1.5	Protective Action Decision Implementation for the Plume Phase	M
Objective 2: Exposure Control			
Harford County Emergency Worker Monitor-Decon/Vehicle - Monitoring and Decontamination Station	2.1	Emergency Worker Exposure Control Decision-Making Process	M
Pennsylvania Accident Assessment Center (BRP) - State Accident Assessment Center	2.1	Emergency Worker Exposure Control Decision-Making Process	M
MDE Accident Assessment Center - State Accident Assessment Center	2.1	Emergency Worker Exposure Control Decision-Making Process	M
Alliance Fire Rescue - Monitoring and Decontamination Center, General Public	2.2	Emergency Worker Exposure Control Management	M
Christiana Care Union Hospital - MS-1 Hospital	2.2	Emergency Worker Exposure Control Management	M
Rising Sun Community Fire Company - MS-1 Ambulance	2.2	Emergency Worker Exposure Control Management	M
Rising Sun Community Fire Company - Monitoring and Decontamination Station, Emergency Worker	2.2	Emergency Worker Exposure Control Management	M
Fulton Township Emergency Operation Center - Emergency Operations Center	2.2	Emergency Worker Exposure Control Management	M
Drumore Township Emergency Operation Center - Emergency Operations Center	2.2	Emergency Worker Exposure Control Management	M
Lancaster County Emergency Operation Center - Emergency Operations Center	2.2	Emergency Worker Exposure Control Management	M
West Nottingham Township Emergency Operations Center - Emergency Operations Center, Municipal, Risk,	2.2	Emergency Worker Exposure Control Management	M
Chester County Emergency Operations Center - Emergency Operations Center, County, Risk	2.2	Emergency Worker Exposure Control Management	M
Pennsylvania State Police (ICP) Peach Bottom - Incident Command Post (ICP)	2.2	Emergency Worker Exposure Control Management	M

State Field Monitoring Team B (BRP) - State Field Monitoring Team	2.2	Emergency Worker Exposure Control Management	M
State Field Monitoring Team A (BRP) - State Field Monitoring Team	2.2	Emergency Worker Exposure Control Management	M
Radiological Rapid Response Vehicle (R3V) - Field Team Management	2.2	Emergency Worker Exposure Control Management	M
Martic Township Emergency Operation Center - Emergency Operations Center, Municipal, Risk, PA	2.2	Emergency Worker Exposure Control Management	M
Solanco Regional EOC Back up Route Alerting - Route Alerting - Back-Up	2.2	Emergency Worker Exposure Control Management	M
Little Britain Township Emergency Operation Center - Emergency Operations Center	2.2	Emergency Worker Exposure Control Management	M
PSP TCP/ACP and ICP to Plant - Traffic and Access Control (TCP/ACP)	2.2	Emergency Worker Exposure Control Management	M
Maryland Field Monitoring Team A - State Field Monitoring Team	2.2	Emergency Worker Exposure Control Management	M
Maryland Field Monitoring Team B - State Field Monitoring Team	2.2	Emergency Worker Exposure Control Management	M
Harford County Emergency Worker Monitor-Decon/Vehicle - Monitoring and Decontamination Station	2.2	Emergency Worker Exposure Control Management	M
Rising Sun High School - Monitoring and Decontamination Center, General Public	2.2	Emergency Worker Exposure Control Management	M
Lower Chanceford Township Emergency Operations Center - Emergency Operations Center, Municipal, Risk	2.2	Emergency Worker Exposure Control Management	M
Harford County Emergency Operations Center - Emergency Operations Center, County, Risk	2.2	Emergency Worker Exposure Control Management	M
Harford County Emergency Operations Center - Route Alerting - Back-Up	2.2	Emergency Worker Exposure Control Management	M
Harford County, Upper Chesapeake Medical Center	2.2	Emergency Worker Exposure Control Management	M
E. Drumore Twp/Providence Twp/Quarryville Twp/Solenco Twp combined Emergency Operation Center	2.2	Emergency Worker Exposure Control Management	M
York County Office of Emergency Management - Emergency Operations Center	2.2	Emergency Worker Exposure Control Management	M
Fawn Grove Township/ Fawn Borough Emergency Operations Center - Emergency Operations Center	2.2	Emergency Worker Exposure Control Management	M
Delta-Peach Bottom Emergency Operations Center - Emergency Operations Center, Municipal, Risk, PA	2.2	Emergency Worker Exposure Control Management	M

Lower Chanceford Township Emergency Operations Center - Emergency Operations Center, Municipal, Risk	2.2	Emergency Worker Exposure Control Management	M
Cecil County EOC - Emergency Operations Center, County, Risk	2.2	Emergency Worker Exposure Control Management	M
Rising Sun Community Fire Company - Route Alerting - Back-Up	2.2	Emergency Worker Exposure Control Management	M
Objective 3: Alert and Notification			
Lancaster County Emergency Operation Center - Emergency Operations Center	3.1	Communications	M
Maryland Field Monitoring Team B - State Field Monitoring Team	3.1	Communications	M
Maryland Field Monitoring Team A - State Field Monitoring Team	3.1	Communications	M
PSP TCP/ACP and ICP to Plant - Traffic and Access Control (TCP/ACP)	3.1	Communications	M
Solanco Regional EOC Back up Route Alerting - Route Alerting - Back-Up	3.1	Communications	M
Constellation Media Operations Center - Joint Information Center	3.1	Communications	M
West Nottingham Township Emergency Operations Center - Emergency Operations Center, Municipal, Risk,	3.1	Communications	M
Constellation Emergency Operations Facility Emergency Operating Facility	3.1	Communications	M
Chester County Emergency Operations Center - Emergency Operations Center, County, Risk	3.1	Communications	M
Pennsylvania State Police (ICP) Peach Bottom - Incident Command Post (ICP)	3.1	Communications	M
Pennsylvania Accident Assessment Center (BRP) - State Accident Assessment Center	3.1	Communications	M
Pennsylvania State Police (ICP) Peach Bottom - Incident Command Post (ICP)	3.1	Communications	M
Pennsylvania State Police York Station (Dispatch) - State Police Dispatch	3.1	Communications	M
State Field Monitoring Team B (BRP) - State Field Monitoring Team	3.1	Communications	M
Drumore Township Emergency Operation Center - Emergency Operations Center, Municipal, Risk, PA	3.1	Communications	M
Fulton Township Emergency Operation Center - Emergency Operations Center, Municipal, Risk, PA	3.1	Communications	M
State Field Monitoring Team A (BRP) - State Field Monitoring Team	3.1	Communications	M
Radiological Rapid Response Vehicle (R3V) - Field Team Management	3.1	Communications	M

Rising Sun Community Fire Company - Monitoring and Decontamination Station, Emergency Worker	3.1	Communications	M
Alliance Fire Rescue - Reception Center	3.1	Communications	M
Harford Technical High School - Mass Care Center	3.1	Communications	M
Harford County Emergency Worker Monitor-Decon/Vehicle - Monitoring and Decontamination Station	3.1	Communications	M
Harford County Emergency Operations Center - Route Alerting - Back-Up	3.1	Communications	M
Commonwealth Joint Information Center (at the CRCC) - Joint Information Center	3.1	Communications	M
Martic Township Emergency Operation Center - Emergency Operations Center, Municipal, Risk, PA	3.1	Communications	M
Little Britain Township Emergency Operation Center - Emergency Operations Center, Municipal, Risk, P	3.1	Communications	M
Lower Chanceford Township Emergency Operations Center - Emergency Operations Center	3.1	Communications	M
Delta-Peach Bottom Emergency Operations Center - Emergency Operations Center	3.1	Communications	M
Fawn Grove Township/ Fawn Borough Emergency Operations Center - Emergency Operations Center	3.1	Communications	M
York County Office of Emergency Management - Emergency Operations Center, County, Risk	3.1	Communications	M
E. Drumore Twp/Providence Twp/Quarryville Twp/Solenco Twp combined Emergency Operation Center	3.1	Communications	M
Maryland Joint Information Center - Joint Information Center	3.1	Communications	M
Maryland Department of Emergency Management (MDEM) - Emergency Operations Center	3.1	Communications	M
Lower Chanceford Township Emergency Operations Center - Emergency Operations Center	3.1	Communications	M
Harford County Emergency Operations Center - Emergency Operations Center	3.1	Communications	M
Rising Sun Community Fire Company - Route Alerting - Back-Up	3.1	Communications	M
Cecil County EOC - Emergency Operations Center, County, Risk	3.1	Communications	M

MDE Accident Assessment Center - State Accident Assessment Center	3.1	Communications	M
Rising Sun High School - Monitoring and Decontamination Center, General Public	3.1	Communications	M
Maryland Joint Operations Center (MJOC COOP) MD State Highway - Emergency Operating Facility	3.1	Communications	M
Chester County Emergency Operations Center - Emergency Operations Center	3.2	Alert and Notification to the Public	M
E. Drumore Twp/Providence Twp/Quarryville Twp/Solenco Twp combined Emergency Operation Center	3.2	Alert and Notification to the Public	M
York County Office of Emergency Management - Emergency Operations Center	3.2	Alert and Notification to the Public	M
Martic Township Emergency Operation Center - Emergency Operations Center	3.2	Alert and Notification to the Public	M
Fawn Grove Township/ Fawn Borough Emergency Operations Center - Emergency Operations Center	3.2	Alert and Notification to the Public	M
Rising Sun Community Fire Company - Route Alerting - Back-Up	3.2	Alert and Notification to the Public	M
Delta-Peach Bottom Emergency Operations Center - Emergency Operations Center,	3.2	Alert and Notification to the Public	M
Lower Chanceford Township Emergency Operations Center - Emergency Operations Center	3.2	Alert and Notification to the Public	M
Lower Chanceford Township Emergency Operations Center - Emergency Operations Center	3.2	Alert and Notification to the Public	M
Little Britain Township Emergency Operation Center - Emergency Operations Center	3.2	Alert and Notification to the Public	M
Maryland Department of Emergency Management (MDEM) - Emergency Operations Center	3.2	Alert and Notification to the Public	M
West Nottingham Township Emergency Operations Center - Emergency Operations Center	3.2	Alert and Notification to the Public	M
Solanco Regional EOC Back up Route Alerting - Route Alerting - Back-Up	3.2	Alert and Notification to the Public	M
Harford County Emergency Operations Center - Emergency Operations Center	3.2	Alert and Notification to the Public,	M
Fulton Township Emergency Operation Center - Emergency Operations Center,	3.2	Alert and Notification to the Public	M
Cecil County EOC - Emergency Operations Center	3.2	Alert and Notification to the Public	M

Lancaster County Emergency Operation Center - Emergency Operations Center	3.2	Alert and Notification to the Public	M
Drumore Township Emergency Operation Center - Emergency Operations Center	3.2	Alert and Notification to the Public	M
Maryland Joint Operations Center (MJOC COOP) MD State Highway - Emergency Operating Facility	3.2	Alert and Notification to the Public	M
Harford County Emergency Operations Center - Route Alerting - Back-Up	3.2	Alert and Notification to the Public	P
Chester County Emergency Operations Center - Emergency Operations Center, County, Risk	3.3	Emergency Information and Instructions for the Public and News Media	M
Commonwealth Joint Information Center (at the CRCC) - Joint Information Center	3.3	Emergency Information and Instructions for the Public and News Media	M
Constellation Media Operations Center - Joint Information Center	3.3	Emergency Information and Instructions for the Public and News Media	M
Lancaster County Emergency Operation Center - Emergency Operations Center	3.3	Emergency Information and Instructions for the Public and News Media	M
York County Office of Emergency Management - Emergency Operations Center	3.3	Emergency Information and Instructions for the Public and News Media	M
Harford County Emergency Operations Center - Emergency Operations Center	3.3	Emergency Information and Instructions for the Public and News Media	M
Maryland Joint Information Center - Joint Information Center	3.3	Emergency Information and Instructions for the Public and News Media	P
Cecil County EOC - Emergency Operations Center, County, Risk	3.3	Emergency Information and Instructions for the Public and News Media	P
Objective 4: Detect, Measure, Sample, Analyze, and Assess			
Radiological Rapid Response Vehicle (R3V) - Field Team Management	4.1	Field Monitoring Teams Management	M
Pennsylvania Accident Assessment Center (BRP) - State Accident Assessment Center	4.1	Field Monitoring Teams Management	M
MDE Accident Assessment Center - State Accident Assessment Center	4.1	Field Monitoring Teams Management	P
State Field Monitoring Team B (BRP) - State Field Monitoring Team	4.2	Plume Phase Measurements and Sampling	M
State Field Monitoring Team A (BRP) - State Field Monitoring Team	4.2	Plume Phase Measurements and Sampling	M
Maryland Field Monitoring Team B - State Field Monitoring Team	4.2	Plume Phase Measurements and Sampling	M
Maryland Field Monitoring Team A - State Field Monitoring Team	4.2	Plume Phase Measurements and Sampling	M

Pennsylvania Accident Assessment Center (BRP) - State Accident Assessment Center	4.5	Plume Phase Analysis and Dose Assessment	M
MDE Accident Assessment Center - State Accident Assessment Center	4.5	Plume Phase Analysis and Dose Assessment	M
Objective 5: Operate			
Alliance Fire Rescue - Monitoring and Decontamination Center, General Public	5.1	Monitoring, Decontamination, Sheltering, and Registration of Evacuees	M
Rising Sun High School - Monitoring and Decontamination Center, General Public	5.1	Monitoring, Decontamination, Sheltering, and Registration of Evacuees	M
Harford Technical High School - Mass Care Center	5.1	Monitoring, Decontamination, Sheltering, and Registration of Evacuees	M
Northern High School - Monitoring and Decontamination Center, General Public	5.1	Monitoring, Decontamination, Sheltering, and Registration of Evacuees	M
Alliance Fire Rescue - Reception Center	5.1	Monitoring, Decontamination, Sheltering, and Registration of Evacuees	M
Harford County Emergency Worker Monitor-Decon/Vehicle - Monitoring and Decontamination Station, Emer	5.2	Monitoring and Decontamination of Emergency Workers, Equipment, and Vehicles	M
Rising Sun Community Fire Company - Monitoring and Decontamination Station, Emergency Worker	5.2	Monitoring and Decontamination of Emergency Workers, Equipment, and Vehicles	M
Lancaster County Public Safety Training Center (LCPSTC) - Monitoring and Decontamination Station, Em	5.2	Monitoring and Decontamination of Emergency Workers, Equipment, and Vehicles	M
Cristiana Care Union Hospital - MS-1 Hospital	5.3	Transportation and Treatment of Contaminated, Injured Individuals	M
Rising Sun Community Fire Company - MS-1 Ambulance	5.3	Transportation and Treatment of Contaminated, Injured Individuals	M
Harford County Upper Chesapeake Medical Center	5.3	Transportation and Treatment of Contaminated, Injured Individuals	M
Fulton Township Emergency Operation Center - Emergency Operations Center, Municipal, Risk, PA	5.4	Traffic and Access Control	M
Drumore Township Emergency Operation Center - Emergency Operations Center, Municipal, Risk, PA	5.4	Traffic and Access Control	M

Lancaster County Emergency Operation Center - Emergency Operations Center, County, Risk	5.4	Traffic and Access Control	M
West Nottingham Township Emergency Operations Center - Emergency Operations Center, Municipal, Risk,	5.4	Traffic and Access Control	M
Chester County Emergency Operations Center - Emergency Operations Center, County, Risk	5.4	Traffic and Access Control	M
Pennsylvania State Police (ICP) Peach Bottom - Incident Command Post (ICP)	5.4	Traffic and Access Control	M
Pennsylvania State Police (ICP) Peach Bottom - Incident Command Post (ICP)	5.4	Traffic and Access Control	M
Martic Township Emergency Operation Center - Emergency Operations Center	5.4	Traffic and Access Control	M
Little Britain Township Emergency Operation Center - Emergency Operations Center	5.4	Traffic and Access Control	M
Lower Chanceford Township Emergency Operations Center - Emergency Operations Center	5.4	Traffic and Access Control	M
Delta-Peach Bottom Emergency Operations Center - Emergency Operations Center	5.4	Traffic and Access Control	M
Fawn Grove Township/ Fawn Borough Emergency Operations Center - Emergency Operations Center	5.4	Traffic and Access Control	M
York County Office of Emergency Management - Emergency Operations Center	5.4	Traffic and Access Control	M
E. Drumore Twp/Providence Twp/Quarryville Twp/Solenco Twp combined Emergency Operation Center	5.4	Traffic and Access Control	M
Maryland Department of Emergency Management (MDEM) - Emergency Operations Center	5.4	Traffic and Access Control	M
Harford County Emergency Operations Center - Emergency Operations Center, County, Risk	5.4	Traffic and Access Control	M
Cecil County EOC - Emergency Operations Center, County, Risk	5.4	Traffic and Access Control	M
PSP TCP/ACP and ICP to Plant - Traffic and Access Control (TCP/ACP)	5.4	Traffic and Access Control	M

3.3 Criteria Evaluation Summaries

3.3.1 State Jurisdictions

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

3.3.1.1 Commonwealth of Pennsylvania

3.3.1.1.1 Commonwealth of Pennsylvania Response Coordination Center (CRCC)

a. Met: 1.1, 1.2, 1.4, 1.5, 3.1, 3.2, 5.4
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE

ISSUE NO: 46-24-2.1-P-006

CAPABILITY TARGET 2.1: Emergency Worker Exposure Control Decision Making Process

CONDITIONS: The Pennsylvania Emergency Management Agency (PEMA) Interim Radiological Plan Guidance dated April 6, 2009, does not include a process that details the issuance of dosimetry and potassium iodide (KI) to state emergency workers, nor was there a procedure included on checklists that would have prevented emergency workers from being deployed prior to receiving a briefing and dosimetry. Following a precautionary decision by the PEMA Senior State Official to restrict water traffic within the 10-mileEmergency Planning Zone (EPZ) around PBAPS, the Pennsylvania Fish and Boat personnel located at the Incident Command Post (ICP) in Delta, Pennsylvania were required to initiate and manage waterway restrictions on the Susquehanna River. Fish and Boat Commission emergency responders reported directly to clear waterways without a radiological briefing and issue of required dosimetry and potassium iodide (KI) from a designated staging area or State radiological personnel.

POSSIBLE CAUSE: The Interim Radiological Plan Guidance dated April 6, 2009, does not provide a process for issuing dosimetry to state emergency workers, nor was there a procedure included on checklists that would have prevented emergency workers from being deployed prior to receiving a briefing and dosimetry.

REFERENCE:

- Interim Radiological Plans Guidance dated April 6, 2009, to Annex E, Appendix 5 of the Radiological Emergency Preparedness Response Plan to a Nuclear Power Plant Incident.
- NUREG-0654/FEMA-REP-1, Rev. 2., (C.2.c, H.11, K.2, K.2.b, K.3, K.3.a, M.1.b, M.8, and O.1).

EFFECTS: State emergency workers operating within the EPZ could potentially receive unnecessary exposure to ionizing radiation during a radiological

release without receiving a proper radiological briefing and issued appropriate dosimetry, protective clothing, and radioprotective drugs.

RECOMMENDATION: Following an implementation of precautionary actions and Protective Action Decisions (PADs), PEMA should ensure that decisions impacting emergency workers entering the EPZ are directed to the appropriate location and personnel for issue of Category A dosimetry and receive the necessary radiological briefing prior to deployment. A modification to the Interim Radiological Plans Guidance and a procedure checklist for state decision makers and State Agency Representatives (AREPs) would mitigate future occurrences. In addition, radiological exposure control training for all AREPs that includes the basics of radiation exposure, dosimetry use, and information on radioprotective drugs should be provided.

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

3.3.1.1.2 Commonwealth of Pennsylvania Joint Information Center

a. Met: 1.1, 1.2, 3.1, 3.3
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues – Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.1.1.3 Pennsylvania Accident Assessment Center at the CRCC

a. Met: 1.1, 1.2, 1.3, 1.4, 2.1, 3.1, 4.5,
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues -Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.1.1.4 Pennsylvania Radiological Rapid Response Vehicle

a. Met: 1.1, 1.2, 2.2, 3.1, 4.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues – Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.1.1.5 Pennsylvania State Field Monitoring Team A

a. Met: 1.1, 1.2, 2.2, 3.1, 4.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues – Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.1.1.6 Pennsylvania State Field Monitoring Team B

a. Met: 1.1, 1.2, 2.2, 3.1, 4.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues – Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.1.1.7 Pennsylvania State Police

a. Met: 1.1, 1.2, 2.2, 3.1, 5.4
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues – Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.1.1.8 Constellation Media Operations Center

a. Met: 1.1, 1.2, 3.1, 3.3
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues – Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.1.1.9 Constellation Emergency Operations Center

a. Met: 1.1, 1.2, 1.3, 3.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues – Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.1.2 State of Maryland

3.3.1.2.1 Maryland Department of Emergency Management (MDEM)

a. Met: 1.1, 1.2, 1.4, 1.5, 2.1, 3.1, 3.2, 5.4
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE

ISSUE NO: 46-24-3.3-P-005

Capability Target: 3.3: Emergency Information and Instructions for the Public and News Media

CONDITION: The Maryland Department of Emergency Management (MDEM) Media Release #4 (entitled "Evacuations Ordered After Incident at Peach Bottom Atomic Power Station"), as well as the update to Media Release #4,

states that evacuees should leave pets at home and that pets are not allowed in public shelters, which does not fully adhere to current guidance and authorities. The update to Media Release #4 also advised the public evacuating from zones in Harford County to report to specific reception centers, including facility names and addresses, but no specific reception center information was provided in the updated Media Release for members of the public evacuating from zones in Cecil County.

POSSIBLE CAUSE: MDEM's Media Release templates describing the process for evacuation of the general public have not been updated to reflect current pet care guidance and authorities. Also, Public Information staff and approving authorities did not realize that specific reception center information was not included in the updated Media Release for evacuees from zones in Cecil County.

REFERENCES:
- NUREG-0654/FEMA-REP-1, Rev. 2 (E.2, E.4, E.5, G.1, G.2, G.3, G.3.a, G.4, G.5, J.11.d, J.13, K.4 and O.1)
- Americans with Disabilities Act (as amended in 2010), 28 CFR 36
- Post-Katrina Emergency Management Reform Act of 2006, Title II Sec. 211 & 221 (PKEMRA Congress Website)
- Pets Evacuation and Transportation Standards Act of 2006, Pub. L. No. 109-308 (PETS Act Congress Website)
- 2019 Radiological Emergency Preparedness Manual (RPM), Capability Targets 3.3 and 5.1

EFFECTS: If ordered to evacuate, evacuees from Harford County may be misled to believe that there are no plans or facilities to care for pets whatsoever and that pets must be left at home. Additionally, evacuees from Cecil County may be unaware of the name and address of their pre-identified reception center.

CORRECTIVE ACTION: Media release templates detailing evacuation activities were updated to reflect current guidance and authorities, to include specific reception center information for evacuees from zones in Cecil County. FEMA received the updated media release templates on May 7, 2024. A subsequent review indicated that the templates are adequate and resolves the plan issue.

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

3.3.1.2.2 Maryland Department of Environmental Accident Assessment Center

a. Met: 1.1, 1.2, 1.3, 1.4, 2.1, 3.1, 4.5
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE

ISSUE NO: 46-24-2.1-P-002

CAPABILITY TARGET 4.1: Field Monitoring Teams Management

CONDITIONS: The Maryland Department of the Environment (MDE) Accident Assessment Center (AAC) Field Team Leader (FTL) failed to direct the Field Teams (FTs) to monitoring locations sufficient to characterize the plume.

POSSIBLE CAUSE: The MDE Procedure EP-203, Mobilization of Field Teams, Revision: 9, Date 10/21, lacks sufficient detail on the strategies of field team deployment to support characterization of the plume. The procedure states that the FTL is to "direct FT activities to survey locations, survey types, and collecting sample data to identify plume track and verify dose projections" and to "ensure activities are directed in keeping with "As Low As Reasonably Achievable" (ALARA) practices." Information is not provided on the standard 10-point monitoring strategy and the necessity to determine the plume edges so that plume location, direction, and radiation levels may be confirmed.

REFERENCES:
- MDE Procedure EP-203, Mobilization of Field Teams, Revision: 9, Date 10/21, Step II.A.7.
- Federal Radiological Monitoring and Assessment Center (FRMAC) Monitoring and Sampling Manual, Volume II, Revision 3, Radiation Monitoring and Sampling, January 2021, DOE/NV/03624-1024, Section 3.1, Ten-Point Monitoring Strategy
- NUREG-0654/FEMA-REP-1, Rev. 2 (H.11, H.13, I.5, I.6, I.9, I.10, M.7, M.8, and O.1)
- Radiological Emergency Preparedness Manual, Part III, Capability Target 4.1, December 2019

EFFECTS: The FTs were initially deployed to locations outside of the expected plume travel area and were not instructed to proceed to locations that would enable them to find the plume edge. Without confirmation of the plume location, radiation exposure rate levels, and air sampling results, MDE could not characterize the plume and verify the estimated release rate and radionuclides present in the plume.

CORRECTIVE ACTION: Procedures were updated to include more information on monitoring strategies so that Field Team Leaders are reminded of the necessity of determining the plume location, obtaining sufficient information to characterize the plume, and how to compare field data to dose projections. FEMA received the plan revision on April 26, 2024, and a subsequent review determined it to be adequate and resolves the plan issue.

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

3.3.1.2.3 Maryland Department of Environmental Field Team One

a. Met: 1.1, 1.2, 2.2, 3.1, 4.2,

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

3.3.1.2.4 Maryland Department of Environmental Field Team Two

a. Met: 1.1, 1.2, 2.2, 3.1, 4.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues – Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.1.2.5 Maryland Joint Operations Center

a. Met: 1.1, 1.2, 3.1, 3.2
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 Pennsylvania Risk Jurisdictions

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

3.3.2.1 Chester County Emergency Operations Center

a. Met: 1.1, 1.2, 1.5, 2.2, 3.1, 3.2, 3.3, 5.4
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
a. Prior Issues – Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.2 Chester County, West Nottingham Township Emergency Operations Center

a. Met: 1.1, 1.2, 1.5, 2.2, 3.1, 3.2. 5.4
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 Lancaster County Emergency Operations Center

a. Met: 1.1, 1.2, 1.5, 2.2, 3.1, 3.2, 3.3, 5.4
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 Lancaster County, Emergency Worker Monitoring and Decontamination Lampeter-Strasburg School Complex Demonstrated at Lancaster Public Safety Center

a. Met: 1.1, 1.2, 2.2 3.1, 5.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NNONE
e. Prior Issues – Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.5 Lancaster County. Drumore Township Emergency Operations Center

a. Met: 1.1, 1.2, 1.5, 2.2, 3.1, 3.2, 5.4
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NNONE
e. Prior Issues – Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.6 Lancaster County, Fulton Township Emergency Operations Center

a. Met: 1.1, 1.2, 1.5, 2.2, 3.1, 3.2, 5.4
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NNONE
e. Prior Issues – Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.7 Lancaster County, Little Britain Township Emergency Operation Center

a. Met: 1.1, 1.2, 1.5, 2.2, 3.1, 3.2, 5.4
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NNONE
e. Prior Issues – Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.8 Lancaster County, Martic Township Emergency Operation Center

a. Met: 1.1, 1.2, 1.5, 2.2, 3.1, 3.2, 5.4
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NNONE
e. Prior Issues – Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.9 Lancaster County, East Drumore/Providence/Solanco Townships and Quarryville Borough, Emergency Operation Center

a. Met: 1.1, 1.2, 1.5, 2.2, 3.1, 3.2, 5.4
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NNONE
e. Prior Issues – Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.10 Lancaster County, East Drumore/Providence/Solanco Townships and Quarryville Borough, Emergency Operation Center Back Up Route Alerting

a. Met: 1.2, 2.2, 3.1, 3.2,
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NNONE
e. Prior Issues – Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.11 Lancaster County, Penn Manor School District

a. Met: 1.5
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 Lancaster County, Penn Manor Middle School

a. Met: 1.5
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 Lancaster County, Solanco School District

a. Met: NONE
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 Lancaster County, Solanco High School

a. Met: 1.5
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 Lancaster County, Clermont Elementary School

a. Met: 1.5
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 York County, Emergency Operations Center

a. Met: 1.1, 1.2, 1.5, 2.2, 3.1, 3.2, 3.3, 5.4
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 York County, Evacuee Monitoring/Decontamination Station at Red Lion High School, Demonstrated at Alliance Fire and Rescue

a. Met: 1.2, 2.2, 3.1, 5.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues – Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.18 York County, Mas Care Station at Red Lion High School, Demonstrated at Alliance Fire and Rescue

a. Met: 1.1, 1.2, 3.1, 5.1
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 York County, Delta-Peach Bottom Emergency Operations Center

a. Met: 1.1, 1.2, 1.5, 2.2, 3.1, 3.2, 5.4
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NNONE
e. Prior Issues – Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.20 York County, Fawn Grove Township/Fawn Borough Emergency Operations Center

a. Met: 1.1, 1.2, 1.5, 2.2, 3.1, 3.2, 5.4
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NNONE
e. Prior Issues – Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.21 York County, Lower Chanceford Township Emergency Operations Center

a. Met: 1.1, 1.2, 1.5, 2.2, 3.1, 3.2, 5.4
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NNONE

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

3.3.2.22 York County, Delta-Peach Bottom Emergency Operations Center Back Up Route Alerting

a. Met: 1.2, 2.2, 3.1, 3.2,
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NNONE
e. Prior Issues – Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.2.23 York County, South Eastern School District

a. Met: NONE
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 York County, Delta-Peach Elementary School

a. Met: 1.5
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 Maryland Risk Jurisdictions

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

3.3.3.1 Cecil County Emergency Operations Center

a. Met: 1.1, 1.2, 1.5, 2.2, 3.1, 3.2, 3.3, 5.4
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE

ISSUE NO: 46-24-2.1-P-003

CAPABILITY TARGET 3.3; Emergency Information and Instructions for the Public and News Media.

CONDITIONS: The Cecil County Public Information Officer, Annex K, of the Cecil County Radiological Emergency Response Plan (RERP), dated April 2022 does not specifically state how press releases and media contacts are accomplished from the Cecil County Emergency Operation Center (EOC). During the exercise Cecil County relied upon Harford County to communicate information to the public.

POSSIBLE CAUSE: The Cecil County Radiological Emergency Response Plan (RERP) of April 2022 and Public Information Officer Annex K do not adequately outline the current collaboration between the two counties to manage PIO functions.

REFERENCE:
- NUREG-0654/FEMA-REP-1, Rev. 2 (E.2, E.4, E.5, G.1, G.2, G.3, G.3.a, G.4, G.5, and O.1)
- Cecil County Radiological Emergency Response Plan, April 2022 and Public Information Officer Annex K.

EFFECTS: The public potentially would not receive Cecil County specific emergency information related to the incident.

RECOMMENDATION:
- Ensure that the Cecil County Radiological Emergency Response Plan and Public Information Officer Annex K are updated to accurately reflect the current collaboration between the two counties for performing PIO functions and incorporate a review process by County Leadership prior to dissemination.
- Establish a virtual meeting between the two PIOs to facilitate continuous collaboration and information sharing.

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

3.3.3.2 Cecil County, Rising Sun Fire Station #8, Back Up Route Alerting

a. Met: 1.2, 2.2, 3.1, 3.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NNONE
e. Prior Issues – Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.3.3 Cecil County, Reception/Evacuee Monitoring and Decontamination at Rising Sun High School

a. Met: 1.2, 2.2, 3.1, 5.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NNONE
e. Prior Issues – Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.3.4 Cecil County, Emergency Worker Monitoring and Decontamination at Rising Sun Fire Station #8

a. Met: 1.2, 2.2, 3.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NNONE
e. Prior Issues – Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.3.5 Cecil County, Conowingo Elementary School

a. Met: 1.5
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 Harford County Emergency Operations Center

a. Met: 1.1, 1.2, 1.5, 2.2, 3.1, 3.2, 3.3, 5.4
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NNONE
e. Prior Issues – Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.3.8 Harford County Back Up Route Alerting

a. Met: 1.2, 2.2, 3.1, 3.2
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE

ISSUE NO: 46-24-2.1-P-001

CAPABILITY TARGET 3.2: Alert and Notification to the public in a timely manner.

CONDITIONS: Back-up route alert officers were not briefed or issued dosimetry until after a siren failure was noted.

POSSIBLE CAUSE: Harford County Sheriff's Office Checklist Part Two, Response Actions for the Harford County Sheriff's Office, under the Alert status, item #8 indicates that officers should be mobilized for route alerting if the public alert system is to be activated. Only under the Site Area Emergency criteria are dosimetry issuance and briefing addressed. In this instance the event escalated very quickly to a Site Area Emergency and sirens were sounded before any radiological briefing was delivered. Route alerting activities were needlessly delayed by this.

REFERENCE:

- NUREG-0654/FEMA-REP-1, Rev. 2 (E.2, E.4, E.5, F.3, and O.1);
- Harford County Sheriff's Office Radiological Checklist for the PBAPS; Radiological Emergency Preparedness Manual 2023, page245-Alert and notification of the public is completed in a timely manner.

EFFECTS: Back-up route alerting was delayed unnecessarily by the failure to have officers equipped and briefed at the time of the siren failure.

CORRECTIVE ACTION: On May 15, 2024, the Harford County Sheriff's Office provided FEMA with an updated *Checklist Part Two, Response Actions for the Harford County Sheriff's Office,* which included provisions that a radiological briefing and the issuance of dosimetry and KI be conducted under the Alert Emergency Classification Level. A FEMA review of the plan revision determined that it was adequate and resolves this plan issue.

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

3.3.3.9 Harford County, Reception/Evacuee Monitoring and Decontamination at Fallston High School

a. Met: 1.2, 2.2, 3.1, 5.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NNONE
e. Prior Issues – Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.3.10 Harford County, Emergency Worker Monitoring and Decontamination at Fallston High School

a. Met: 1.2, 2.2, 3.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NNONE
e. Prior Issues – Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.3.11 Harford County, Mass Care at the Patterson Mill High School

a. Met: 1.2, 2.2, 3.1
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NNONE
e. Prior Issues – Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.3.12 Harford County, North Harford Elementary School

a. Met: 1.5
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues – Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.3.13 Harford County, North Harford Middle School

a. Met: 1.5
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE

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

3.3.3.14 Harford County, North Harford High School

a. Met: 1.5
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 Peach Bottom Atomic Power Station Medical Services Assessments

3.3.4.1 Cecil County, Christiana Care Union Hospital

a. Met: 1.2, 2.2, 5.3
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues – Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.4.2 Cecil County, Rising Sun Community Ambulance

a. Met: 1.2, 2.2, 5.3
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: ONE
e. Prior Issues - Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.4.3 Harford County, Upper Chesapeake Medical Center

a. Met: 1.2, 2.2, 5.3
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE
e. Prior Issues – Resolved: NONE
f. Prior Issues - Unresolved: NONE

3.3.4.4 Harford County, Station 62 Ambulance, Harford County Emergency Medical Services

a. Met: 1.2, 2.2, 5.3
b. Level 1 Findings: NONE
c. Level 2 Findings: NONE
d. Plan Issues: NONE

ISSUE NO: 46-24-2.1-P-007

CAPABILITY TARGET 2.2: Emergency Worker Exposure Control

CONDITIONS: The Harford County Fire and EMS Field Operations, Medical Services Plan, does not contain provisions to properly monitor EMS staff and the ambulance in order to prevent the spread of radiological contamination.

POSSIBLE CAUSE: Staff did not have clear plans and procedures for contamination control and monitoring of the EMS crew after transportation of a potentially contaminated individual to the hospital.

REFERENCE:
- NUREG-0654/FEMA-REP-1, Rev. 2 (C.2.c, H.11, H.11.b, K.2.b, K.3, K.3.a, M.1.b, and O.1)
- Upper Chesapeake Health, Emergency Operations Plan, Section 12, Hazardous Materials Response Chemical and Nuclear Contamination External & Internal, September 2024
- Harford County, Fire/EMS Field Operations, MS-1 Response Plan

EFFECTS: Without proper controls, radiological contamination could have been spread throughout the Upper Chesapeake Medical Center and/or to other emergency workers.

CORRECTIVE ACTION: Harford County Planners updated the Fire, Rescue and EMS Radiological Checklist for the Peach Bottom Atomic Power Station and added language in the plan to have EMS transport personnel "be monitored at the hospital by either hospital staff or Special Operations Team members for preliminary indication of contamination". FEMA received the updated procedure on June 13, 2024. A subsequent review of the plan revision determined that it is adequate and resolves this plan issue.

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

SECTION 4: DEMONSTRATED STRENGTHS

4.1 Risk Jurisdictions

4.1.1 Pennsylvania State Police CRCC

The Pennsylvania State Police (PSP) utilized an internal computer system to monitor, in real-time, the completion of the Incident Command Post's Activity Log ICS 214. This form records the details of notable incident activities and enhanced situational awareness.

4.1.2 Pennsylvania State Police Incident Command Post

The Pennsylvania State Police (PSP) sergeant in charge communicated with the PSP at the incident command post through a commercial group chat system on the departmental laptop computers, verifying response objectives as needed.

4.1.3 Commonwealth of Pennsylvania Response Coordination Center (CRCC)

The Commonwealth Response Coordination Center (CRCC) Unified Command coordinated well with the Agency Representatives in the CRCC, thus were able to make informed decisions with law enforcement regarding the hostile action and the radiological release at Peach Bottom Atomic Power Station.

4.1.3 Commonwealth of Pennsylvania Response Coordination Center (CRCC)

The Commonwealth Response Coordination Center (CRCC) Joint Information Center (JIC) Public Information Officer (PIO) maximized JIC Team capabilities utilizing the five Agency Representatives (AREPs) by assigning JIC Manager responsibilities according to strengths and experience. The organizational structure freed the PIO to remain fully engaged with senior leadership with delegating the JIC lead to an experienced AREP.

4.1.4 Commonwealth of Pennsylvania Bureau of Radiological Protection (BRP) Accident Assessment

The co-location of the dose assessment personnel with personnel who monitored and analyzed live plant instrument data using the Peach Bottom plant parameter display system was a significant strength as it enabled a number of What If analyses to better understand changing plant conditions.

4.1.5 Constellation Joint Information Center (JIC) (w/ Pennsylvania State Police Public Information Officer (PIO)

Having the PIO liaisons in a single room sped up collaboration and led to quick approvals on language from press releases. As room allows, this practice should be continued to allow for improved communications.4.1.4 Commonwealth of Pennsylvania Bureau of Radiological Protection (BRP) Accident Assessment

During the press conference, audio from the Commonwealth Response Coordination Center (CRCC) cut out. The team at the Constellation JIC quickly pivoted and was able to proceed with the press conference as normal. This was due to great pre-

conference communications and a sync call between liaisons and their PIO counterparts.

4.1.6 Lancaster County Emergency Operation Center

During the exercise a total of 53 personnel from four participating municipalities were diverted from exercise play to address several real-world events. These events included two fires, a chemical spill into a waterway that resulted in a large fish kill and a Silver Alert. Adjustments were made to accommodate the loss of staff, and as a result the real-world events did not have a significant impact on the exercise.

Two communications failures were experienced during the course of the exercise. One failure involved an EMNet line in the EOC and the other involved the inability of EOC Dispatch staff to contact the municipality of Drumore. Both of these failures were rapidly addressed and neither ended up having a notable effect on exercise play.

The Lancaster EOC is to be commended from making use of technology in delivering dosimetry briefings to municipalities in Lancaster County. The Radiological Officer made use of MS Teams to broadcast a near 20-minute prepared video briefing to personnel in the municipalities then delivered an update on weather, plant conditions and EOC updates. This eliminated the need for in person briefings and provided consistency in dosimetry and potassium iodide use.

4.1.6 York County ARES/RACES

The York County ARES/RACES volunteers are an enthusiastic group of knowledgeable and well-trained individuals on radio communications. Their radio equipment is start of the art and are a tremendous asset to York County and the local risk municipalities.

The York County Emergency Management and 911 staff integrated with the Pennsylvania State Police to rapidly supply communications and other resources to support the Incident Command Post.

4.1.6 Harford County, Emergency Operations Center

The Director of the Department of Emergency Services demonstrated forward-thinking by furnishing the Maryland Department of Emergency Management with his Evacuation Time Estimate for the Harford County section within the EPZ. Additionally, he requested supplementary law enforcement personnel after coordinating with the Harford County Sheriff's Office. He identified a potential 51 target areas in the county, prioritizing 19 of them as needing heightened security.

4.1.6 Harford County, Darlington Elementary School

The principal, school nurse, and staff had a forward-thinking approach to the exercise. It was obvious that the preparation for a radiological event as related to for their references, job aids and the Go Bags were well thought out, practiced and prepared.

SECTION 5: CONCLUSION

The Commonwealth of Pennsylvania, the State of Maryland 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 Peach Bottom Atomic Power Station Plume Exercise evaluated on April 16, 2024, and the Out-of-Sequence Demonstrations conducted March 25-26, April 17, and May 8, 2024.

FEMA assesses offsite planning and preparedness for communities within the plume and/or ingestion exposure pathway EPZs of commercial NPPs through an established set of objectives and capability targets that reflect the intent of the planning standards of 44 CFR 350 and the evaluation criteria of NUREG-0654/FEMA-REP-1, Rev 2, December 2019. Thus, FEMA considers these objectives/capability targets to be the benchmarks for FEMA's validation of reasonable assurance.

Each of these objectives/capability targets apply to all aspects of FEMA's assessment and are reported out in terms of core capabilities in the Biennial Preparedness Report. There are five overarching objectives, each of which have a unique set of capability targets that support the accomplishment of the objective. The capability targets are associated with one or more core capabilities, as agreed to by the OROs and RAC Chairs. This assessment strategy supports FEMA's regulatory responsibilities and successfully aligns REP evaluation methodology with the doctrine of the NPS.

Federal Emergency Management Agency (FEMA) evaluators assessed 296 Capability Targets in five Objectives:

- Objective 1: Emergency Operations Management
- Objective 2: Exposure Control
- Objective 3: Alert and Notification
- Objective 4: Detect, Measure, Sample, Analyze, and Assess
- Objective 5: Operate

These resulted in a determination of no Level 1 Findings, no Level 2 Finding, and six new Plan Issues. Four Plan Issues were resolved prior to the publish date of this report after revised plans and procedures were received by FEMA.

Based on the results of the exercise and a review of the offsite radiological emergency response plans and procedures submitted, FEMA Region 3 has determined they are adequate (meet the planning and preparedness standards of NUREG-0654/FEMA-REP-1, Revision 2, December 2019, as referenced in 44 CFR 350.5) and there is reasonable assurance they can be implemented, as demonstrated during this exercise.

PBAPS APPENDIX A – EXERCISE TIMELINES

Emergency Classification Level or Event	Time Utility Declared	Commonwealth of Pennsylvania			
		CRCC	BRP ACC	Constellation EOF	Constellation JIC
Unusual Event	N/A	N/A	N/A	N/A	N/A
Alert	1606	1620	1621	1614	1614
Site Area Emergency	1630	1643	1644	1650	1650
General Emergency	1752	1808	1808	1810	1810
Simulated Radiation Release Started	1630	1718	1808	1725	1725
Simulated Radiation Release Ended	Ongoing	Ongoing	Ongoing	Ongoing	Ongoing
Facility Declared Operational		1635	1624	1657	1657
Governor's Declaration of State of Emergency		1734	1740	1812	1812
Declaration of Local Emergency		N/A	1836	1845	1845
Notice of a Hostile Action Event		1620	1712	1658	1658
Precautionary Actions					
Law Enforcement Actions (Shelter in-place)		1711	1723	1726	1726
Close Parks		1711	N/A	1726	1726
Restrict Water Traffic		1711	1711	1726	1726
Restrict Rail Traffic		1711	1758	1726	1726
Restrict Airspace		1711	1735	1726	1726
Shelter Livestock / Stored Feed & Water		1711	1739	1721	1721
School Activities Canceled		1711	1801	1721	1721
Relocate Risk School		N/A	N/A	1750	1750
1st PAD Decision (0-2 miles Restricted Area/Stay Indoors)		1707		1707	1707
1st Siren Activation		1717	1717	1717	1717
1st EAS		1720	1720	1720	1720
2nd PAD Decision (0-10 miles all zones Shelter in Place)		1829			
2nd Siren Activation		1838	1838	1838	1838
2nd EAS		1841	1841	1844	1844
3rd PAD Decision (0-10 miles evac all zones and ingest KI)		1945			
3rd Siren Activation		1950	1950	1950	1950
3rd EAS		1953	1953	1953	1953
Notification to Shelter Message is:		1826	1723	1810	1810
Notification to Evacuate: 10 mi/360 degrees		1950	1942	1942	1942
KI Administration Decision: EWs advised to take KI		1949	1949	1844	1844
General Public/Institutionalized advised to take KI		1949	1949	1915	1915
Exercise Terminated		2030	2030	2032	2032

Emergency Classification Level or Event	Time Utility Declared	Chester County	
		Chester County EOC	West Nottingham Township
Unusual Event	N/A	N/A	N/A
Alert	1606	1620	1621
Site Area Emergency	1630	1643	1644
General Emergency	1752	1808	1808
Simulated Radiation Release Started	1630	1718	1808
Simulated Radiation Release Ended	Ongoing	Ongoing	Ongoing
Facility Declared Operational		1635	1624
Governor's Declaration of State of Emergency		1734	1740
Declaration of Local Emergency		N/A	1836
Notice of a Hostile Action Event		1620	1712
Precautionary Actions			
Law Enforcement Actions (Shelter in-place)		1711	1723
Close Parks		1711	N/A
Restrict Water Traffic		1711	1711
Restrict Rail Traffic		1711	1758
Restrict Airspace		1711	1735
Shelter Livestock / Stored Feed & Water		1711	1739
School Activities Canceled		1711	1801
Relocate Risk School		N/A	N/A
1st PAD Decision (0-2 miles Restricted Area/Stay Indoors)		1707	
1st Siren Activation		1717	1717
1st EAS		1720	1720
2nd PAD Decision (0-10 miles all zones Shelter in Place)		1829	
Siren Activation		1838	1838
2nd EAS		1841	1841
3rd PAD Decision (0-10 miles evac all zones and ingest KI)			
3rd Siren Activation		1950	1950
3rd EAS		1953	1953
Notification to Shelter		1826	1723
Notification to Evacuate: 10 mi/360 degrees		1953	1949
KI Administration Decision: EWs advised to take KI		1949	1949
General Public/Institutionalized advised to take KI		1949	1949
Exercise Terminated		2030	2030

Emergency Classification Level or Event	Time Utility Declared	Lancaster County					
		Lancaster County EOC	Drumore Township EOC	Fulton Township EOC	Little Britain Township EOC	Martic Township EOC	Solanco Regional EOC
Unusual Event	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Alert	1606	1630	1630	1713	1615	1604	1634
Site Area Emergency	1630	1645	1658	1713	1636	1651	1704
General Emergency	1752	1836	1843	1846	1804	1840	1843
Simulated Radiation Release Started	1724	1722	1729	1734	1725	1734	1726
Simulated Radiation Release Ended	Ongoing	Ongoing	Ongoing	Ongoing	Ongoing	Ongoing	Ongoing
Facility Declared Operational		1642	1657	1740	1628	1715	1713
Governor's Declaration of State of Emergency		1823	1740	1753	1714	1739	1743
Declaration of Local Emergency		1841	N/A	1753	1715	1800	N/A
Notice of a Hostile Action Event		1927	N/A	1753	1645	1755	N/A
Precautionary Actions							
Law Enforcement Actions (Shelter in-place)		1705	1850	1844	1707	1707	N/A
Close Parks		1711	1738	1740	1705	1737	N/A
Restrict Water Traffic		1711	1743	1740	1705	1737	1739
Restrict Rail Traffic		1711	1754	1740	1705	1737	1750
Restrict Airspace		1711	1738	1740	1705	1726	1726
Shelter Livestock / Stored Feed & Water		1711	1738	1740	1705	1738	1738
School Activities Canceled		1711	1738	1748	N/A	N/A	1750
Relocate Risk School		1711	1755	N/A	1705	N/A	N/A
1st PAD Decision (0-2 miles Restricted Area/Stay Indoors)		1711					
1st Siren Activation		1717	1724	1714	1717	1717	1717
1st EAS		1720	1720	1720	1720	1720	1720
2nd PAD Decision (0-10 miles all zones Shelter in Place)		1836					
2nd Siren Activation		1838	1838	1838	1838	1838	1838
2nd EAS		1841	1841	1841	1841	1841	1841
3rd PAD Decision (0-10 miles evac all zones and ingest KI)		1945					
3rd Siren Activation		1950	1950	1950	1943	2001	1950
3rd EAS		1953	1953	1953	1946	2003	1953
Notification to Shelter Message is:		1711	1850	1844	1819	1955	1846
Notification to Evacuate is: 10 mi/360 degrees		1945	1956	1957	1933	1955	1955
KI Administration Decision: EWs advised to take KI		1945	1956	1957	1957	1955	1955
General Public/Institutionalized advised to take KI		1945	1933	1933	1933	1955	1955
Exercise Terminated		2030	2025	2030	2015	2030	2036

Emergency Classification Level or Event	Time Utility Declared	York County				
		York County EOC	Delta-Peach Bottom EOC	Fawn Township/ EOC	Lower Chanceford Township EOC	ICP
Unusual Event	N/A	N/A	N/A	N/A	N/A	N/A
Alert	1606	1616	1628	1629	1624	1609
Site Area Emergency	1642	1646	1652	1650	1651	1651
General Emergency	1752	1754	1808	1806	1806	1806
Simulated Radiation Release Started	1642	1733	1730	1733	1733	1733
Simulated Radiation Release Ended	Ongoing	Ongoing	Ongoing	Ongoing	Ongoing	Ongoing
Facility Declared Operational		1610	1655	1708	1635	1618
Governor's Declaration of State of Emergency		1734	1914	1738	1815	1740
Declaration of Local Emergency		1712	N/A	N/A	1730	N/A
Notice of a Hostile Action Event		1652	1620	N/A	1624	1609
Precautionary Actions						
Law Enforcement Actions: 0-2 miles Restricted Area/Stay		N/A	1702	1710	1710	1702
Close Parks		1707	1730	1740	1730	1743
Restrict Water Traffic		1707	1730	1740	1730	1743
Restrict Rail Traffic		1707	1730	1740	1730	1743
Restrict Airspace		1707	1730	1728	1730	1651
Shelter Livestock / Stored Feed & Water		1707	1825	1828	1830	1740
School Activities Canceled		1641	1825	1828	1830	1740
Relocate Risk School		1758	1825	1828	1830	1707
1st PAD Decision (0-2 miles Restricted Area/Stay Indoors)		1707				
1st Siren Activation		1717	1717	1717	1717	1717
1st EAS		1720	1720	1720	1720	1720
2nd PAD Decision (0-10 miles all zones Shelter in Place)		1828				
2nd Siren Activation		1838	1838	1838	1838	1838
2nd EAS		1841	1841	1841	1841	1841
3rd PAD Decision (0-10 miles evac all zones and ingest KI)		1941				
3rd Siren Activation		1950	1950	1950	1953	1950
3rd EAS		1953	1953	1953	1953	1953
Notification to Shelter Message is:		1841	1841	1841	1841	1841
Notification to Evacuate is: 10 mi/360 degrees		1941	1946	1950	1950	1940
KI Administration Decision: EWs advised to take KI		1941	1946	1950	1943	1943
General Public/Institutionalized advised to take KI		1941	1946	1950	1953	1953
Exercise Terminated		2033	2033	2033	2033	2032

Emergency Classification Level or Event	Time Utility Declared	State of Maryland		
		MDEM	MJOC	MDE/AAC
Unusual Event	N/A	N/A	N/A	N/A
Alert	1606	1615	1615	1616
Site Area Emergency	1630	1636	1635	1634
General Emergency	1752	1804	1803	1803
Simulated Radiation Release Started	1642	1719	1714	1714
Simulated Radiation Release Ended	Ongoing	Ongoing	Ongoing	Ongoing
Facility Declared Operational		1638	N/A	1742
Governor's Declaration of State of Emergency		1749	1724	1749
Declaration of Local Emergency		N/A	N/A	N/A
Notice of a Hostile Action Event		1615	1616	1615
Precautionary Actions				
Law Enforcement Actions (Shelter in-place)		1817	1700	1817
Close Parks		1707	1712	1727
Restrict Water Traffic		1707	1703	1727
Restrict Rail Traffic		1707	1703	1727
Restrict Airspace		1707	1703	1727 / 1841
Shelter Livestock / Stored Feed & Water		1707	1703	1727 / 1841
School Activities Canceled		1653	1653	1653
Relocate Risk School		1707		1727
1st PAD Decision (0-2 miles Restricted Area/Stay Indoors)			1714	1707
1st Siren Activation		1717	1717	1717
1st EAS		1720	1722	1720
2nd PAD Decision (0-10 miles all zones Shelter in Place)			1825	1817
2nd Siren Activation		1827	1830	1827
2nd EAS		1830	1833	1830
3rd PAD Decision (0-10 miles evac all zones and ingest KI)				1933
3rd Siren Activation		1943	1943	1943
3rd EAS		1946	1946	1946
Notification to Shelter		1817	1825	1817
Notification to Evacuate		1933	1933	1933
KI Administration Decision: EWs advised to take KI		1707	1846	1727
General Public/Institutionalized advised to take KI		1933	1933	1940
Exercise Terminated		2012	2013	2134

Emergency Classification Level or Event	Time Utility Declared	Maryland Risk Counties Peach Bottom Atomic Power Station	
		Cecil County EOC	Harford County EOC
Unusual Event	N/A	N/A	N/A
Alert	1606	1615	1615
Site Area Emergency	1630	1636	1635
General Emergency	1752	1804	1804
Simulated Radiation Release Started	1717	1725	1720
Simulated Radiation Release Ended	Ongoing	Ongoing	Ongoing
Facility Declared Operational		1628	1641
Governor's Declaration of State of Emergency		1714	1714
Declaration of Local Emergency		1715	1718
Notice of a Hostile Action Event		1645	1627
Precautionary Actions			
Law Enforcement Actions (Shelter in-place)		1707	1707
Close Parks		1705	1705
Restrict Water Traffic		1705	1705
Restrict Rail Traffic		N/A	N/A
Restrict Airspace		1705	1705
Shelter Livestock / Stored Feed & Water		1705	1705
School Activities Canceled		1705	1705
Relocate Risk School		1705	1705
1st PAD Decision (0-2 miles Restricted Area/Stay Indoors)			1705
1st Siren Activation		1717	1717
1st EAS		1720	1720
2nd PAD Decision (0-10 miles all zones Shelter in Place)			1816
2nd Siren Activation		1827	1827
2nd EAS		1830	1830
3rd PAD Decision (0-10 miles evac all zones and ingest KI)			1930
3rd Siren Activation		1943	1943
3rd EAS		1946	1946
Notification to Shelter		1819	1816
Notification to Evacuate		1933	1930
KI Administration Decision: EWs advised to take KI		1705	1705
General Public/Institutionalized advised to take KI		1933	1930
Exercise Terminated		2015	2018

APPENDIX B: EXERCISE EVALUATORS AND TEAM LEADERS

The following is the list of Evaluators and Team Leaders for the Peach Bottom Atomic Power Station Radiological Emergency Preparedness Plume Pathway Exercise evaluated on April 16, 2024. The following constitutes the managing staff for the Exercise Evaluation:

- Thomas Scardino, DHS/FEMA, Regional Assistance Committee (RAC) Chairman
- Taylor Griffiths, DHS/FEMA, Project Officer and Site Specialist

Peach Bottom Atomic Power Station

LOCATION	TEAM LEADER	AGENCY
Commonwealth Response Coordination Center (CRCC); Commonwealth Joint Information Center at the CRCC; Constellation Media Operations Center; Constellation Emergency Operations Facility; Pennsylvania State Police	Joe Suders	FEMA Region 3
Pennsylvania Accident Assessment Center (BRP) at the CRCC; Radiological Rapid Response Vehicle; State Field Team A; State Field Team B;	Kenneth Wierman	FEMA HQ
Chester County Department of Emergency Services	Tina Thomas	FEMA Region 3
Lancaster County Emergency Operation Center	Roy Smith	REP Support Team
York County Emergency Operation Center	Brian Hasemann	FEMA Region 2
Maryland Department of Emergency Management (MDEM) State Emergency Operations Center/JIC (COOP	Dan Rose	FEMA Region 3
Maryland Department of the Environment Accident Assessment Center (MDE/AAC)	Kenneth Wierman	FEMA HQ
Cecil County Emergency Operation Center	Zach Corle	FEMA Region 3

Harford County Emergency Operation Center	Lee Torres	FEMA Region 3
LOCATION	**EVALUATOR**	**AGENCY**
Alliance Fire Rescue	Lorenzo Leon	FEMA Region 3
Alliance Fire Rescue	Alexander Hazard	FEMA Region 3
Cecil County EOC	Zachary Corle	FEMA Region 3
Cecil County EOC	Meg Swearingen	REP Support
Cecil County EOC	Alonzo McSwain	FEMA HQ
Cecil County EOC	Meg Swearingen	REP Support
Chester County Emergency Operations Center	Tina Thomas	FEMA Region 3
Chester County Emergency Operations Center	George Labonte	FEMA Region 3
Chester County Emergency Operations Center	Tina Thomas	FEMA Region 3
Clermont Elementary School	Matthew Welshans	FEMA HQ
Commonwealth Joint Information Center (at the CRCC)	Paul Anderson	REP Support
Commonwealth Response Coordination Center (CRCC) Pennsylvania Emergency Management Agency (PEMA)	Joe Suders	FEMA Region 3
Commonwealth Response Coordination Center (CRCC) Pennsylvania Emergency Management Agency (PEMA)	Peter Connell	FEMA Region 3
Commonwealth Response Coordination Center (CRCC) Pennsylvania Emergency Management Agency (PEMA)	Kevin Reed	REP Support
Conowingo Elementary School	Meg Swearingen	REP Support
Constellation Emergency Operations Facility	Roger Winkelmann	REP Support
Constellation Media Operations Center	Matthew Welshans	FEMA HQ
Cristiana Care Union Hospital	Daniel Rose	FEMA
Darlington Elementary School	William Webb	REP Support
Delta/Peach Bottom Elementary	Lorenzo Leon	FEMA Region 3
Delta-Peach Bottom Emergency Operations Center	Kevin Malone	FEMA HQ
Drumore Township Emergency Operation Center	Michael Burriss	REP Support
Drumore Township Emergency Operation Center	Michael Burriss	REP Support
Dublin Elementary School	Mark Dalton	REP Support

E. Drumore Twp/Providence Twp/Quarryville Twp/Solenco Twp combined Emergency Operation Center	Bruce Swiren	REP Support
E. Drumore Twp/Providence Twp/Quarryville Twp/Solenco Twp combined Emergency Operation Center	Paul Nied	REP Support
Fawn Grove Township/ Fawn Borough Emergency Operations Center	LaShawn Halsey	FEMA HQ
Fawn Grove Township/ Fawn Borough Emergency Operations Center	Don Carlton	REP Support
Fulton Township Emergency Operation Center	Herbert Massie	REP Support
Harford Christian Elementary School	Stephen Watts	REP Support
Harford County Community Reception Center Center/Evacuee Mon-Decon	Sam Paletta	REP Support
Harford County Emergency Medical Services	Taylor Griffiths	FEMA Region 3
Harford County Emergency Operations Center	Mark Dalton	REP Support
Harford County Emergency Operations Center	Lee Torres	FEMA Region 3
Harford County Emergency Operations Center	Matthew Celia	FEMA HQ
Harford County Emergency Operations Center	Gary Goldberg	REP Support
Harford County Emergency Worker Monitor-Decon/Vehicle	Gary Goldberg	REP Support
Harford Technical High School	Meghan Hutchinson	REP Support
Lancaster County Emergency Operation Center	Roy Smith	REP Support
Lancaster County Emergency Operation Center	William McDougall	REP Support
Lancaster County Emergency Operation Center	Stephen Watts	REP Support
Lancaster County Public Safety Training Center (LCPSTC)	Joe Suders	FEMA Region 3
Lancaster County Public Safety Training Center (LCPSTC)	Taylor Griffiths	FEMA Region 3
Little Britain Township Emergency Operation Center	Rosemary Samsel	REP Support
Lower Chanceford Township Emergency Operations Center	Ronald Bonner Jr	REP Support

Lower Chanceford Township Emergency Operations Center	Kevin Leuer	REP Support
Martic Township Emergency Operation Center	Brenda Rembert	REP Support
Marticville Middle School	Taylor Griffiths	FEMA Region 3
Maryland Department of Emergency Management (MDEM)	Daniel Rose	FEMA Region 3
Maryland Department of Emergency Management (MDEM)	Thomas Gahan	REP Support
Maryland Field Monitoring Team A	Carol Shepard	REP Support
Maryland Field Monitoring Team B	Cheryl Weaver	REP Support
Maryland Joint Information Center	Thomas Hegele	REP Support
Maryland Joint Operations Center (MJOC COOP) MD State Highway	William Webb	REP Support
MDE Accident Assessment Center	Marcy Campbell	REP Support
MDE Accident Assessment Center	Melody Geer	REP Support
Northern High School	Thomas Scardino	FEMA Region 3
Penn Manor District Office	Joe Suders	FEMA Region 3
Pennsylvania Accident Assessment Center (BRP)	Reginald Rodgers	REP Support
Pennsylvania Accident Assessment Center (BRP)	Kenneth Wierman	FEMA HQ
Pennsylvania State Police (ICP) Peach Bottom	Jon Christiansen	REP Support
Pennsylvania State Police (ICP) Peach Bottom	Alexander Hazard	FEMA Region 3
Pennsylvania State Police (ICP) Peach Bottom	Dennis Cribben	FEMA Region 3
Pennsylvania State Police York Station (Dispatch)	Jon Christiansen	REP Support
PSP TCP/ACP and ICP to Plant	Jon Christiansen	REP Support
Radiological Rapid Response Vehicle (R3V)	John Wills	REP Support
Rising Sun Community Fire Company	Meghan Hutchinson	REP Support
Rising Sun Community Fire Company	Taylor Griffiths	FEMA Region 3
Rising Sun Community Fire Company	Lorenzo Leon	FEMA Region 3
Rising Sun Community Fire Company	Lee Torres	FEMA Region 3
Rising Sun Community Fire Company Ambulance	Zachary Corle	FEMA Region 3
Rising Sun High School	Ronald Bonner Jr	REP Support
Solanco High School	Thomas Scardino	FEMA Region 3
Solanco Regional EOC Back up Route Alerting	Dennis Wilford	REP Support
Solanco School District Office	Alexander Hazard	FEMA Region 3

South Eastern District Office	Lee Torres	FEMA Region 3
State Field Monitoring Team A (BRP)	Michael DeBonis	FEMA Region 2
State Field Monitoring Team B (BRP)	Deborah Blunt	REP Support
University of Maryland Upper Chesapeake Medical Center	Alexander Hazard	FEMA Region 3
West Nottingham Township Emergency Operations Center	Steven Candurra	FEMA Region 2
West Nottingham Township Emergency Operations Center	Sam Paletta	REP Support
York County Office of Emergency Management	Brian Hasemann	FEMA Region 2
York County Office of Emergency Management	Thomas Reynolds	REP Support
York County Office of Emergency Management	Misty Chance	FEMA Region 6
York County Office of Emergency Management	Thomas Reynolds	REP Support

APPENDIX C: ACRONYMS AND ABBREVIATIONS

Acronym	Meaning
ACP	Access Control Point
ALC	Annual Letter of Certification
ANS	Alert and Notification System
ARC	American Red Cross
ARES	Amateur Radio Emergency Services
BRP	Bureau of Radiological Protection
BuRA	Back-up Route Alerting
CERT	Community Emergency Response Team
CFR	Code of Federal Regulations
CERC	Corporate Emergency Response Center
CNS	Commonwealth Notification System
CPM	Counts per Minute
CRCC	Commonwealth Response Coordination Center
DAD	Digital Alarming Dosimeter
DHS	Department of Homeland Security
DOT	Department of Transportation
EAL	Emergency Action Level
EAS	Emergency Alert System
ECL	Emergency Classification Level
EMC	Emergency Management Coordinator
EMD	Emergency Management Director
EMS	Emergency Medical Services
EOC	Emergency Operations Center
EOP	Extent of Play
EPT	Exercise Planning Team
EPZ	Emergency Planning Zone
ESF	Emergency Support Function
EW	Emergency Workers
EWMDS	Emergency Worker Mon/Decon Station
FD	Fire Department
FEMA	Federal Emergency Management Agency
FMT	Field Monitoring Team
FRMAC	Federal Radiological Monitoring Assessment Center
FPE	Full Participation Exercise
FST	Field Sampling Team
FTC	Field Team Coordinator
GE	General Emergency

GIS	Geographic Information Systems
HazMat	Hazardous Materials
IPAWS	Integrated Public Alert & Warning System
IPX	Ingestion Pathway Zone
JIC	Joint Information Center
KI	Potassium Iodide
LOA	Letter of Agreement
MDEM	Maryland Department of Emergency Management
MDE	Maryland Department of Environment
MCC	Mass Care Center
MOC	Media Operations Center
MOU	Memorandum of Understanding
MSEL	Master Scenario Events List
NPP	Nuclear Power Plant
NRC	Nuclear Regulatory Commission
OOS	Out of Sequence
ORH	Office of Radiological Health
ORO	Offsite Response Organization
OSD	Optically Stimulated Dosimeter
PAD	Protective Action Decision
PAG	Protective Action Guide
PAR	Protective Action Recommendation
PARA	Primary Area Route Alerting
PBAPS	Peach Bottom Atomic Power Station
PDAFN	Persons with Disabilities/Access Functional Needs
PEMA	Pennsylvania Emergency Management Agency
PIO	Public Information Officer
PPE	Personal Protective Equipment
PRD	Permanent Record Dosimeter
RAC	Regional Assistance Committee
RACES	Radio Amateur Civil Emergency Services
RC	Reception Center
REA	Radiation Emergency Area
REPP	Radiological Emergency Preparedness Program
RERP	Radiological Emergency Response Plan
RO	Radiological Officer
SAC	Staging Area Coordinator
SAE	Site Area Emergency
SAV	Staff Assistance Visit
SEOC	State Emergency Operations Center

SEVAN	State Emergency Voice Activation Network
TCP	Traffic Control Point
TRNSDEP	Transportation Dependent
VHF	Very High Frequency
WEA	Wireless Emergency Alerts

APPENDIX D: EXTENT OF PLAY AGREEMENT

The 2024 Peach Bottom Atomic Power Station Plume Exercise Extent-of-Play (EOP) Agreement is a document created by the Commonwealth of Pennsylvania Emergency Management Agency and the Maryland Department of Emergency Management that sets the parameters for exercise demonstration. The EOP agreement was signed by the FEMA Region 3, Commonwealth of Pennsylvania Emergency Management, and the Maryland Department of Emergency Management Agency planning team members.

PEACH BOTTOM ATOMIC POWER STATION
2024 RADIOLOGICAL EMERGENCY PREPAREDNESS EXERCISE

METHOD OF OPERATION

I. Peach Bottom Atomic Power Station (PBAPS)

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

II. Bureau of Radiation Protection (BRP)

BRP personnel will be present at the CRCC, the nuclear facility Emergency Operations Facility (EOF), the Tactical Operations Center (TOC), and branch and field locations. BRP field teams will participate and be observed. This is an evaluated exercise for BRP for all exercising elements.

III. PEMA Operations at the CRCC

This "Method of Operation" Document includes activities for the Full Participation Hostile Action Based (HAB) Plume Exercise (April 16, 2024), and the uncompleted "Out-of-sequence" Activities (March 26, 2024).

A. Plume Exercise – April 16, 2024

PEMA staff and Agency Representatives (AREPs) from designated state departments/agencies, will comprise initial operations at the CRCC during a demonstration window of 4:00 p.m. to 10:00 p.m. on April 16, 2024. The CRCC **WILL** be evaluated during this exercise.

PEMA staff will assist in the HAB specific aspects of the exercise by being part of the Unified Command at PEMA Headquarters.

B. Plume Exercise –April 16, 2024

The Pennsylvania State Police (PSP) demonstration will take place as part of the Plume Exercise. The Incident Command Post will provide demonstration on traffic and access control.

C. "Out-of-Sequence" Activities – None

No Mass Care Walkdowns are required for this exercise.

D. "Out-of-Sequence" Activities – March 26, 2024

A PEMA Lead Controller will disseminate exercise-related messages from the CRCC to the risk counties for dissemination to the participating school districts during a demonstration window of 9:00 a.m. to 11:00 a.m. on March 26, 2024. The CRCC and County Emergency Operation Centers (EOCs) will participate but WILL NOT be evaluated during the "Out-of-Sequence" component. PEMA personnel will serve as Observers at the identified school districts and schools.

PEMA personnel will serve as "Observers" at the various field exercise locations (reception centers, emergency worker and general public monitoring/decontamination centers, and mass care centers). This will be performed out-of-sequence in a demonstration window of 7:00 p.m. to 9:30 p.m. on March 26, 2024 (see Attachment A, Sections I.1, I.2, I.3, and I.4). An exercise coordinator will remain in the CRCC. The CRCC and counties WILL NOT be evaluated during the evening "Out-of-Sequence" component.

IV. PEMA Area Office Operations

The PEMA Area Offices (Eastern and Central Area) <u>will not be activated nor evaluated during this exercise.</u> Selected staff of the Area Offices will serve as Liaison Officers to risk and support counties as assigned. Liaison Officers are exercise participants.

V. Pennsylvania State Police

The Pennsylvania State Police (PSP) demonstrations will take place during the Plume phase demonstration on April 26, 2024.

PSP will have a leading role in the Incident Command Post (ICP). They will provide the primary communication paths between the State CRCC and the Incident Command Post.

PSP will demonstrate traffic and access control points as part of the Incident Command Post. The demonstration will include how personnel are assigned to traffic and access control points and demonstrate available communications and traffic control equipment. FEMA evaluators may conduct an interview for follow up questions and view equipment/supplies. Discussion will occur on how essential personnel pass through the TCP/ACP locations to the point of need.

In addition, PSP will be supporting the Joint Information Center with vetting of press releases for law enforcement sensitive information.

VI. Counties Designated to Participate (Pennsylvania)

The three risk counties (Chester (partial participation), Lancaster, and York), in coordination with PEMA, will demonstrate the capability to mobilize appropriate staff, activate their respective EOCs and implement emergency response operations to include sheltering and/or evacuation. County government will provide direction and coordination to risk municipalities. Actual sheltering or evacuation of the general public will be simulated.

As part of Hostile Action Based Exercise the counties may receive requests or communications from the Tactical Operations Center. Counties should demonstrate the ability to direct resources to the correct location and backfill any positions needed, as applicable. Counties may have specific predefined activities as part of the Law Enforcement response. Assets or personnel will not actually deploy except for near site Incident Command Post (ICP).

VII. Municipal Emergency Management Designated to Participate

The risk municipalities will demonstrate mobilization of staff, activation of their EOC, and implementation of emergency response operations. Some municipalities are required to demonstrate back-up route alerting. Some municipalities have combined with other municipalities.

VIII. Incident Command Post (ICP)/Tactical Operations Center (TOC)

Pennsylvania State Police, other law enforcement departments, and other members of the ICP/TOC will demonstrate the ability to provide command and coordination of the incident, as well as radiological protection of personnel. No tactical actions or manning of control points will be demonstrated except for the one TCP/ACP being evaluated. Only those assets or personnel necessary to demonstrate the command, coordination, communication, and radiological protection components will be deployed. Demonstration of the communications equipment capability will be performed. For operational security, an "Exercise Planning Package" may be used instead of actual plans.

The Unified Command (at PEMA) will demonstrate the ability to provide command and coordination of the incident beyond the tactical component of the scenario.

IX. PEMA Liaison Officers

Liaison Officers will be present at the participating risk and support county EOCs, the Constellation EOF, and Constellation Joint Information Center (JIC), and ICP/TOC (as appropriate) to provide assistance, guidance, and support. It is customary to also send a liaison to Maryland Department of Emergency Management/Maryland Department of Environment.

X. Controllers

Controllers will be present at the emergency worker monitoring/decontaminating stations and the mass care monitoring/decontamination centers on March 26, 2024. 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.*

XI. 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 XV)

XII. Outside Observer Coordination

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

XIII. FEMA Evaluators

Federal Evaluators will be present at the risk and support county EOCs, risk municipal EOCs, CRCC, ICP, TOC, Staging Area and JIC, and at appropriate field locations to evaluate player response to the actual and simulated events in the exercise scenario. FEMA will evaluate risk municipalities in Chester, Lancaster, and York counties. Note that Chester county is only being observed. having been evaluated in the 2023 Limerick HAB Exercise.

HAB Plume Phase Exercise (April 16, 2024): Federal Evaluators will be present at the risk county EOCs, risk municipal EOCs, CRCC and JIC, ICP/TOC, Staging Area, and at appropriate field locations to evaluate player response to the actual and simulated events in the exercise scenario. FEMA will evaluate risk municipalities in Chester, Lancaster, and York counties.

Out-of-Sequence Period:

- On April 16, 2024, Federal Evaluators will be present at the ICP/TOC for Traffic and Access Control Points demonstration as per Attachment A, Section II.5.a
- On March 26, 2024, Federal Evaluators will be present at the identified "out-of-sequence" demonstration sites per Attachment A, Section I.5. These include the identified Public-School Districts and participating school buildings.

- On March 26, 2024, Federal Evaluators will be present at identified Reception Centers, Emergency Worker and Evacuee Monitoring and Decontamination Centers, and Mass Care Centers, as identified in Attachment A, Sections I.1, I.2, I.3, and I.4

XIV. 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. Out-of-Sequence Exercise

The out-of-sequence Medical Services hospital demonstration was federally evaluated at Wellspan York Hospital, York County, on June 14, 2023, and Wellspan Ephrata Hospital, Lancaster County on October 3, 2023.

The out-of-sequence exercise window for school demonstrations will be on March 22 and 26, 2024 from 9:00 a.m. to 11:00 a.m.

Reception Centers, Emergency Worker Monitoring and Decontamination Stations, Evacuee Monitoring and Decontamination Centers, and Mass Care Centers, as identified in Attachment A, Sections I.1, I.2, I.3, and I.4 will be conducted on March 16, 2024, from 7:00 p.m. to 9:30 p.m.

B. HAB Plume Phase Exercise

Commonwealth, county and municipal EOC operations will be conducted on April 26, 2024, with exercise period from approximately 4:00 p.m. to 10:00 p.m. unless terminated by the Lead Controller in coordination with the Utility and PEMA. (Please refer to the Extent of Play Demonstration Tables, Attachment A)

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

The ICP, TOC, and Staging Area will be at the Calvary Chapel of Delta - 5911 Delta Road Delta, PA. Unified Command will be at PEMA Headquarters. These activities will be conducted on the evening of April 16, 2024, along with State, County and Municipal EOC operations.

During Exercises involving Hostile Action Based evaluation federal evaluators/observers will be present at the TOC, ICP, Staging Area, Chester, Lancaster, and York Counties, Risk Municipalities and Unified Command (at PEMA).

During the exercise the Access and Traffic Control Point Demonstration along with escort of utility teams and simulated plant entry will be demonstrated to meet exercise objectives.

C. Post Plume Exercise

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

XV. Stand-down

All jurisdictions will request approval on a jurisdiction-by-jurisdiction basis prior to stand-down. Upon completion of all requirements and after having been informed by the FEMA Evaluator that all evaluation areas have been demonstrated and/or completed, the risk municipality EOCs may request approval from their county EOC to stand-down their portion of the exercise.

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

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

3. The risk municipalities will request termination from their respective risk county after it is confirmed that their FEMA Evaluator(s) have completed their evaluation and re-demonstration is not required.

XVI. General Concepts

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

XVII. Re-demonstrations

During the exercise, any activity that is not satisfactorily demonstrated may be re-demonstrated by the participants during the exercise with the approval of the Regional Assistance Committee (RAC) Chair as long as it does not negatively interfere with the exercise. Refresher training may be provided by the players, observers, and/or controllers. FEMA Evaluators are not permitted to provide refresher training. Re-demonstrations will be negotiated between the players, observers, controllers, and evaluators. PEMA will consult with 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.

OBJECTIVE 1 – Emergency Operations Management

Capability Target 1.1: Mobilization *(Vice Sub-Element 1.a.1)*
Core Capability: Operational Coordination; Planning
Recommended Evaluation Frequencies: At every assessment activity
Recommended Assessment Activities: Exercise; Drill
Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (A.1, A.1.a, A.1.b, A.3, A.4, A.5, C.1, C.2, C.2.a, C.2.b, C.3, E.1, E.1.a, E.3, F.1.c, H.6, and O.1)
Intent: The capability to alert, notify, and mobilize OROs to staff facilities in support of emergency operations.

Demonstration and Evaluation Guidance:

1. Alert, notify, and mobilize key personnel, to include a 24-hour staffing roster, and activate facilities in a timely manner.
   - What time was staff notified? What time did they arrive at the facility?
   - Did the ORO demonstrate the activation of facilities for immediate use by mobilized personnel upon their arrival?
   - Was activation of facilities/locations completed in accordance with plans/procedures?
   - Were key emergency personnel contacted, alerted, and mobilized in a timely manner?
   - Did the ORO demonstrate the ability to staff and maintain 24-hour operations?
   - Were position staff trained and in place for facility activation?
2. Receive and verify notifications.
   - Who notified the ORO? Licensee or other?
   - For reverse notification, how was the licensee notified?
   - Was the notification/information verified? How?
   - What was the initial ECL? Were changes to ECLs communicated in the same manner?
3. Identify and request additional resources, as needed.
   - Was the ability to identify and request additional resources demonstrated? If not, was the ability to identify compensatory measures demonstrated?
   - Were MOUs and LOAs available for review?
4. Determine a facility operational.
   - What time was the facility declared operational?
   - What criteria was used to determine if the facility was operational?
   - What was the time difference between notifications of personnel and when the facility was declared operational?

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.

State Negotiated Extent of Play:
Pre-positioning of state emergency personnel (Liaison Officers) at the Emergency Operations Facility (EOF), the Utility Joint Information Center (JIC) and Risk and Support Counties is appropriate due to the commuting distance from the individual's duty location or residence. Risk municipalities will conduct callouts to demonstrate the mobilization of key personnel. The method for mobilizing staff will be discussed with the FEMA evaluator and any equipment utilized for notification will be shown and described through interview.

- *Activation of law enforcement commences with a call from the Peach Bottom Atomic Power Station to the Pennsylvania State Police at the York Barracks.*
- *Actual calls (or pager notifications) will be made to the municipal EOC personnel and law enforcement personnel involved in the HAB response for the Plume Phase exercise per plans and procedures.*
- *In all instances, the demonstration of a shift change is **NOT** required. Twenty-four-hour staffing will be demonstrated by means of a roster or staffing chart.*
- *All out-of-sequence players will be pre-positioned, and equipment will be demonstrated or shown to be inventoried (School District personnel, PSP TCP/ACP, Reception Centers, Emergency Worker Monitoring and Decontamination Stations Mass Care/Sheltering Centers and Monitoring and Decontamination Centers).*
- *Individuals working in state facilities and county EOCs may be pre-positioned for the plume phase.*
- *Other locations, including Municipal EOCs, Tactical Operations Center, Staging Area, and Incident Command Post will **NOT** pre-stage but will wait for notification of emergency before staffing their duty location. They may, however, wait in close proximity to their duty location.*
- *BRP may position field teams in the exercise area awaiting mission assignment, the R3V may preposition. The DEP South Central Office will coordinate field team operations in lieu of the R3V. All BRP operational units will be evaluated for this exercise.*
- *Note that Chester County will be partially participation for this exercise.*

Capability Target 1.2: Direction and Control *(Vice Sub-Element 1.b.1, 1.c.1, 1.e.1)*
Core Capabilities: Operational Coordination; Environmental Response/Health and Safety; Public Information and Warning; Mass Care Services; Public Health, Healthcare, and Emergency Medical Services; Situational Assessment; Critical Transportation; Planning
Recommended Evaluation Frequencies: At every assessment activity
Recommended Assessment Activities: Exercise; Drill
Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (A.1, A.1.a, A.1.b, A.1.c, A.2, A.3, A.5, C.2, C.2.a, C.2.b, C.3, D.4, E.1, H.6, and O.1)
Intent: The capability to provide overall direction and control of response efforts, commensurate with the responsibilities of leadership, as detailed in plans/procedures.

Demonstration and Evaluation Guidance:

1. Support protective action decision-making.
   - Who, by title and position, was in charge?
   - Who was authorized to make any PADs prior to an official PAR from the licensee?
   - Did decision-makers obtain input from their support staff?
2. Conduct briefings in a timely manner.
   - Were briefings conducted in a timely manner?
   - What information was provided?
   - How frequently were briefings held?
   - Who gave the briefing?
3. Maintain situational awareness.
   - Did the ORO maintain situational awareness? How?
4. Coordinate response activities with other organizations.
   - Were response activities coordinated with other organizations? How?

5. Obtain resources to support emergency operations.
   - Were resources obtained to support emergency operations (e.g., through MOUs or other agreements)?
   - Was just-in-time training provided, as necessary?
6. Provide and maintain adequate facilities and equipment to support the emergency response.
   - Were facilities and equipment adequate to support operations? How so?
   - Was the facility evacuated during the plume? What means of monitoring and decontamination were used?

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.

State Negotiated Extent of Play:
The ICP/TOC may utilize a plans and procedures which FEMA may inspect in advance at a mutually agreed time and place for operational security purposes. *Radiological survey instruments are calibrated per manufacturer's recommendations. In Pennsylvania, support counties do not have DRDs or KI, but those responsible for reception centers and/or monitoring and decontamination centers will have PRDs.* *Evaluation of dosimetry and KI quantities will be verified using inventory sheets. Dosimetry and KI will not be removed from storage locations and boxes/packages will not be opened. A box of KI will be available to the evaluator to verify the lot number and expiration date. KI questions will be addressed through interviews.* *Some counties maintain dosimetry and KI at the county and distribute to the municipality when needed and some have the items stored at the municipality. PSP maintains a cache of dosimetry and KI for both the 10-mile EPZ TCP/ACPs that they man as well as a cache dedicated to ICP/TOC and Staging Area use during an HAB. The counties and the PSP ICP/TOC and Staging caches have high range 0-200 R DRDs.* *Annual Direct Reading Dosimeter leakage testing verification will be available to the evaluator.* *All DRDs "read" in units of Roentgens. The Commonwealth, counties and municipalities do not use DRDs which "read" in units of milli-Roentgens.* *Reception Centers shall be evaluated on their ability to use maps or other documentation to direct evacuating persons to the correct Monitoring/Decontamination Centers and/or Mass Care Centers (as applicable). Maps, in sufficient quantities to support planning assumptions, will be available for viewing by evaluators. If Reception Centers are co-located with Monitoring/Decontamination centers and Mass Care Centers, the use of maps or documents to provide direction does not apply.* ***Personnel manning reception centers should receive a radiological briefing and receive category C dosimetry due to potential for radiological contamination.*** *Note: Bus drivers returning to the EPZ to fulfill relocation requirements will be equipped with Category A dosimetry and receive a radiological briefing.*

Capability Target 1.3: Protective Action Recommendations *(Vice Sub-Element 2.b.1; 3.e.1)*

Core Capabilities: Operational Coordination; Environmental Response/Health and Safety; Situational Assessment; Planning
Recommended Evaluation Frequencies: Biennially
Recommended Assessment Activities: Biennial exercise only
Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (D.4, J.7, J.8, J.8.b, J.9, and O.1)
Intent: The capability to use dose assessment and field data, compare this data to the PAGs, and choose among a range of protective actions those most appropriate in a given emergency.

Demonstration and Evaluation Guidance:

Plume

1. Select and implement pre-planned precautionary protective actions.
   - Who, by title/position and organization, made decisions to implement any preplanned precautionary protective actions outlined within plans/procedures?
   - What precautionary protective actions were taken? Why?
2. Utilize the methodology in plans/procedures to select among a range of protective actions most appropriate in a given emergency. This could also include the use of preplanned precautionary protective actions contained in plans/procedures.
   - Were differences in dose projection greater than a factor of ten discussed with the licensee? If so, were the differences resolved, and timely and appropriately incorporated into the PAR?
3. Develop PARs.
   - Who, by title/position and organization, developed each PAR?
   - What information (e.g., from the licensee, field monitoring data, release data, meteorological data, etc.) was used to develop each PAR?
   - Were PARs based on the ECL?
   - Were ETEs considered?
   - Were EPA and FDA PAGs considered when making PARs? Were any other criteria, guidance, and/or methodologies used?
   - Were recommendations for KI made and on what were they based?
   - What populations or groups were included in the KI PAR (e.g., general public, institutionalized)?
4. Transmit PARs in a timely manner.
   - Who, by title/position and organization, transmitted each PAR to the decision-makers?
   - Who was the PAR provided to?

Post Plume

1. Assess radiological consequences and provide appropriate PARs for the ingestion exposure pathway.
   - Who had the authority to make PARs for the ingestion pathway?
   - Were precautionary actions (e.g., placing animals on stored feed and water) were considered to protect the ingestion pathway?
   - Did the ORO coordinate on PARs developed for ingestion pathway?
   - What boundaries were recommended for the restricted area? Did this include a recommendation for a buffer zone?
   - Were projected doses considered in developing recommendations for relocation? Were they compared to the EPA PAGs?
   - Were FDA PAGs (DILs as a surrogate) considered when recommending holds or embargos?
   - Were recommendations made for exposure and dose limitations for those temporarily reentering the restricted area?
   - Were recommendations developed to assist decision-makers on relaxing protective actions to allow for return?

   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.

State Negotiated Extent of Play:
If the scenario has no radiological release, or potential of a radiological release, the decision-making process used to make protective action decisions (PADs) can be addressed through an interview at the CRCC if required. *The Commonwealth will, as part of decision making, provide direction to schools and special populations.* *BRP will validate plant dose projections and coordinate resolution of differences if more than a factor of 10.* *The Commonwealth will include Maryland and it's affected counties in the decision-making process, but they may make a decision independent of the Commonwealth's decision.*

Capability Target 1.4: Protective Action Decisions for the Plume Phase *(Vice Sub-Element 2.b.2; 2.c.1)*
Core Capabilities: Operational Coordination; Environmental Response/Health and Safety; Situational Assessment; Critical Transportation; Planning
Recommended Evaluation Frequencies: Biennially
Recommended Assessment Activities: Biennial exercise only
Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (D.1.b, D.4, J.6, J.7, J.8, J.8.b, J.10, J.10.a, J.10.b, J.11.c-g, and O.1)
Intent: The capability to utilize appropriate factors and necessary coordination in the decision-making process used to make PADs for the public.

Demonstration and Evaluation Guidance:

1. Coordinate and make PADs for members of the general public.
   - Who, by title and organization, made PADs?
   - Did PADs need to be coordinated with other jurisdictions?
   - Did all appropriate OROs communicate and coordinate precautionary protective actions and/or PADs amongst each other? Who was involved?
   - What applicable Federal guidelines were utilized when making PADs?
   - Were precautionary protective actions and/or initial PADs made in a timely manner based on the scenario?
   - What were PADs based on (e.g., ETEs, predetermined actions, information/PARs from the licensee, protective action strategy, ORO assessment of plant status, weather conditions, and/or radiological releases, other incident information, input from appropriate ORO authorities, overall risk assessment of evacuation vs. shelter-in-place, considerations for those with access and functional needs, etc.)?
   - Are any supplemental resources necessary to implement a PAD (e.g., law enforcement, fire service, HAZMAT, and medical resources)? If so, who can request Federal support?
   - Were PADs coordinated with the ICP, if applicable?
   - Were all decisions communicated with all affected locations in a timely manner?
2. Coordinate and make PADs for those with access and functional needs.
   - What factors were considered for PADs made for those with access and functional needs?
   - Were there specific PADs for those with access and functional needs?
   - What was the basis of the PADs for those with access and functional needs?
3. Coordinate and make PADs for students at schools.
   - How did the ORO alert and notify all school systems/districts of emergency conditions?
   - What were protective actions for schools based on?
   - What PADs were made?
   - How were the PADs coordinated?
4. Coordinate and make subsequent or alternate PADs.
   - Were subsequent or alternate PADs made? What were they? On what were they based (e.g., changing metrological conditions, field data, updated dose projections, changes in plant conditions)?
   - Was the process for making PADs during a rapidly escalating situation different?
   - What were subsequent/alternate PADs based on?
5. Coordinate and make decisions on the administration of KI (where applicable) for the public and institutionalized members of the population.
   - What was the KI decision-making process?
   - Did the decision require coordination with assessment and decision-making staff? Was it based on projected thyroid dose compared with the established PAGs?
   - Was there coordination among OROs involved in the decision-making process for KI administration?
   - Was the message content clear on KI instructions?
   - How was KI information provided to those who needed to take it?

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.

State Negotiated Extent of Play:

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

The Commonwealth will include Maryland and it's affected counties in the decision-making process, but they may make a decision independent of the Commonwealth's decision.

Capability Target 1.5: Protective Action Decision Implementation for the Plume Phase *(Vice Sub-Element 3.b.1; 3.c.1; 3.c.2)*
Core Capabilities: Operational Coordination; Public Information and Warning; Environmental Response/Health and Safety; Critical Transportation; Health and Social Services; Housing; Natural and Cultural Resources; Planning
Recommended Evaluation Frequencies: Biennially
Recommended Assessment Activities: Exercise; Drill
Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (A.4, C.2.a, G.1, J.11, J.11.a, J.11.b, J.11.c, J.11.e, J.11.g, and O.1)
Intent: The capability to implement precautionary protective action and/or PADs, including evacuation and/or sheltering, for all populations within the plume and ingestion exposure pathway EPZs. The populations include those with access and functional needs, students, and institutionalized individuals.

Demonstration and Evaluation Guidance:

1. Implement PADs, ensuring communication and coordination with all appropriate jurisdictions.
   - Were resources identified and utilized effectively?
   - Did OROs communicate and work together in an effective manner?
   - What type of coordination occurred on the implementation of protective actions?
   - Was the public kept informed and was the information provided relevant?
   - Were PADs implemented as directed?
   - What types of populations are in the plume exposure pathway EPZ (e.g., institutionalized, access and functional needs, non-English speaking, etc.)? Who is responsible for notifying each, and at what point during the incident?
   - Were there any gaps in resources identified? If so, how were they addressed?
2. Assist those with access and functional needs during the implementation of PADs.
   - What time was the order received for those with access and functional needs?
   - Were the facility/facilities receiving those with access and functional needs listed in the plans?
   - How were individuals with services animals addressed
3. Communicate, coordinate, and implement protective actions for schools.
   - What school districts are located within the plume exposure pathway EPZ?
   - Who notifies school districts? How?
   - What was the protective action that the school took?
   - With regard to processing students, faculty, and staff, what sort of PADs were made?
   - At which ECL were the school districts notified?
   - If students were moved, which reclamation centers were they sent to? Which is the host school?
   - How were parents and/or guardians notified?

- Are there schools located outside the plume exposure pathway EPZ that have students living within the EPZ? What arrangements are made for those students?
- What type of transportation was provided to the students (e.g., bus, etc.)?
- Who notifies the bus drivers?
- Were there adequate buses available? And how do they communicate with the school?
- Do the bus drivers know where to take the students? Are they trained on what to do?
- Was the school evacuated during the plume? What means of monitoring and decontamination were used?

4. Communicate with transportation officials.
   - What transportation needs or resources were required?
   - Was a list of the transportation providers available?
   - Were transportation providers contacted?
   - How were needs for transportation-dependent individuals met?
   - Were designated pick-up points used?
5. Identify evacuation routes for the general public.
   - What evacuation routes were selected?
   - Were the direction of the wind/plume and/or other hazardous conditions considered in determining which evacuation routes were used?
   - How was this information communicated to the media and the public?
   - How were alterations to the pre-designated routes communicated to the media and the public?
   - Was the facility evacuated during the plume?
6. Make KI available to both institutionalized persons and the general public, in accordance with plans and procedures.
   - How was the decision to take KI disseminated to the public and institutionalized persons?
   - Did the ORO provide KI to the general public and institutionalized persons? If so, how was it distributed?
   - What quantities of KI are available?
   - Where is KI stored?
   - What dosages of KI are available?
   - What is the expiration date of KI? If there is an extended policy, where is the letter certifying the extension?
   - Did the ORO ensure that the KI is stored in a temperature-controlled facility?
   - What information was provided to the general public with regard to KI?
   - What instructions were provided for the use of KI?
   - Did the instructions include dosages and frequency to take KI?
   - Did the instructions include contradictions and side effects of using KI? How was it explained?
   - How was KI ingestion documented for institutionalized persons?
   - Did staff maintain lists of the institutionalized individual who ingested KI?

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.

State 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, verification of lot numbers, and expiration dates. 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. All personnel staffing the centers shall be issued a simulated PRD and its use explained to the evaluator. Actual PRDs will be available for evaluator inspection.

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

The names, locations, and contact information of identified individuals with access/functional needs are maintained on a list at their respective municipal EOC (based upon residential jurisdiction). Copies of these lists will not be provided to the evaluators; however, evaluators will be allowed to inspect the lists during the exercise.

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

Initial contact, by the County, with special populations (hospitals, nursing homes and county correctional facilities) will be actual (One actual call required for each type – hospitals, nursing homes, and correctional facilities if located in the Emergency Planning Zone). 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.

School students will not be involved during the exercise. Actions and activities associated with the demonstration of Capability Target 1.5 will be limited to the School District Administration key personnel, evaluated schools, and the County. Evacuation of students will be conducted through an interview process with School District personnel or the building principal.

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

Risk County school plans <u>do not</u> require communications between the school and vehicles. Bus drivers are not considered emergency workers and therefore do not require dosimetry unless returning to the EPZ to fulfill relocation requirements.

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.

Capability Target 1.6: Protective Action Decisions for the Post-Plume Phase *(Vice Sub-Element 2.d.1, 2.e.1)*
Core Capabilities: Operational Coordination; Environmental Response/Health and Safety; Situational Assessment; Critical Transportation; Housing; Planning
Recommended Evaluation Frequencies: At least once every 8-years
Recommended Assessment Activities: Exercise; Drill
Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (J.12, J.14, J.14.a-f, M.1, M.1.b, M.4, M.5, M.6, M.7, M.8, and O.1)
Intent: The capability to assess the radiological consequences for the ingestion exposure pathway and post-plume phase, relate them to the appropriate PAGs, and make and coordinate timely, appropriate PADs to mitigate exposure.

Demonstration and Evaluation Guidance:

1. Make post-plume phase decisions in a timely manner.
   - Who has the authority to make ingestion exposure pathway decisions?
   - Who has the authority to make decisions for relocation, reentry, reoccupancy, or return?
   - What Federal guidance was utilized in the decision-making process?
   - What additional resources, if any, were requested or anticipated?
   - Were there any precautionary protective actions for the ingestion exposure pathway considered prior to analytical data?
   - Did ingestion exposure pathway assessment include analysis of water, food, and release characterization?
   - What times were decisions regarding the ingestion exposure pathway made, including precautionary protective actions?
   - How were boundaries of temporary embargo zones identified?
   - How were the boundaries of the deposition footprint determined (e.g., field and/or aerial measurements, deposition projections or a combination of sources)?
   - Were crops grown in affected areas identified? Was there a determination on how crops would be harvested or tracked?
   - How were water supply sources identified?
   - Were sample results obtained from specified labs? Were dose assessments based upon sample results? Were locations plotted on a map to identify areas that exceed PAGs?
   - What watershed and agricultural data was used to make decisions?
   - Did ANI participate, and did they address compensation of loss?
2. Make relocation decisions for the post-plume phase in a timely manner.
   - How were integrated doses in contaminated areas estimated? Were they compared to the PAGs?
   - How were the areas to be restricted identified/determined? What factors were used to make the decision (e.g., the mix of radionuclides in deposited materials, calculated exposure rates vs. the PAGs, field samples of vegetation and soil analyses, etc.)?
   - Was the optional approach (230 μR/hr) to determine the restricted area boundary utilized?
   - How was access to evacuated and restricted areas controlled? What agencies have that responsibility?
   - How was the area of interest identified?
   - If aerial measurements were used, what method or procedure will be used to identify the area of interest that is below the detection limit of the aircraft?

- How did the ORO relocate members of the evacuated public who lived in areas that now have residual radiation levels in excess of the PAGs?
- How did the ORO determine the area(s) to be restricted?
- What resources are available for providing medical and social assistance for relocated individuals?

3. Make reentry decisions for the post-plume phase in a timely manner.
   - What was the coordinated strategy for authorized reentry of individuals to the restricted zone? What was considered when forming the strategy (e.g., established exposure limits, maintenance of essential services and/or property, security, retrieval of possessions, etc.)?
   - How did the ORO determine location of control points, who should be allowed to re-enter the restricted zone, and what provisions were made to determine and control their exposure?
   - How did the ORO provide for exit from the restricted area, including monitoring of persons, vehicles, and equipment?
   - What were the exposure limits, including the time period over which the dose would accumulate?
4. Make return decisions for the post-plume phase in a timely manner.
   - What were the return boundaries based on? (e.g., political boundaries, physical boundaries)
   - Was return permitted to the boundary of the restricted area or was a buffer zone established?
   - Did decision-makers consider restoration of services for areas where return was allowed? (e.g., medical facilities, schools, utilities, roads, and intermediate housing).
5. Make re-occupancy decisions for the post-plume phase in a timely manner.
   - What considerations are made for reoccupancy?
   - What factors were taken into account to consider reoccupancy?
   - What community organizations were part of the decision-making process?
   - What instructions were provided to the population allowed to reoccupy areas?
   - Were any additional actions necessary for populations to reoccupy an area? (e.g., washing down buildings, restricting use of backyard produce gardens)
6. Coordinate PADs as appropriate.
   - What arrangements were made to coordinate potential decisions?
   - How were decisions coordinated internally and with other jurisdictions?
   - How were decisions communicated?

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.

State Negotiated Extent of Play:
This sub-element will not be evaluated during this exercise.

Capability Target 1.7: Protective Action Decision Implementation for the Post-Plume Phase *(Vice Sub-Element: 3.a.1, 3.d.1, 3.e.1, 3.e.2, 3.f.1, 5.b.1)*
Core Capabilities: Operational Coordination; Public Information and Warning; Environmental Response/Health and Safety; Critical Transportation; Health and Social Services; Housing; Natural and Cultural Resources; Planning
Recommended Evaluation Frequencies: Biennially
Recommended Assessment Activities: Exercise; Drill

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (C.2, J.12, J.14, J.14.a-f, M.1, M.1.b, M.4, M.5, M.6, M.7, M.8, and O.1)
Intent: The capability to implement and coordinate PADs to mitigate exposure and address long-term radiological consequences.

Demonstration and Evaluation Guidance:

1. Communicate and implement protective actions for agribusinesses, such as dairy farms, meat and poultry producers, fisheries, fruit growers, vegetable growers, grain producers, food processing plants, and water supply intake points.
   - How were agribusinesses notified of the PADs?
   - What coordination and communications among organizations responsible for implementing protective actions occurred? How were changes and developments communicated?
   - Were precautionary protective actions taken to prevent contamination?
   - Were Federal and other resources identified that will assist with determination and implementation of ingestion exposure pathway protective actions?
2. Formulate protective action information (e.g., brochures, email, text message, etc.) for the general public and food producers and processors.
   - Were there instructions in the protective actions provided on what foods or crops were being affected?
   - Were protective actions clearly provided and were maps provided identifying the specific areas in which to implement the protective actions by the decision-makers?
   - Were reproduction-ready information and instructions to pre-determined individuals and businesses available for production and distribution (obtain copies of available information)? Was the information on the handouts current?
3. Control, restrict, or prevent distribution of contaminated food by commercial sectors, ensuring communication and coordination with agencies responsible for enforcing food controls.
   - What were the state/local requirements to implement embargos or condemnations?
   - Who delivered condemnation or embargo notices to agribusinesses?
   - How were necessary legal notices delivered?
   - Did the ORO use Federal resources as identified in the National Response Framework Nuclear/Radiological Incident Annex, if needed?
   - What coordination and communications among organizations responsible for implementing protective actions occurred?
   - What measures were taken and what strategies were developed by the ORO to implement protective actions for general public and for food producers in the ingestion exposure pathway EPZ, including preventing distribution of potentially contaminated food?
   - Was there current information on the locations of permanent agribusiness facilities available? From what source was this information obtained?
   - In addition to the location of agribusiness sites, what other information (e.g., name and address of owner) was available?
   - Was there current information on harvest times available? From what source was this information obtained?
   - Was a plan developed to monitor transportation routes out of the affected areas and to monitor and sample foods on vehicles leaving the area?
   - Who is responsible to monitor and sample foods on vehicles and where will they be located?
   - Where or how were condemned food products taken for disposal?

4. Communicate instructions to the public regarding relocation decisions and intermediate-term housing for relocated persons.
   - What coordination and communications among organizations responsible for implementing protective actions occurred?
   - How were decisions and instructions for relocation communicated to organizations and the public?
   - Was a monitoring and decontamination location included in the information provided to the public?
5. Coordinate and implement decisions concerning relocation, including short- and/or long-term relocation of evacuees.
   - What coordination and communications among organizations responsible for implementing protective actions occurred?
   - How did the ORO coordinate and implement decisions concerning relocation of individuals from now-restricted areas?
   - What were the provisions of short-, intermediate-, and long-term relocation of evacuees from now-restricted areas?
   - Was the ORO prepared to provide housing?
   - What were the arrangements made to relocate those displaced as a result of contamination? What provisions were made for their care and support?
   - How were transportation-dependent evacuees transported from the restricted zone if they had not been previously evacuated? What transportation was provided? How was it communicated?
6. Control reentry and exit of individuals who are authorized by the ORO to temporarily reenter the restricted area.
   - What coordination and communications among organizations responsible for implementing protective actions occurred?
   - What coordination and implementation of decisions for temporary reentry of individuals to restricted areas occurred?
   - What instructions/information were provided prior to reentry (e.g., map and plots of radiation exposure rates, advice on areas to avoid, associated time frames, etc.)?
   - How were those individuals permitted temporary reentry to restricted areas protected from unnecessary radiation exposure?
   - Were DRDs and PRDs assigned for emergency workers and individuals permitted temporary reentry to a restricted area? What information was provided regarding dosimetry use?
   - Were persons reentering escorted by someone trained in the use of dosimetry?
   - What were the procedures for exit from the restricted area(s) emergency workers and individuals?
   - What were the procedures for exit from the restricted area(s) for vehicles and other equipment?
   - How were dosimetry and exposure record handled upon exit from the restricted area(s)?
   - Was monitoring and decontamination conducted at the exit from the restricted area or at a separate center?
   - How were individuals transported into and out of the restricted area?
7. Implement policies concerning return of members of the public to areas that were evacuated during the plume phase.
   - What coordination and communications among organizations responsible for implementing protective actions occurred?

- How were services and facilities (e.g., utilities, food store/restaurants, hospitals, schools, etc.) that require restoration within a few days identified and prioritized?
- What resources were available to facilitate restoration?
- Was implementation of the decision to return supported by restoration of services and facilities?
- Were hot spots decontaminated if necessary?

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.

State Negotiated Extent of Play:
This sub-element will not be evaluated during this exercise.

OBJECTIVE 2 - Exposure Control

Capability Target 2.1: Emergency Worker Exposure Control Decision-Making Process *(Vice Sub-Element: 2.a.1)*
Core Capabilities: Operational Coordination; Environmental Response/Health and Safety; Situational Assessment; Planning
Recommended Evaluation Frequencies: Biennially
Recommended Assessment Activities: Exercise; Drill
Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (C.2.c, H.11, K.2, K.2.b, K.3, K.3.a, M.1.b, M.8, and O.1)
Intent: The capability to assess and control the radiation exposure and dose received by emergency workers and utilize a decision-making chain to authorize emergency worker exposure limits to be exceeded for specific missions.

Demonstration and Evaluation Guidance:

1. Control emergency workers' exposure and dose, including offsite workers performing duties onsite.
   - Who was responsible for managing emergency workers' exposure and dose?
   - Were projected doses and likely exposure rate patterns considered before dispatching workers?
   - Were any of the following considered: alternate entry and exit routes; potential changes to meet conditions; area or roads to avoid; what to do in the event of equipment or vehicle failure; and previous doses?
   - Were safety issues, supplemental to radiation, considered for the locations of field teams, the ICP, and other appropriate personnel?
   - How did incoming mutual aid, including Federal or private resources, obtain dosimetry, radioprotective drugs, and subsequent just-in-time training?
   - Who briefed emergency workers? Did the briefing include the following:
     - Ensuring dosimetry are zeroed or initial reading is recorded.
     - Frequency to read and record dosimeters.
     - The process of reporting exposures.
     - Proper placement of dosimeters.
     - Proper use of PRDs.
     - Ingestion and documentation of radioprotective drugs.
     - Potential adverse effects of radioprotective drugs.
     - The location to report to for monitoring and decontamination.
2. Maintain record of dose as a result of exposure.
   - How were exposures and subsequent doses reported from the field documented?
3. Authorize exposures and dose in excess of identified limits.
   - Who authorized emergency workers to receive exposure in excess of identified limits?
   - What were the identified limits?
   - How was this authorization documented?
4. Process for considering occupational exposures and to authorize individuals to receive doses in excess of occupational dose limits.
   - Was occupational exposure considered for those working during the emergency, in both the intermediate and late phases of a NPP accident?
   - Who authorized occupational doses in excess of Federal limits?
5. Determine a correction factor for DRD-based isotopic release mixture.

- What approach was used to correct DRD readings to TED (e.g., dosimeter corrections factors)?

6. Control exposure and dose for temporary reentry of emergency workers, or members of the public, to restricted areas.
   - What provisions were available for controlling exposure and dose rates for temporary reentry to restricted areas?
   - How were controlled exposure and doses documented for those reentering restricted areas?
7. Determine the need to authorize radioprotective drugs using projected thyroid doses and field measurements. Projections are compared to previously established PAGs.
   - Who authorized emergency workers to take radioprotective drugs?
   - When was the decision made to authorize emergency workers to take radioprotective drugs?
   - Was the decision to use radioprotective drugs based on projected thyroid doses?
   - Were projected thyroid doses compared to establish PAGs?
   - Did the decision-making process for use of radioprotective drugs include close coordination with assessment and decision-making staff?
   - How was the decision to authorize radioprotective drugs communicated to emergency workers?
8. Adequately protect members of the public from radiological exposure and control dose for those who are authorized to temporarily reenter a restricted area.
   - What provisions were there for dosimetry and contamination control for emergency workers and members of the public temporarily reentering a restricted area?
   - What exposure rates or limits were established for emergency workers and members of the public temporarily reentering a restricted area?
   - How were exposure and doses documented and controlled for emergency workers and members of the public temporarily reentering restricted areas?
   - What was the process for decontamination, collection of dosimetry, and recording exposures for emergency workers or members of the public exiting the restricted area following temporary reentry?
   - How was contamination monitoring and decontamination conducted for those exiting a restricted area?

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

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

Capability Target 2.2: Emergency Worker Exposure Control Management *(VICE Sub-Element 3.a.1)*
Core Capabilities: Operational Coordination; Environmental Response/Health and Safety; Planning
Recommended Evaluation Frequencies: Biennially
Recommended Assessment Activities: Exercise; Drill
Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (C.2.c, H.11, H.11.b, K.2.b, K.3, K.3.a, M.1.b, and O.1)
Intent: The capability of emergency workers to manage dose and exposure, use equipment (e.g., dosimetry, radio protective drugs), and identify procedures to monitor their exposure and dose, including following procedures to obtain authorization to receive emergency exposures in excess of the PAGs.

Demonstration and Evaluation Guidance:

1. Maintain an appropriate inventory of DRDs that are leak-tested or current in calibration.
   - What types of DRDs were used?
   - Were they consistent with the plans?
   - Were they current in calibration or leak test?
2. Maintain an appropriate inventory of PRDs.
   - What type of PRDs were used?
   - Was the inventory of available PRDs sufficient for the number of workers?
   - How many PRDs were available?
3. Retain an adequate supply of radioprotective drugs.
   - Was there an adequate supply of radioprotective drugs?
   - How many doses of radioprotective drugs were available?
   - Was the quantity of radioprotective drugs available sufficient for the number of individuals needing to take it?
4. Adequately distribute appropriate DRDs and PRDs.
   - Was dosimetry distributed in a timely manner?
   - Was dosimetry distributed appropriately to read identified exposure limits?
   - Did workers receive personal dosimetry or group dosimetry?
5. Adequately distribute radioprotective drugs to emergency workers.
   - Were radioprotective drugs distributed in a timely manner?
6. Record and report exposures in the field.
   - Did workers read and record dosimetry on a regular basis?
   - At what frequency were readings recorded?
   - To who were the readings reported?
   - Who briefed emergency workers? Did the briefing include the following:
     - Ensuring dosimetry are zeroed or initial reading is recorded.
     - Frequency to read and record dosimeters.

- The process of reporting exposures.
- Proper placement of dosimeters.
- Proper use of PRDs.
- Ingestion and documentation of radioprotective drugs.
- Potential adverse effects of radioprotective drugs.
- The location to report to for monitoring and decontamination.

7. Implement decisions to administer radioprotective drugs.
   - What was the quantity of the inventory of radioprotective drugs and the expiration date?
   - Was the available quantity of radioprotective drugs sufficient to support the number of emergency workers?
   - Was the supply of radioprotective drugs stored according to manufacturer recommendations?
   - How was the ingestion of radioprotective drugs documented?
   - Did emergency workers have a basic knowledge of procedures for ingesting and recording the use of radioprotective drugs, even if the scenario did not drive its use?
   - How were records of exposure and ingestion of radioprotective drugs maintained?
   - Did plans/procedures include a mechanism for identifying an emergency worker who has declined to take radioprotective drugs in advance? If so, how was this documented?
8. Report to individual responsible for managing exposure and dose when limits are reached.
   - What was the identified exposure limit?
   - What was the dosimeter correction factor and how was it communicated to emergency workers?
   - What is the process for receiving approval for exceeding exposure limits and dose limits?
   - Who authorized emergency workers to exceed limits or replace a worker who has reached exposure limits?
   - Who coordinated with offsite emergency workers who were performing duties onsite?
9. Implement exposure control decisions to members of the public from radiological exposure and control dose for those who are authorized to temporarily reenter a restricted area.
   - What exposure control decisions were implemented to members of the public? What was the control dose for those who were authorized to temporarily reenter a restricted area?

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

State Negotiated Extent of Play:
Radiological briefings will be provided to address exposure limits, procedures to replace those approaching limits, and how permission to exceed limits is obtained from the county. Emergency workers will also be briefed on when to take KI and on whose authority. Distribution of KI will be simulated. *OROs should also demonstrate the use of all applicable dosimetry forms to emergency workers. The completion of one "Dosimetry-KI Form" will be demonstrated.* *At any time, players may ask other players or supervisors to clarify radiological information.* *The Staging Area Supervisor will ensure that emergency workers under their control receive a radiological briefing, are equipped with radiological dosimetry and are practicing emergency worker exposure control. Dosimetry will be distributed to these initial deployment personnel as soon as reasonably possible.*

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

Emergency workers who are assigned to low exposure rate areas, (e.g., counting laboratories, emergency operations centers, and communications centers) may have individual direct reading dosimeters or they may be monitored by dosimeters strategically placed in the work area. In Pennsylvania, this will be accomplished through the use of an area kit. The area kit process is explained in State, County and Municipal Plans. For this exercise, a dedicated Fly Away Kit will be positioned for use at ICP/TOC/Staging (maintained by PSP York Barracks). For purposes of demonstration a drill kit will be utilized. The drill kit shall contain appropriate PPE for the mission per Annex E.

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

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

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

All locations that have dosimetry equipment allocated as indicated within their Radiological Emergency Response Plan (RERP). Chester and York County have dosimetry and KI stored at the municipality. Lancaster has dosimetry / KI stored at County EMA and can be seen and reviewed at the county location. During a real event the dosimetry/KI would be delivered to the municipality. Sealed boxes and KI will not be opened. Inventory sheets will be available.
b
Simulation PRDs with mock serial numbers will be used for the exercise.

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. All staff shall be issued a PRD (simulated)and explain its use to the evaluator. Actual PRDs will be made available to the evaluator.

OBJECTIVE 3 - Alert and Notification

Capability Target 3.1: Communications *(Vice Sub-Element: 1.d.1)*
Core Capabilities: Operational Communications; Operational Coordination; Situational Awareness; Planning
Recommended Evaluation Frequencies: At every assessment activity
Recommended Assessment Activities: Exercise; Communication Drill (N.4.e)
Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (E.1.a, E.3, F.1, F.1.a, F.1.b, F.1.c, F.3, and O.1)
Intent: The capability to provide and maintain reliable communications with emergency personnel.

Demonstration and Evaluation Guidance:

1. Utilize communication systems that are fully functional, continuously available, and redundant.
   - What types of communications system(s) and method(s) were available? Which were demonstrated?
   - Was the communication system(s) fully functional?
   - Did personnel demonstrate familiarity of use with each system/method?
   - Was a communications check with other jurisdictions, field teams, and/or other support organizations required and completed?
2. Maintain periodic test results and corrective actions on a real time basis.
   - How were test results and corrective actions tracked in real time?
   - Was documentation of the test results and/or corrective actions made available?
3. Access at least one communication system that is independent of the commercial telephone system.
   - Which communication system(s) available was independent of commercial telephone?
   - Was it able to be accessed/utilized?
4. Manage the communication systems and ensure that all message traffic is handled without delays that might disrupt emergency operations.
   - Were there any delays in message traffic that disrupted emergency operations? If so, how were the delays addressed/mitigated?
5. Identify and address any failures of the systems.
   - Were there any communication failures? If so, how was the failure identified?
   - What actions were taken to correct the failure and/or how was the failure overcome?
   - Did the failure affect overall performance?
6. Transmit, receive, and understand messages (i.e., "content check").
   - Were the messages transmitted/received understood by personnel?
   - What was the message?
   - Was a "content check" (i.e., informational message that could be received during an actual radiological emergency) performed?

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.

State Negotiated Extent of Play:
The plant will communicate to the risk counties and CRCC utilizing the EMNet Communications System (primary) and the commercial telephone system (secondary). Risk and support counties will intercommunicate with the CRCC via the commercial telephone system (primary), SEVAN (secondary), email, and other systems. In the event the plant is unable to contact the CRCC via the Dedicated Automatic Ring Down Telephone, the Power Plant will contact the CRCC via the commercial telephone system. If the plant cannot contact the CRCC, the Power Plant will contact the ***York County EOC,*** *and they will fulfill the role of primary contact until communications with the CRCC can be made.* *The Commonwealth coordinates commonwealth and county response via a phone/internet bridge line. When warranted, siren sounding will be coordinated on the phone/internet bridge line.*

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

Bureau of Radiation Protection Field Teams and R3V will demonstrate two or more forms of communications. BRP is evaluated for this exercise.

Law enforcement staff at the ICP/TOC and Staging Area will demonstrate two methods of communications.

Capability Target 3.2: Alert and Notification of the Public *(Vice Sub-Element: 5.a.1; 5.a.3; 5.a.4)*
Core Capabilities: Public Information and Warning; Planning
Recommended Evaluation Frequencies: Biennially
Recommended Assessment Activities: Biennial exercise only
Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (E.2, E.4, E.5, F.3, and O.1)
Intent: The capability to provide instructions to the public.

Demonstration and Evaluation Guidance:

Alert and Notification System

1. Sequentially provide an alert signal followed by an initial instructional message to populated areas.
   - Who has releasing authority of initial EAS or other notification method messaging?
   - Who made the decision to activate the alert and notification system?
   - What process is followed to activate the system?
   - Who activated the system?
   - What alert method(s) was used (siren-system, tone-alert radio, route alerting, telephone, Telecommunication Device for the Deaf/TeleType [TDD/TTY], etc.)?
2. Alert and notify the general public.
   - Was the same method used for approving and releasing subsequent alert and notification as the initial alert/ notification?
   - What alert method(s) was used (siren-system, tone-alert radio, route alerting, telephone, TDD/TTY, etc.)?
   - What message was sent out? Was it pre-scripted?
   - How often were messages repeated?
   - Conduct initial messaging with, at a minimum, the following four essential elements in the message:
     - Identification of the ORO responsible and the official with authority for providing the alert 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 online information) for use by the general public during an emergency;
     - 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.
3. Identify and address any failures of the system(s) or portion of a system(s).
   - Were there any failures of the system or a portion(s) of the system?

- How were any failures of the system or a portion(s) of the system identified?
- Was the failure attributed to a specific portion of the plume and/or ingestion exposure pathway EPZ or segment of the population? How?
- What alternate means of alert and notification (e.g., simultaneous, or concurrent failure models have overlapping systems which will seamlessly address failures; activation of additional system(s); route alerting; etc.) was utilized for the area of the plume and/or ingestion exposure pathway EPZ or segment of the population affected by the failure(s)? How were the alerts/notifications provided? What was the message?
- Once the failure was identified, what actions were taken?
- If message dissemination is identified as not being accomplished in a timely manner, what was the specific delay? What caused the message to not be provided in a timely manner?

4. Actual testing of the mobile public address system will be conducted at an agreed upon location.
   - What notification methods were tested?
   - How does the notification system deliver messages (e.g., via phone call, text message, and email based on a database of contact information associated with physical addresses)?
   - How, and how often, is the system tested?

EAS

1. Identify the process to activate the EAS.
   - What protocol or system was used to activate the EAS? (i.e., software, NWS, radio station, IPAWS)
   - How long did the process take to activate the system?
   - If NWS or radio station was used, was there verification between the ORO and the broadcast station of the EAS message prior to broadcast?
2. Ensure that updated emergency information is disseminated in a timely manner.
   - Were messages updated to relay the most current information concerning the incident?
3. Ensure that current emergency information is repeated at pre-established intervals.
   - What are the pre-established intervals?
   - How often was information repeated?
4. Identify the process to activate the EAS, to include the process to receive and then broadcast updated information/ messages and verification of the message, if applicable.
   - Did the station have a copy of current plans, procedures, and messages?
   - Did station staff demonstrate the process to broadcast messages?
   - If required, did the EAS station verify who the message came from and that it is the correct message?
   - Was the EAS station kept updated with new information and messages? How?
5. Broadcast the message on a 24-hour basis.
   - What is the 24-hour capability of this location?
   - Is there back-up power supply or is an alternate station used?

Route/Alternate Alerting

1. Complete route alerting, whether because of failure for system/portion of a system or for exception areas, as needed to demonstrate all routes are capable of being run in allotted time. Emphasis on the most challenging routes and demonstration of these routes will be varied from assessment activity to assessment activity. Challenging routes are defined as those that may be difficult to accomplish, such as those that are lengthy or with conditions (physical or otherwise) that may affect the speed and accuracy with which the route can be completed (e.g., traffic patterns and/or capacity, road conditions, etc.).
   - Why was route/alternate alerting initiated?
   - Was this a FEMA-approved exception area?
   - What organization(s) are responsible for providing route/alternate alerting?
   - Under what conditions was route/alternate alerting initiated?
   - Who notified the resources to begin route/alternate alerting? How were they notified?
   - What resources provided route/alternate alerting?
   - How long did it take to complete the route/alternate alerting?
   - How was the message announced? What was the content of the message?
   - For exception area notification, was it completed within 45 minutes of the initial decision by authorized offsite emergency officials to notify the public of an incident?
   - What system was used for exception areas?
   - Who approves the use of the system for alerting exception areas?
   - Who deployed the system for alerting exception areas and what was the process?
   - Can individual sub-areas be activated using the system to alert FEMA approved exception areas?
   - Was a test done or was a previous tests report used as confirmation of operation in alerting exception areas?

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.

State Negotiated Extent of Play:
The Commonwealth of Pennsylvania has implemented a Statewide EAS Control System in cooperation with the Pennsylvania Association of Broadcasters per the State Emergency Communications Committee and Pennsylvania Emergency Alert System State EAS Plan (November 2, 2011). The CRCC (PEMA) is the initiating point for the activation of the EAS. Risk counties have the control equipment for activation of sirens. Coordination will occur between the CRCC and the affected counties with respect to the Alert and Notification System (ANS) process. Sirens will be coordinated, and the sounding simulated at the appropriate time with the simulated activation of EAS taking place approximately three minutes following the simulated activation of the sirens. The process, up to the point of dissemination of the EAS message, will be demonstrated to the evaluator. The EAS will be read and explained to the evaluator, and a copy of the EAS will be given to them. Regular broadcasting will not be interrupted on the EAS Stations. Broadcast of the message(s) or test message(s) is ***NOT*** *required and* ***NOT*** *requested. Counties may elect to simulate county specific supplemental messages to their electronic local media.* *Following the decision to activate the alert and notification system, in accordance with the OROs' plan and/or procedures, ANS activation should be accomplished in a timely manner for primary alerting/notification.* ***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.* *Back-up alert notification of the public due to a simulated siren failure will be demonstrated. (Refer to Attachment A, Section II.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 II.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. For the 2024 Exercise, if the route requires two vehicles to meet the objective of a recommended goal of 45 minutes to complete, then the FEMA evaluator will run a segment with the first vehicle (second vehicle to wait for return of FEMA evaluators), then the FEMA evaluator will run the second segment with the second vehicle. Maps of back-up route alerting will be provided to FEMA in advance of the exercise.* *NOTE: Non-emergency personnel may not be permitted to ride along in emergency vehicles (e.g., fire trucks, police vehicles) during the route alerting demonstration. FEMA evaluators may need to drive in their own vehicles.*

IPAWS may be used, as long as it does not interfere with the required, demonstrated, and evaluated notifications. No notifications to the general public will be made. Alternate methods of alerting will NOT be evaluated.

Capability Target 3.3: Emergency Information and Instructions for the Public and News Media *(Vice Sub-Element: 5.b.1; 3.e.2)*
Core Capabilities: Public Information and Warning; Planning
Recommended Evaluation Frequencies: Biennially
Recommended Assessment Activities: Biennial exercise only
Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (E.2, E.4, E.5, G.1, G.2, G.3, G.3.a, G.4, G.5, and O.1)
Intent: The capability to disseminate emergency information and instructions to the public during all phases of an incident.

Demonstration and Evaluation Guidance:

Plume Phase

1. Deliver coordinated, prompt, reliable, and actionable information in a timely manner.
   - Who approves the message content and authorizes the release of the message?
   - Was messaging coordinated with appropriate Federal, state, local, and tribal stakeholders prior to dissemination?
   - Were methods consistent with an established JIS?
   - How often was emergency information repeated?
2. Provide clear, concise, accessible messaging using plain language.
   - Was language clear, concise, accurate, and delivered in a timely manner?
   - Was the PAD correctly and appropriately reflected?
   - Was the ECL appropriately disclosed and adequately explained?
   - When needed, were familiar landmarks and boundaries to describe protective action areas?
   - Was there a closing statement included in the messaging? If so, what was it? How was it communicated to affected and/or potentially affected populations?
3. Messaging addresses appropriate cultural and linguistic considerations.
   - Is public information required to be available in non-English languages at this location/site? If so, how were messages translated and/or provided?
   - How are those with access and/or functional needs provided with messages and actionable information?
   - Are there any cultural and/or other linguistic considerations relevant for this area? If so, what are they and how were they implemented?
4. Ensure subsequent messaging is consistent with protective actions.
   - Are 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 access and/or functional needs, and public inquiry hotline telephone number) to assist the public in carrying out the PADs provided?
   - Was messaging consistent with protective actions?
5. Update information as the incident progresses, to include validating previously identified protective areas and clearly identifying any new protective action areas, any information that is no longer valid, and any changes to previously provided information (e.g., rerouting of evacuation routes due to impediments, etc.).

- How often was information on the incident progression updated?
- What new protective action areas were identified?
- How was invalid information rescinded?
- How was invalid information updated to reflect any changes?
- Was follow-up and additional messaging coordinated and delivered? How?

6. Respond to media and public inquiries.
   - Were the appropriate PIOs or subject matter experts (SMEs) available?
   - How did PIOs or SMEs gather and verify information?
   - How did PIOs or SMEs coordinate information with appropriate personnel for approval?
   - How was exchange, discussion, and coordination of information among PIOs or SMEs conducted?
   - Were media briefings conducted? If so, were they frequent, timely, and was information disseminated accurately?
   - Were media and public inquires handled and addressed appropriately?
   - Were trends and/or rumors captured and addressed in media releases?

Post-Plume Phase

1. Rapidly disseminate of ingestion exposure pathway information to predetermined individuals and businesses.
   - Where there any delays or reasons why messages were not timely?
2. Provide information to the public that addresses temporary reentry to a restricted area, permanent relocation from areas not evacuated, and return to formerly restricted areas will be communicated.
   - What sort of information was provided to the public addressing temporary reentry into a restricted area, permanent relocation of areas not evacuated, and return to formerly restricted areas? How was the information communicated?

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.

State Negotiated Extent of Play:
*Subsequent emergency information and instructions should be provided to the public and the media in a timely manner. <u>This will **NOT** be subject to specific time requirements.</u> Minimum of one media briefing will be demonstrated in each risk county and at the CRCC JIC.* *The Commonwealth, 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"). The Commonwealth and counties will receive approximately ten public inquiry calls from the State Exercise Cell assigned this responsibility. The Commonwealth and 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.*

OBJECTIVE 4 - Detect, Measure, Sample, Analyze, and Assess

Capability Target 4.1: Field Monitoring Teams Management *(Vice Sub-Elements: 4.a.2)*
Core Capabilities: Operational Coordination; Environmental Response/Health and Safety; Planning
Recommended Evaluation Frequencies: Biennially
Recommended Assessment Activities: Exercise; Drill
Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (H.11, H.13, I.5, I.6, I.9, I.10, M.7, M.8, and O.1)
Intent: The capability to provide overall management of FMTs to direct movements and measurements to characterize the plume and its impacts.

Demonstration and Evaluation Guidance:

1. Brief FMTs on predicted plume location and direction, plume travel speed, equipment operational checks, background measurement, and exposure control procedures before deployment.
   - What instructions or assignments were given to the FMT?
   - Who briefed the FMTs prior to deployment? Was the pre-deployment briefing adequate? Did it address predicted plume location and direction, plume travel speed, and exposure/contamination control procedures before deployment?
2. Direct the FMTs to monitoring locations, predesignated points or otherwise, at times and locations sufficient to characterize the plume.
   - Who controlled the FMTs' movement and determination of sample location?
   - Were FMTs directed to locations at times sufficient to characterize the plume?
   - What approach was used to select appropriate sampling locations, pre-designated sampling points, or plume traverse (while maintaining specified exposure limits)?
   - What time were assignments completed?
   - During a HAB incident, were there provisions for the field team management to inform Incident Command of FMT activities and location? Was this activity observed?
3. Obtain peak plume measurements from FMTs.
   - Which agency's (i.e., ORO, licensee, or other) FMTs were assigned the responsibility of finding the plume edge, obtaining peak measurements in the plume, and obtaining maximum radiation readings in the downwind areas (e.g., centerline measurements)?
4. Direct FMTs to collect air samples at locations and times sufficient to characterize the plume.
   - How were locations at which to collect air samples selected?
   - Were the samples taken sufficient to characterize the plume?
5. Keep Incident Command informed of FMTs activities and location(s) during a HAB incident or other instances when an ICP or other may be in use.
   - How were activities and locations communicated with Incident Command during a HAB incident?

6. Coordinate and share information amongst all FMTs (licensee, Federal, state, and local).
   - Did all FMTs (i.e., licensee, Federal, and ORO) share and coordinate plume measurement information?
   - Did the ORO coordinate or use any resources from other agencies, e.g., Federal, mutual aid, or compact?
7. Coordinate sample analysis from field to those responsible for assessing radiological data.
   - How was field data coordinated with dose assessors or those responsible for assessing radiological data?
8. Coordinate transfer of sample media to locations and organizations responsible for assessing radiological data.
   - Did coordination concerning transfer of samples, including a chain-of-custody form(s), to a radiological laboratory or laboratories occur?
9. Assist with development and modification of sampling plans, as appropriate.
   - How were sampling plans developed and maintained?

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.

State Negotiated Extent of Play:
Department of Environmental Protection (DEP), Bureau of Radiation Protection (BRP) field teams are equipped with the necessary instrumentation and supplies. FEMA evaluators will meet the field teams at the Department of Environmental Protection's South-Central Office located at 909 Elmerton Avenue at 1:00 p.m. on April 16, 2024, to evaluate instrumentation checks, equipment inventory verification and equipment operability check. *Field Team Control will be performed within or near the 10-mile EPZ using the DEP R3V. During the exercise, the field teams will be directed to take measurements in locations to provide information sufficient to characterize the plume and impacts. If necessary, field teams will be provided with inject(s) for additional demonstration. The additional inject(s) will have no impact on the CRCC's activities. In addition to field team measurements, remote detectors may be placed by the field teams near the expected plume pathway. These detectors may transmit data to the R3V. Field teams will follow As Low As Reasonably Achievable (ALARA) principles in the deployment of these detectors. An air sample will be conducted during field sampling – Air sample team should inform evaluator of location sample should be conducted but move to a safe location for actual set up.* *Field teams will be evaluated by FEMA.*

Capability Target 4.2: Plume Phase Measurements and Sampling *(Vice Sub-Element: 4.a.3)*
Core Capabilities: Environmental Response/Health and Safety; Planning
Recommended Evaluation Frequencies: Biennially
Recommended Assessment Activities: Exercise; Environmental Monitoring Drill (N.4.d)
Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (H.9, H.11, H.11.a, H.11.b, H.12, H.13, I.2, I.5, I.6, I.7, I.8, I.9, I.10, and O.1)
Intent: The capability to make and report measurements of ambient radiation.

Demonstration and Evaluation Guidance:

1. Maintain emergency equipment including calibration and operational checks according to manufacturer's specifications or per national standards.
   - Did each FMT perform an operational check on each radiation survey instrument, including a source-response check which is compared to a known range of readings to confirm the instrument can properly measure radiation?
   - Did each FMT obtain a background radiation measurement with each radiation survey instrument before entering the affected area?
2. Maintain inventory for emergency kits.
   - Were kits inventoried prior to deployment?
   - Did kits contain supplies and equipment sufficient to support field team operations?
3. Operate and monitor radiation survey instruments to detect changes in radiation exposure rate while moving and in stationary positions.
   - Did FMTs operate and monitor survey instruments continuously and in a way that prevented inadvertent exposure to an active plume?
4. Use appropriate contamination control and PPE.
   - Did field teams use appropriate contamination control techniques?
   - What PPE was used?
   - How was instrumentation protected from contamination?
5. Be in location(s) at the appropriate time(s) to detect and characterize the active release (plume).
   - What agencies participated as part of the FMT?
   - Were field teams moved to potential locations where the plume was predicted to pass?
6. Obtain peak plume measurements either directly or from licensee field teams.
   - Were peak plume measurements obtained? If so, from where?
7. Correctly interpret survey instrument readings to determine submersion in the active plume.
   - What exposure rate did FMTs use to determine the possible edge of the plume?
   - Did FMTs compare waist high open-window and closed-window exposure rates to determine submersion in an active plume?
   - Did FMTs take samples? What samples were taken?
   - Did field team record and report area surveys (ambient exposure rates) at multiple locations?
8. Collect representative air samples in the active plume on particulate media (e.g., glass or paper filter) and iodine selective media (e.g., silver zeolite cartridge).
   - Was air sampling accomplished at a flow rate between 1.5 cfm and 2 cfm to maintain maximum collection efficiencies of the particulate and iodine sampling media?
   - Was the ambient exposure rate monitored to note changes during air sampling? How often was the ambient exposure rate noted (e.g., beginning, mid-sampling, end-of-sampling, or continuously monitored)?
9. Handle sample media and equipment to avoid sample cross-contamination, contamination of equipment and personnel contamination.
   - What methods were used to prevent sample cross-contamination?
   - How were instruments and equipment used for sample counting handled to prevent spread of contamination?
   - How was radiologically contaminated waste handled?
10. Determine an appropriate low background location to count sample media.
    - What was the background counting rate in the low background location selected to count the samples in the field?
11. Count iodine and particulate media using appropriate and effective instrumentation and counting geometries or have samples analyzed by a supporting laboratory within four hours.
    - What instrument was used to count the media in the field?

- What means were used to ensure an effective, repeatable counting geometry?
- If samples were not counted in the field, what was the dedicated transportation means that ensured samples were analyzed by the supporting laboratory within four hours?

12. Report to field monitoring team manager all survey and counting results in format and units suitable for use by the organization's dose assessor.
    - Were results of surveys and, if taken, field results from air samples documented? How were they transmitted?
13. Procedures, qualified collection and counting efficiencies, and calculations are capable of detecting airborne radioactive iodine concentrations as low as 10-7 μCi/cc.
    - Was the flow rate, sample volume, counting efficiencies, and appropriate calculations performed to prove the ability to detect concentrations as low as 10-7 Ci/cc?
14. Preparation of packaging, sample identification, and chain-of-custody forms ensures integrity of samples throughout transportation and transfer.
    - Was packaging and handling adequate to prevent cross-contamination?
    - Was sample identification and chain-of-custody completed to maintain integrity of the samples?

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.

State Negotiated Extent of Play:
Measurements will be made by the DEP/BRP, in accordance with the State Annex E, Appendix 6, BRP Technical Assessment ad Protective Actions, and the BRP Standard Implementing Procedures (IPs). Two mobile monitoring teams from the BRP South Central Regional Office will demonstrate ambient radiation monitoring and radioiodine, and particulate sampling. Field teams will be equipped with appropriate dosimetry and KI. Field teams will be evaluated by FEMA. Each team will be directed to monitoring locations and perform actual radiation measurements at each location. Measurements may consist of truck installed radiation monitor or hand-held radiation instruments. Field teams will take simulated air samples, as directed and relay information to the R3V. In place of silver zeolite cartridges, field teams will simulate using charcoal cartridges during the exercise. All measurements and data will be immediately forwarded to the R3V. All field team data that is forwarded to the R3V, can be entered into the RadResponder Network either by hand-held mobile devices (FMTs) or laptop computer (R3V). That data will be maintained for further evaluation and assessment. *FEMA evaluators will meet the field teams on April 16, 2024, at 1:00 p.m. at the Department of Environmental Protection Office at 909 Elmerton Ave Harrisburg, PA. At this time, FEMA evaluators are permitted to ride along in the BRP vehicles.*

Capability Target 4.3: Post-Plume Phase Measurements and Sampling *(Vice Sub-Element: 4.b.1)*
Core Capabilities: Environmental Response/Health and Safety; Planning
Recommended Evaluation Frequencies: At least once every 8-years
Recommended Assessment Activities: Exercise; Environmental Monitoring Drill (N.4.d)
Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (H.11, H.11.a, H.11.b, H.12, H.13, I.2, I.5, I.6, I.8, M.7, and O.1)
Intent: The capability to report measurements of ambient radiation and collect environmental, food, and drinking water samples for laboratory analyses that support decision-making.

Demonstration and Evaluation Guidance:

1. Maintain and prepare instruments, equipment, and supplies for use, including performing pre-operational checks of radiation survey instruments.
   - Did each FMT perform an operational check on each radiation survey instrument, including a source-response check which is compared to a known range of readings to confirm the instrument can properly measure radiation?
   - Did each FMT obtain a background radiation measurement with each radiation survey instrument before entering the affected area?
2. Use appropriate contamination control and PPE.
   - What sort of contamination controls and PPE was utilized?
3. Execute the sampling plan.
   - Were samples collected consistent with samples specified in the sampling plan?
4. Collect each type of sample necessary to assess the ingestion exposure pathway and to support reentry, relocation, and return decisions. The types of samples necessary are based on the exercise scenario and may include drinking water, soil, vegetation, milk, crops, or other agriculture samples.
   - Which types of samples did FMTs collect?
   - Were samples collected at the locations identified by the field team manager?
   - Did each FMT follow the appropriate procedure for collecting each type of sample?
5. Obtain and record ambient radiation measurements at each sample location and at other locations, as directed.
   - Was an ambient radiation measurement taken at each sample location?
6. Handle sample media to avoid sample cross-contamination and equipment/personnel contamination.
   - Did each FMT properly package each sample?
   - What precautions were taken to prevent cross-contamination of samples?
   - Did each FMT properly document each sample?
   - Was a chain-of-custody record created?
   - Was each sample assigned a unique identification number?
7. Prepare and package samples appropriately (e.g., geometries specific to those used in the processing samples, including sample identification, and chain-of-custody forms) to ensure the integrity of samples throughout transportation and transfer.
   - Did each FMT properly document each sample, including creating a chain-of-custody record? Was each sample assigned a unique identification number?
   - Were samples collected by the ORO at a central location (e.g., sample control point) or delivered directly to the laboratory?
   - Did sample control point personnel follow appropriate procedures for receiving samples?
   - Were chain-of-custody records properly maintained?
   - How were samples transported to the laboratory?
   - Were any samples identified as having exposure rates or contamination levels too high to be accepted by a particular laboratory? If so, what was done with those samples?

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.

State Negotiated Extent of Play:
This sub-element will not be demonstrated during this exercise.

Capability Target 4.4: Laboratory Operations *(Vice Sub-Element: 4.c.1)*
Core Capabilities: Environmental Response/Health and Safety; Planning
Recommended Evaluation Frequencies: At least once every 8-years
Recommended Assessment Activities: Laboratory Drill (N.4.c)
Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (C.4, H.11, H.11.b, H.13, I.2, I.6, M.7, and O.1)
Intent: The capability to perform laboratory analyses of radioactivity in environmental, food, and drinking water samples to support decision-making.

Demonstration and Evaluation Guidance:

1. Prepare analytical equipment for use, including performing calibrations, quality control checks, and background counts, as appropriate.
   - Was the equipment used calibrated using standards traceable to the National Institute of Standards and Technology (NIST) in the appropriate geometries? Were quality control checks and background counts performed in accordance with procedures?
2. Receive and track samples, including completing chain-of-custody records.
   - Did laboratory personnel follow their procedures for receiving samples?
   - Were samples properly documented, including completing chain-of-custody records?
   - How were samples tracked throughout the analysis process?
3. Prepare and process each type of sample necessary to assess the ingestion plume exposure pathway and to support reentry, relocation, and return decisions. The types of samples necessary are based on the exercise scenario and may include drinking water, soil, vegetation, milk, crops, or other agriculture samples.
   - Which types of samples (e.g., air cartridge and filter, soil, vegetation, water, milk, crops, etc.) did the laboratory have the capability to analyze? What samples were processed during the demonstration?
   - Did laboratory personnel follow their procedures for sample preparation? What measures were taken to control contamination?
4. Analyze samples to determine the concentration of each radionuclide in each sample. Minimum detection limits (MDLs) for various radionuclides must be low enough to support ORO decisions.
   - Did the gamma spectroscopy systems use high-purity germanium detectors or another type? Did the software library include the radionuclides expected to be released during a nuclear power plant incident?
   - Did the laboratory have the capability to analyze samples for strontium-90? If so, how long would that analysis take? If not, did the ORO have plans in place to obtain such analysis?
   - What count times were used? Were the MDLs for various radionuclides low enough to support ORO decisions?
   - For food and milk samples, were the MDLs less than the FDA DILs?
   - For soil samples, were the MDLs low enough to support relocation decisions?
   - For drinking water samples, were MDLs lower than the EPA DRLs?
   - Did the laboratory have radiation level or contamination level limits for incoming samples? If so, what happens to samples exceeding those limits?
   - How many samples could the laboratory process in one day and in what order would samples be processed? Did the ORO have a method to identify priority samples?
   - How would samples be stored after counting is completed? What methods would be used to prevent spoilage of perishable samples? Were storage locations shielded or located far enough away to prevent increased radiation levels near the counting equipment?

5. Provide analysis results to the appropriate organization.
    - How were counting results processed and reported to the ORO? Were results reported in appropriate units (e.g., soil sample results reported in units of activity per area, not in units of activity per weight)? Was results decay corrected to the sample collection time or to another time? Were results transmitted electronically or by hard copy?
6. If the laboratory is used to count air samples during the early phase of an incident and prepare, process, and analyze air filters and cartridges, provide analysis results in a timely manner to support ORO decisions.
    - If the laboratory would be used to count air samples during the early phase of an incident, what would be the approximate time from when a sample is collected by FMTs to when the results would be provided to the ORO?

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.

State Negotiated Extent of Play:
This sub-element will not be evaluated during this exercise.

Capability Target 4.5: Plume Phase Analysis and Dose Assessment *(Vice Sub-Element: 2.b.1)*
Core Capabilities: Environmental Response/Health and Safety; Planning
Recommended Evaluation Frequencies: Biennially
Recommended Assessment Activities: Exercise; Drill
Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (A.3, H.13, I.6, I.8, I.10, K.3, and O.1)
Intent: The capability to collect data, project doses to members of the public and emergency workers and analyze and communicate the results.

Demonstration and Evaluation Guidance:

1. Obtain adequate data to make dose projections.
   - What information was used to make dose projections?
   - Did the information include information/recommendations of the licensee, release data, and meteorological data?
2. Use software and/or other methods (e.g., manual calculations) to make dose projections for members of the public (both TED and thyroid dose) based on plant data.
   - What modeling system was used to make dose projections?
   - Did the ORO demonstrate the capability to use other methods, such as manual calculations?
3. Compare dose projections to members of the public to EPA PAGs.
   - Did the ORO make TED and thyroid dose projections available to members of the public based on information/ recommendations of the licensee, release data, and meteorological data?
   - Did the ORO compare dose projections to EPA PAGs and make PARs?
4. Compare dose projections to the public with those of the licensee and discuss differences greater than a factor of ten with the licensee and explain reasons for the difference.
   - Were differences in dose projection greater than a factor of ten discussed with the licensee? If so, were the differences resolved and considered in the PAR?
5. Make initial PARs based on recommendations of the licensee, release data, meteorological data, and other pertinent information.
   - Were initial PARs based on recommendations from the licensee, release data, meteorological data, and any other pertinent information? If not, what were the initial PARs based on?
6. Promptly communicate PARs to decision-makers.
   - How were PARs communicated to decision-makers?
   - How quickly were PARs communicated to decision-makers?
7. Receive ambient exposure rates from FMTs and compare to model projections.
   - Were ambient exposure rates received from FMTs and compared to modeled exposure rates?
8. Calculate iodine and particulate concentrations from FMT air samples.
   - Did the ORO calculate iodine and particulate concentrations from FMT air sample data?
9. Calculate plume ratios of noble gas, iodine's, and particulates, and compare to model projections.
   - Did the ORO calculate iodine and particulate concentrations from FMT air sample data?

10. Adjust PARs, as necessary, based on analysis of field data.
    - Did the ORO adjust PARs based on exposure rates measured by iodine and particulate ratios calculated from air samples collected by FMTs?
11. Calculate an incident-specific correction factor for emergency workers inside the plume exposure pathway EPZ.
    - Did the ORO calculate an incident-specific correction factor for emergency workers inside the plume exposure pathway EPZ?
    - Was the correction factor adjusted for emergency workers inside the plume exposure pathway EPZ based on air sample data collected by FMTs?
    - Was the incident-specific correction factor communicated to emergency workers inside the plume exposure pathway EPZ?

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.

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

Capability Target 4.6: Post-Plume Phase Sampling Plan Development and Analysis *(Vice Sub-Element: New)*
Core Capabilities: Environmental Response/Health and Safety; Planning
Recommended Evaluation Frequencies: At least once every 8-years
Recommended Assessment Activities: Exercise; Environmental Monitoring Drill (N.4.d)
Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (A.3, H.13, I.2, I.6, I.8, I.10, J.12, J.14.b, J.14.c, K.3, M.7, M.8, and O.1)
Intent: The capability to identify and prioritize sampling, collect data, determine areas where relocation is recommended, identify food that is contaminated above federally approved limits, and analyze and communicate the results.

Demonstration and Evaluation Guidance:

1. Periodically conduct radiological assessment of public exposure.
    - What methods were used to assess public exposure and at what frequencies?
2. Estimate projected doses in contaminated areas and identify areas where projected doses exceed relocation PAGs.
    - Did the ORO calculate projected doses based on laboratory analyses of soil samples?
    - Did the ORO calculate a DRL for relocation for each area with a homogeneous radionuclide deposition mixture?
    - Were areas exceeding DRLs identified?
3. Develop and modify sampling plan to assess the radiological consequences of a release on the food and drinking water supplies.
    - How was the area of interest identified (e.g., depositions footprint)?
    - Did the ORO's assessment include an evaluation of the radiological analyses of representative samples of drinking water, food, and other ingestible substances of local interest from potentially impacted areas?
    - Did the ORO's assessment include a characterization of the releases from the facility?

- Did the ORO's assessment include the extent of areas potentially impacted by the release?

4. Determine areas to be restricted based on factors such as mix of radionuclides in deposited materials, calculated exposure rates compared to PAGs, and analysis of vegetation and soil samples.
   - How were the boundaries of the deposition determined?
   - If deposition boundaries were determined by projections, how were the projected areas verified (e.g., field measurements, environmental sampling)?
5. Evaluate the radiological analyses of representative samples of drinking water, food, and other ingestible substances of local interest from potentially impacted areas.
   - Were the pre-determined DILs the same as the 1998 FDA DILs? If not what, were the differences? If other than the FDA DILs were used, what rationale was given for other decision criteria?
   - What projected doses were used to recommend protective actions for food, drinking water, and persons being relocated?
6. Compare radiological impacts of analysis on food and water and other representative samples to appropriate ingestion PAGs.
   - Did the ORO demonstrate the capability to obtain sample results from the specified laboratory?
   - Were results reported in appropriate units? (e.g., were soil sample results reported in units of activity per area—not in units of activity per weight?)
   - Was results decay corrected to the sample collection time or to some other time?

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.

State Negotiated Extent of Play:
This sub-element will not be evaluated during this exercise.

OBJECTIVE 5 - Operate

Capability Target 5.1: Monitoring, Decontamination, Sheltering, and Registration of Evacuees *(Vice Sub-Element: 6.a.1; 6.c.1)*
Core Capabilities: Operational Coordination; Environmental Response/Health and Safety; Mass Care; Planning
Recommended Evaluation Frequencies: Biennially*
Recommended Assessment Activities: Exercise; Drill
Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (J.11.d, J.13, K.4, and O.1)
Intent: The capability to implement radiological monitoring and decontamination of evacuees, and to identify, register, temporarily shelter, and provide congregate care for evacuees at reception centers.

Demonstration and Evaluation Guidance:

1. Set-up operations.
   - Was the facility set up and operational? Did it include route markings, instrumentation, record keeping, and contamination control measures?
   - Where did monitoring, decontamination, and registration of evacuees occur?
   - How was contamination minimized within the facility? What contamination control provisions were utilized?
   - What supplies were available to set up the facility?
   - What supplies were available to prevent and control spread of contamination?
   - What personal protective supplies were available?
2. Operationally check instruments and equipment.
   - What types of monitoring instruments and equipment were available?
   - Were the instruments current in calibration?
   - Were instruments and equipment operationally checked using an appropriate check source against a known range of reading to verify proper operation?
   - Was an appropriate radioactive check source used to verify proper operational response for each low-range radiation measurement instrument?
   - Were background readings taken?
   - How were background radiation levels established?

Monitoring

1. Attain and sustain the overall monitoring productivity rate per hour needed to monitor 20 percent of the plume exposure pathway EPZ population, including transients, within a 12-hour period at each facility. The monitoring productivity rate per hour is the number of evacuees that can be monitored, per hour, per location, by the total complement of monitors using an appropriate procedure.
   - What is the total population, including transients, of the plume exposure pathway EPZ? What is 20 percent of that figure (the estimate of needed monitoring capability)?
   - What was the time for monitoring sequences for the first six simulated evacuees, per monitoring team (determine percentage)?
   - Were evacuees monitored using hand-held survey instruments or portal monitors?
   - If portal monitors were used, was a body survey made after triggering the portal monitor using hand-held instrument to locate, quantify, and isolate the exact location of the contamination?
   - Where were portal monitors used?

- Was a minimum of six simulated evacuees and one-third of the equipment (at that facility) demonstrated?
- Were the monitoring sequences for these simulated evacuees timed by the evaluators to determine whether the monitoring productivity rate per hour can be met?
- Was the facility able to maintain the rate to monitor 20 percent?
- Based on the demonstration, was the facility able to monitor 20 percent of anticipated evacuees within 12 hours? At this rate, is the facility going to meet the 20 percent goal?

2. Monitor evacuees, service animals, pets, vehicles, and possessions.
   - Was there an adequate number of personnel available to perform monitoring of vehicles and evacuees?
   - What are the provisions for monitoring service animals and pets?
   - What were the provisions for individuals who had completed monitoring (and decontamination, if needed)?
   - What means were used to indicate that evacuees, and their service animals, pets, possessions, and vehicles, have been monitored, cleared, and found to have no contamination or contamination below the trigger/action level indicated (e.g., hand stamp, sticker, bracelet, form, etc.)?
3. Utilize trigger/action levels for determining the need for decontamination.
   - Did monitoring personnel use trigger/action levels to determine the need for decontamination?
   - What trigger or action levels were identified?

Decontamination

1. Decontaminate evacuees, and personal belongings, while limiting the spread of contamination.
   - What provisions were in place to ensure privacy?
   - What is the process for providing modesty garments to evacuees?
   - How was decontamination conducted for small areas of contamination?
   - How were contaminated individuals separated from non-contaminated individuals?
   - How are contaminated clothing and other personal belongings handled?
   - What contamination control procedures were utilized?
   - Were provisions made to collect contaminated waste and to prevent it from increasing the background radiation levels near portal monitors and survey equipment?
   - What is the process to indicate that an individual has been monitored and, if necessary, decontaminated (e.g., hand stamp, sticker, bracelet, form, etc.)?
2. Follow-up with any evacuee(s) who cannot be appropriately decontaminated for assessment; ensure the capability to provide evacuee-referrals.
   - What procedures were used if evacuees could not be adequately decontaminated?
   - What was the follow-up and associated assessment process for those evacuees who could not appropriately be decontaminated?

Vehicles

1. Monitor and decontaminate vehicles.
   - How are vehicles monitored? Were the following monitored: air intake systems, radiator grills, bumpers, wheel wells, tires, and door handles?
   - What procedures were demonstrated for vehicle monitoring?
   - Was at least one vehicle monitored?
   - Was there adequate space for the expected number of vehicles (space must be observed by evaluator)?

- How are vehicles decontaminated?
- What contamination control procedures were utilized?

2. Provide adequate, separate space for both contaminated and non-contaminated vehicles.
   - Was there appropriate space for vehicle parking of both contaminated and non-contaminated vehicles?
   - How were non-contaminated vehicles separated from contaminated or not-yet-monitored vehicles?
3. Monitor emergency worker personnel and their equipment and vehicles for contamination.
   - Was there adequate space for evacuee vehicles at the facility?
   - Were there an adequate number of personnel trained to operate monitoring equipment at the facility?
   - What provisions were in place to ensure privacy?
4. Decontaminate evacuee vehicles based on trigger/action levels.
   - What is the action level for determining the need for decontamination of vehicles?
   - What process is used to decontaminate vehicles?
   - What was done when an evacuee's vehicle could not be successfully decontaminated?

Sheltering and Congregate Care

1. Coordinate for incoming evacuees who have been monitored and, if necessary, decontaminated.
   - How was coordination amongst and between congregate care facilities/mass care for those evacuees that have already been monitored and, if necessary, decontaminated?
   - What identifier was used for those evacuees (and where applicable, service animals, pets, and vehicles) who had been monitored, decontaminated as appropriate, and registered?
2. Establish shelter operations.
   - What is the process for determining if evacuees, service animals, and pets had been monitored for contamination, decontaminated as appropriate, and registered before entering the facility?
   - Did the staff check for arriving individual's confirmation of monitoring/decontamination?
   - Did the ORO appropriately plan for the population expected at this location?
3. Congregate care centers and operations in host/support jurisdictions are sufficient to support the expected number of evacuees.
   - What agency (or agencies) is responsible for managing the congregate care center?
   - What is the capacity of the congregate care center?
   - What resources were available for evacuees (real or simulated) arriving at the congregate care center?

Registration

1. Register evacuees.
   - What is the process to register evacuees after they have completed the monitoring and decontamination process?
   - Did the record contain the individual's name, address, results of monitoring, and time of any decontamination needed?
   - What organization(s) registered evacuees upon completion of monitoring and decontamination?
   - What is the process for registering evacuees?
   - Was a registration record established for each individual?
2. Ensure the registration area is clean and controlled.
   - Was the access to the clean registration area controlled adequately? How?

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.

*****Exercise participation may be rotated among facilities, but each facility designated in the plan must be evaluated no less than once every eight years.

State 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 reception centers and / 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. Floor plans showing set-up (inside) and visual traffic pattern layouts (outside) must be provided at Reception Centers.* *County Plans will include floor plans and diagrams showing facility set up and vehicular traffic flow.* ***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. County Plans will include floor plans and diagrams of monitoring/decontamination centers 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 using either portal monitors or hand-held meters,** a minimum of six volunteer evacuees will be monitored (or any combination of individuals totaling six demonstrations). 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.* *Two of the simulated evacuees, based upon controller injects, will be contaminated. One simulated evacuee will remain contaminated after two decontamination attempts. Exercise participants will be prepared to discuss the process of handling the evacuee following the failed decontamination attempts. Discussions concerning the processing of contaminated personnel*

will include capabilities and written procedures for showering females separate from males. Showering will be simulated; water will not be used.

At the <u>emergency worker monitoring/decontamination stations</u>, *six 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.***

Two of the simulated evacuees, based upon controller injects, will be contaminated. One simulated evacuee will remain contaminated after two decontamination attempts. Exercise participants will be prepared to discuss the process of handling the evacuee following the failed decontamination attempts.

All emergency workers will receive thyroid screening regardless if contamination is found or not, utilizing a survey meter.

<u>Portal Monitor Use:</u> *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. Floor plans with a visual set-up (Visual Aid) for evacuee monitoring/decontamination centers and emergency worker monitoring and decontamination stations need to be provided.

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.

Counties demonstrating mass care center operations during the out-of-sequence window will provide floor plans of the mass care centers to show organization within the facility and space management during a real emergency. Mass care center locations are listed in the demonstration tables "Demonstration of Mass Care Centers" (Attachment A, Section I.4).

Personnel, at a minimum, will consist of one manager and one assistant for each mass care center opened during the out-of-sequence window. The responsible American Red Cross chapter will show the source and quantities, by job functional description, to be provided to mass care centers to support the 24-hour operation. The responsible Red Cross Chapter(s) will provide information regarding the 24-hour staffing and 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 <u>demonstrate</u>

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 March 26, 2024, from 7:00 p.m. to 9:30 p.m. (See Attachment A, Section I.4)

Capability Target 5.2: Monitoring and Decontamination of Emergency Workers, Equipment, and Vehicles *(Vice Sub-Element: 6.b.1)*
Core Capabilities: Operational Coordination; Environmental Response/Health and Safety; Planning
Recommended Evaluation Frequencies: Biennially
Recommended Assessment Activities: Exercise; Drill
Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (K.4 and O.1)
Intent: The capability to implement radiological monitoring and decontamination of emergency workers, equipment, and vehicles.

Demonstration and Evaluation Guidance:

1. Set-up operations.
   - Where will monitoring and decontamination of emergency workers occur?
   - Where will emergency workers' equipment be monitored and decontaminated?
   - Was the facility set up and operational? Did it include route markings, instrumentation, record keeping, and contamination control measures?
   - What supplies were available to set up the facility?
   - What supplies were available to prevent and control spread of contamination?
   - What personal protective supplies were available?
   - How was contamination minimized within the facility?
   - What contamination control provisions were utilized?

2. Operationally check instruments and equipment.
   - Were the instruments current in calibration?
   - Were instruments and equipment operationally checked using an appropriate check source against a known range of reading to verify proper operation?
   - Was an appropriate radioactive check source used to verify proper operational response for each low-range radiation measurement instrument?
   - Were background readings taken?
   - How were background radiation levels established?
3. Monitor emergency worker personnel and their equipment and vehicles for contamination.
   - Was there adequate space for emergency workers at the facility?
   - Were there an adequate number of personnel trained to operate monitoring equipment at the facility?
   - During vehicle monitoring, were the following monitored: air intake systems, radiator grills, bumpers, wheel wells, tires, and door handles?
   - What provisions were in place to ensure privacy?
4. Decontaminate emergency worker personnel and their equipment and vehicles based on trigger/action levels.

- What is the action level for determining the need for decontamination of personnel, equipment, and vehicles?
- What process is used to decontaminate personnel, equipment, and vehicles?
- How was decontamination conducted for small areas of contamination?
- What was done when an emergency worker could not be successfully decontaminated?

5. Control the spread of contamination.
   - What procedures are used to minimize contamination within the facility?
   - How are contaminated emergency workers separated from non-contaminated emergency workers?
   - How are contaminated clothing and other personal belongings addressed? Will clean clothing be provided to emergency workers?
   - Were contamination control procedures, including storage of contaminated clothing and possessions followed?
6. Create and maintain a record of monitoring and decontaminating workers upon completion of monitoring and decontamination activities.
   - Was a record of monitoring and decontamination (if necessary) kept for each emergency worker?
7. Process for prioritizing emergency workers and equipment before the public in facilities where the public and emergency workers are both processed for contamination.
   - What is the process for prioritizing emergency workers and equipment before the public in facilities where the public and emergency workers are both processed for contamination?

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.

*****Exercise participation may be rotated among facilities, but each facility designated in the plan must be evaluated no less than once every eight years.

State 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. Decontamination should be performed in accordance with plans and procedures. Subsequent to the vehicle being monitored, the decontamination procedure will be explained. One radiological survey meter will be issued to each monitoring/decontamination team. One vehicle and/or piece of equipment will not be able to be decontaminated. Simulated radiation contamination data will be included in the scenario package and injected by a controller. Set-up of the facility will be performed as closely as possible to that for an actual emergency with all route markings in place including clearly defined exit areas, per contamination control procedures and/or step-off pads (if used); with the exception of long runs of plastic covered with paper which will not be demonstrated, but the materials may be available and explained (as appropriate.). *Decontamination capabilities and provisions for vehicles and equipment that cannot be decontaminated, will be simulated, and conducted by interview. Water is NOT required to be used.* ***Note:** Re-demonstrations may be performed as appropriate and time permitting.*

Capability Target 5.3: Transportation and Treatment of Contaminated, Injured Individuals *(Vice Sub-Element: 6.d.1)*
Core Capabilities: Environmental Response/Health and Safety; Public Health, Healthcare, Emergency Medical Services; Planning
Recommended Evaluation Frequencies: Biennially
Recommended Assessment Activities: Medical Services Drill (N.4.b)
Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (C.2.d, F.2, H.11, H.12, J.2, K.3, K.4, L.1, L.3, L.4, and O.1)
Intent: The capability to provide medical transport and treatment services to contaminated, injured individuals.

Demonstration and Evaluation Guidance:

Transportation

1. Transport contaminated, injured individuals to medical facilities.
   - Who dispatched the medical transport provider and what information was provided?
   - Did the appropriate briefings occur? What was contained in the briefings?
   - Which agency or agencies demonstrated the transportation of contaminated, injured individuals to appropriate medical facilities?
   - What type of vehicle was used for the transportation of the contaminated, injured individuals?
   - Was the site of pick-up in a potentially contaminated area? If so, what precautions were taken?
   - How did the medical transport provider know to take radiological precautions with the contaminated, injured individual?
   - Was the contaminated, injured individual monitored for radiological contamination before arrival or during initial evaluation by the transport provider?
   - Who did the monitoring?
   - What survey instruments were used?
   - Were the instruments current in calibration?
   - Did medical care take priority over monitoring?
   - Were instruments and equipment operationally checked using an appropriate check source against a known range of reading to verify proper operation?
   - What contamination control measures were taken by the medical transport crew?
   - How was the patient transferred from the medical transport vehicle to the medical facility?
   - Were accident scene survey records transferred to the medical facility staff? Was the transfer made taking care not to spread contamination?
   - Was the medical transport crew knowledgeable about where the medical transport vehicle (or other transport vehicle) and crew would be monitored and decontaminated?
   - Where and by whom will the medical transport crew and medical transport vehicle (or other transport vehicle) be monitored and decontaminated, if required?
2. Maintain communications between the medical transportation provider and the receiving medical facility.
   - What communications occurred between the medical transport crew and the receiving hospital? How?

Medical Facility

1. Operationally check instruments and equipment.
   - How were background measurements obtained on a continuous basis?
   - What survey instruments were used?
   - Were the instruments current in calibration?
   - Were instruments and equipment operationally checked using an appropriate check source against a known range of reading to verify proper operation?
   - Was an appropriate radioactive check source used to verify proper operational response for each low-range radiation measurement instrument?
   - Did the receiving facility personnel don the appropriate PPE in accordance with procedures and in a manner to prevent the spread of contamination?
2. Set-up, activate, and operate an REA.
   - How was the hospital notified to establish a REA? With regard to the REA, what information was provided to the medical facility by the medical transport crew?
   - Were staff, equipment, and supplies readily available for monitoring and decontamination, and setting up the REA?
   - How was access into the REA controlled?
   - Did urgent medical care take precedence over monitoring, decontamination, and contamination control efforts by facility medical staff?
   - Who performed and/or supervised treatment of contaminated, injured individuals?
   - What equipment and supplies were available for treatment of contaminated, injured individuals?
   - How were items assured to be free of contamination before they were transferred out of the REA to the clean area?
   - After treatment and decontamination, how was the individual transferred out of the REA?
   - How did the staff exit the REA?
   - Was a doffing procedure correctly implemented?
   - Was the REA, and equipment within, monitored for contamination prior to returning it to normal operations?
3. Monitor and decontaminate the individual, equipment, and other items.
   - How were monitoring (i.e., survey measurements and samples) results documented and recorded?
   - Did the medical staff make decisions on the need for decontamination of the individual and follow appropriate decontamination procedures?
   - What contamination threshold triggers the need for decontamination of the individual?
   - What methods were used to decontaminate the potentially contaminated individual (once that person is medically stabilized)? Were decontamination methods progressive (e.g., mild decontamination used prior to scrubbing)?
   - What procedure was used if decontamination was not successful?
   - What methods were used to collect and analyze samples, including swabs and skin wipes?
   - Who did the monitoring? What equipment was used?
   - What records were maintained with regard to survey and decontamination?
   - What was the procedure for handling, decontaminating, and storage of contaminated items?
   - What was the action level to determine if equipment was contaminated or not?
   - Who decontaminated the equipment and other items?
   - How was wastewater from decontamination operations handled?
   - What contamination control measures were taken?

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.

State Negotiated Extent of Play:
This sub-element was evaluated at Wellspan York Hospital, York County on June 14, 2023, and Wellspan Ephrata Hospital, Lancaster County on October 3, 2023 *EMS units operating outside of the EPZ are not required to have dosimetry, KI or attend radiological briefings.*

Capability Target 5.4: Traffic and Access Control *(Vice Sub-Element: 3.d.1; 3.d.2)*
Core Capabilities: Critical Transportation; Access Control/Identity Verification; Environmental Response/Health and Safety; On-Scene Security, Protection, and Law Enforcement; Operational Coordination; Planning; Situational Assessment.
Recommended Evaluation Frequencies: Biennially
Recommended Assessment Activities: Exercise; Drill
Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (H.12, J.8, J.8.b, J.10, J.10.a, J.11.c, J.11.e, J.11.f, J.14.d, J.14.e, M.1.b, and O.1)
Intent: The capability to select, establish, and staff traffic and access control points and removing impediments to the flow of evacuation traffic.

Demonstration and Evaluation Guidance:

1. Select, establish, and staff appropriate TCP/ACPs, consistent with current conditions and PADs (e.g., evacuating, sheltering, and relocation), in a timely manner.
   - Were there pre-identified TCPs/ACPs in the plan?
   - What was the basis for determining the location of TCPs/ACPs (e.g., evacuation of area, danger in area, etc.)?
   - At what ECL were TCPs/ACPs established?
   - Who was responsible for establishing traffic routes and/or TCPs/ACPs?
   - Who deployed TCP/ACP personnel to the assigned location?
   - Were necessary resources available when needed?
   - Were there any gaps identified between the TCP/ACP resources needed and the resources available? If so, what alternate resource providers were identified, and resources provided?
   - Were TCPs/ACPs identified, staffed, and established in timely manner?
2. Provide instructions to TAC staff on actions to take, including when modifications in protective action strategies necessitate changes in evacuation patterns or in the area(s) where access is controlled.
   - Did the TCP/ACP staff receive an emergency worker briefing? If so, what did the briefing include?
   - When PADs expanded into the affected area, were TAC personnel relocated?
   - Were instructions provided to TCP/ACP staff on the modification of PADs?
   - Were TCP/ACP personnel able to provide the following information:
     - Location of TCPs/ACPs.
     - Location of reception/registration centers.
     - Location of emergency worker monitoring and decontamination center.
     - Equipment available (e.g., cones) to establish TCPs/ACPs.

    - The means used to verify emergency worker identification and access.
    - Their roles and responsibilities.
  - What plans/procedures were in place for verifying emergency worker identification and access authorization?
3. Contact the state or Federal agencies that have the authority for the different transportation modes (e.g., rail, water, and air traffic).
  - Who notified which agency for control of water, rail, and air traffic?
  - Were times and ECLs documented when rail, water, and air traffic access control were notified by the ORO?
  - What actions were requested? How were actions coordinated?
4. Identify and take appropriate actions concerning impediments that affect the evacuation and evacuation routes.
  - Were there impediments to evacuation? If so, where did the impediment occur on the evacuation route? Was the impediment on the evacuation route left in place for the remainder of the demonstration or was it removed?
  - Were appropriate actions for impediments that affected evacuation routes identified?
  - How were the resources to remove impediments to evacuation identified and coordinated? Was this done in a timely manner? What organizations assisted in impediment removal?
5. Make the decision to re-route traffic and coordinate with key decision-makers and the JIC to ensure the alternate route information is appropriately communicated to evacuees.
  - What key decision-makers were involved in the coordinated effort to re-route traffic?
  - Who made the decision to re-route traffic?
  - What coordination occurred among various OROs, such as local law enforcement, state law enforcement, National Guard, and/or state and/or local transportation departments?
  - What coordination occurred to alert the public of the need to take an alternate route?
  - How and when was the public alerted to take an alternate route?
  - Were decisions made in coordination with all agencies (both internal and external) involved?
  - Was the messaging coordinated and consistent?
6. Establish procedures to control access to and monitor people and vehicles from the evacuated and restricted areas.
  - How did the ORO determine location of ACPs?
  - How was the area identified (e.g., ropes, fences, gates, etc.)?
  - What did the ORO do to control access to the restricted areas?
  - Which agencies have the responsibility to establish procedures to control access to evacuated and restricted areas?
7. Authorize reentry of individuals into the restricted areas.
  - What was the process to approve individuals to reenter the restricted areas?
  - How were individuals authorized to reenter the restricted areas?
  - What provisions were made to determine and control their exposure?
  - How were these individuals tracked to ensure they returned out of the restricted areas?
8. Establish exit procedures.
  - How were individuals, vehicles, and equipment monitored?
  - What was the decision-making guidance for decontamination?
  - What was the disposition of dosimeters, maintenance of the reentry radiation exposure records of dosimetry, and maintenance of emergency worker radiation exposure records?

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.

State 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. *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 will receive the inject only.*

ATTACHMENT A

2024 PEACH BOTTOM ATOMIC POWER STATION EXERCISE EXTENT-OF-PLAY DEMONSTRATION TABLES

I. Out-of-Sequence Events

Activities – **Tuesday, March 26, 2024**

1. Reception Centers

   Time: 7:00 p.m. – 9:30 p.m.

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

RECEPTION CENTER LOCATIONS		
COUNTY	**LOCATION**	**DATE**
Chester	None	March 26, 2024
Lancaster	None	
York	Red Lion High School – Demonstrating at Red Lion Fire Department	

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

EMERGENCY WORKER MONITORING/DECONTAMINATION STATION		
COUNTY	**LOCATION**	**DATE**
Chester	None	March 26, 2024
Lancaster	Lampeter Strasburg School Complex demonstrating at Lancaster Public Safety Training Center (5:00 p.m. Start)	

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

EVACUEE MONITORING/DECONTAMINATION CENTER		
COUNTY	**LOCATION**	**DATE**
Chester	None	March 26, 2024
Lancaster	None	
York	Red Lion High School – Demonstrating at Red Lion Fire Department Northern High School (Demonstration Only)	

4. Mass Care Centers for risk and support counties.

MASS CARE CENTER		
COUNTY	**LOCATION**	**DATE**
Chester	None	March 26, 2024
Lancaster	None	
York	Red Lion High School – Demonstrating at Red Lion Fire Department	

5. School Districts

Date: Tuesday, March 26, 2024

Time: 9:00 a.m. – 11:00 a.m.

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

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

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

When a school system is comprised of multiple buildings (High School, Middle School, Elementary School), the affected buildings (those with students from the EPZ) will be evaluated on a rotational basis to coincide with the eight-year exercise cycle.

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

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

COUNTY	SCHOOL DISTRICT	SCHOOLS (approx. 1/4th evaluated)
Chester	**Oxford Area**	1. Oxford Area S.D. Admin. Office 2. Oxford Area High School*
Lancaster	**Penn Manor**	1. Penn Manor S.D. Admin. Office^ 2. Marticville Middle School* (FEMA Eval.)
	Solenco	1. Solenco S.D. Admin. Office 2. Solenco High School 3. Clermont Elementary
York	**Red Lion**	1. Red Lion S.D. Admin Office^ 2. Clearview Elementary* 3. Larry J. Macaluso Elementary*
	South Eastern	1. South Eastern S.D. Admin. Office 2. Delta/Peach Bottom Elementary

II. Plume Phase Exercise

Activities – **Tuesday, April 16, 2024**

1. County Emergency Operations Center (EOCs)

   Time: Per Exercise Scenario

DEMONSTRATION FOR EOC MOBILIZATION FOR COUNTIES		
COUNTY	**DATE**	**Time**
Chester	April 16, 2024	4:00 p.m. Approx.
Lancaster		
York		

2. BRP field teams will be evaluate at the Department of Environmental Protection at 909 Elmerton Avenue Harrisburg, PA on April 16, 2024, at 1:00 p.m. At this time, FEMA evaluators are permitted to ride along in the BRP vehicles.

Municipal Emergency Operations Center (EOCs)

Time: 4:00 p.m. Approximate

DEMONSTRATION FOR EOC MOBILIZATION FOR MUNICIPALITIES (FEMA EVALUATED)		
RISK COUNTY	**MUNICIPALITY**	**DATE**
Chester	West Nottingham Township	April 16, 2024
Lancaster	Drumore Twp	
	Fulton Township	
	Little Britain Township	
	Martic Township	
	Solenco Regional - ***RA (Quarryville Borough)***	
York	Delta/Peach Bottom Township Regional	
	Fawn Grove Township/Fawn Grove Borough Regional – Demonstrating at Citizens Volunteer Fire Station of Fawn Grove	
	Lower Chanceford - ***RA***	

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

BACK-UP ROUTE ALERTING		
COUNTY	**MUNICIPALITY / ROUTE / SIREN**	**DATE**
Chester	None	April 16, 2024
Lancaster	Solenco Regional (Quarryville Borough)	
Montgomery	Lower Chanceford	

NOTE: *Non-emergency personnel may not be permitted to ride along in emergency vehicles (e.g., fire trucks, police vehicles) during the route alerting demonstration. FEMA evaluators may need to drive in their own vehicles.*

4. Traffic and Access Control Points

a. The Pennsylvania State Police will brief at the ICP/TOC located at the Calvary Chapel of Delta - 5911 Delta Road, Delta, PA. Members attending the briefing will NOT actually deploy to the TCP/ACPs.

b. The PSP briefing will be performed during the exercise on April 16, 2024

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 April 16, 2024.

5. The ICP, TOC, and Staging Area will be demonstrated at the Calvary Chapel of Delta - 5911 Delta Road Delta, PA.

III. Mass Care Center Evaluations (Walkdowns)

There are no walkdowns for this exercise cycle.

APPENDIX C: PARTICIPATING AGENCIES AND SITE MAPS

See PEMA Extent of Play in Appendix B.

APPENDIX D: DIRECTIONS/ADDRESSES

See Action Location Addresses Document provided by the Utility.

APPENDIX E: OPEN ISSUES

No Open Issues

APPENDIX F: ACRONYMS

Acronym	Description
AAC	Accident Assessment Center
AAM	After-Action Meeting
AAR	After-Action Report
ACP	Access Control Point
ALARA	As Low As Reasonably Achievable
ALC	Annual Letter of Certification
ANS	Alert and Notification System
ANSI	American National Standards Institute
ARC	American Red Cross
ARES	Amateur Radio Emergency Services
A-Team	Advisory Team for Environment, Food, and Health
BRP	Bureau of Radiation Protection
BURA	Back Up Route Alerting
BVPS	Beaver Valley Power Station
BZ	Buffer Zone
CAD	Computer Aided Display
C/E	Controller and Evaluator
CED	Committed Effective Dose
CC	Core Capabilties
CCC	Congregate Care Center
CDC	U.S. Center for Disease Control and Prevention
CCL	Core Capabilities List
CCNP	Cisco Certified Network Professional
CCNPP	Calvert Cliffs Nuclear Power Plant
C/E	Controller Evaluator
CDE	Committed Dose Equivalent
CDV	Civil Defense Victoreen
CERC	Corporate Emergency Response Center
CERT	Community Emergency Response Team
CFR	Code of Federal Regulations
CNS	Commonwealth Notification System
C&O	Concepts and Objectives Meeting
CO	Communication Officer
COL	Combined Operating License
CPG	Comprehensive Preparedness Guide
CPM	Counts Per Minute
CRCC	Commonwealth Response Coordination Center
CST	Civil Support Team
DAC	Dose Assessment Coordinator
DAD	Digital Alarming Dosimetry
DAS	Director of Auxillary Services
DCPM	Disintegrating Counts Per Minute
DDHS	U.S. Department of Health and Human Services

DEMA	Delaware Emergency Management Agency
DHS	U.S. Department of Homeland Security
DIL	Derived Intervention Level
DIR	Disaster Initiated Review
DOE	U.S. Department of Energy
DOT	U.S. Department of Transportation
DRD	Direct Reading Dosimeter
DRF	Dosimetry Record Form
DRL	Derived Response Level
DSP	Delaware State Police
EA	Exception Area
EA	Exclusion Area
EA	External Affairs
EAC	Evacuation Assembly Center
EAL	Emergency Action Level
EARA	Exception Area Route Alerting
EAS	Emergency Alert System
EC	Emergency Coordinator
EEG	Exercise Evaluation Guide
ECL	Emergency Classification Level
ECO	Exposure Control Officer
EDE	Effective Dose Equivalent
EMC	Emergency Management Coordinator
EMD	Emergency Management Director
EMnet	Emergency Management Network
EMS	Emergency Medical Services
ENS	Emergency Notification System
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EOP	Extent of Play
EPA	U.S. Environmental Protection Agency
EPT	Exercise Planning Team
EPZ	Emergency Planning Zone
ER	Emergency Room
ERDS	Emergency Response Data System
ERM	Emergency Response Manager
ERO	Emergency Response Organization
ERV	Emergency Response Vehicle
ESC	Emergency Services Coordinator
ESF	Emergency Support Function
ESP	Early Site Permit
ETA	Estimated Time of Arrival
ETE	Evacuation Time Estimate
EW	Emergency Workers
EWMDS	Emergency Worker Monitoring and Decontamination Station
ExPlan	Exercise Plan
FBI	Federal Bureau of Investigation
FCC	U.S. Federal Communications Commission

FD	Fire Department
FDA	U.S. Food and Drug Administration
FE	Functional Exerise
FEMA	Federal Emergency Management Agency
FMT	Field Monitoring Team
FPE	Full Participation Exercise
FPM	Final Planning Meeting
FRMAC	Federal Radiological Monitoring Assessment Center
FRPCC	Federal Radiological Preparedness Coordinating Committee
FSE	Full Scale Exercise
FST	Field Sampling Team
FTC	Field Team Coordinator
GE	General Emergency
GIS	Geographic Information Systems
GM	Guidance Memorandum
G-M	Geiger-Mueller
GPS	Global Positioning System
Gy	Gray
HAB	Hostile Action Based
HAN	Health Alert Network
HHS	U.S. Health and Human Services
HazMat	Hazardous Materials
HF	High Frequency
HP	Health Physicist
HSEEP	Homeland Security Exercise and Evaluation Program
HSPD	Homeland Security Presidential Directive
IC	Incident Commander
ICP	Incident Command Post
ICS	Incident Command System
IP	Improvement Plan
IPAWS	Integrated Public Alert and Warning System
IPM	Initial Planning Meeting
IPZ	Ingestion Pathway Zone
IWP	Initial Warning Point
JIC	Joint Information Center
JIS	Joint Information System
KI	Potassium Iodide
LCD	Liquid Crystal Display
LEOF	Local Emergency Operations Facility
LGS	Limerick Generating Station
LHD	Local Health Department
LOA	Letter of Agreement
MCC	Mass Care Center
MDDT	Mobile Data Display Terminal
MDE	Maryland Department of Environment

MDEM	Maryland Department of Emergency Management
MDT	Mobile Data Terminals
MJOC	Media Joint Operations Center
MHz	Megahertz
MIDAS	Meteorological Information Dose Assessment System
MOU	Memorandum of Understanding
MS	Medical Services Hospital
MSEL	Master Scenario Events List
MSP	Maryland State Police
NAPS	North Anna Power Station
NAWAS	National Warning System
NEP	National Exercise Program
NGO	Non-Governmental Organization
NIMS	National Incident Management System
NNSA	National Nuclear Security Administration
NOAA	National Oceanic and Atmospheric Administration
NPD	National Preparedness Directorate
NOUE	Notification of Unusual Event
NPP	Nuclear Power Plant
NPS	National Preparedness System
NRC	U.S. Nuclear Regulatory Commission
NRIA	Nuclear Radiological Incident Annex
NUREG	Nuclear Regulatory
NWS	National Weather Service
OCA	Owner Controlled Area
OJT	On-The-Job Training
OOS	Out of Sequence
ORH	Office of Radiological Health
ORO	Offsite Response Organization
OSC	Operations Support Center
OSD	Optically Stimulated Dosimeter
OSHA	U.S. Occupational Safety and Health Administration
OSLD	Optically Stimulated Luminescence Dosimeter
PA	Public Affairs
PAD	Protective Action Decision
PAG	Protective Action Guideline
PAR	Protective Action Recommendation
PARA	Primary Area Route Alerting
PAZ	Protective Action Zone
PCA	Preliminary Capabilities Assessment
PBAPS	Peach Bottom Atomic Powers Station
PD	Police Department
PDAFN	Persons with Disabilities/Access and Funtional Needs
PED	Personal Electronic Dosimeter
PEMA	Pennsylvania Emergency Management Agency
PII	Personally Identifiable Information

PIO	Public Information Officer
PPD	Presidential Policy Directive
PPE	Personal Protective Equipment
PPP	Post-Plume Phase
PRA	Primary Route Alerting
PRD	Permanent Record Dosimeter
PS	Planning Standard
PSP	Pennsylvania State Police
R	Roentgen
RA	Regional Administrator
R/h	Roentgen per hour
RAC	Regional Assistance Committee
RACES	Radio Amateur Civil Emergency Services
RAD	Radiation Absorbed Dose
RAO	Radiation Assessment Officer
RC	Reception Center or Relocation Center
RDO	Radiation Defense Officer
REA	Radiation Emergency Area
REC	Radiation Exposure Control
REM	Roentgen Equivalent Man (rem)
REP	Radiological Emergency Plan
REPP	Radiological Emergency Preparedness Program
RERP	Radiological Emergency Response Plan
RHP	Radiological Health Program
RML	Radiological Mobile Laboratory
RO	Radiological Officer
ROO	Radiological Operations Officer
RPM	Radiological Emergency Preparedness Program Manual
RSO	Radiation Safety Oficer
RTF	Radiological Task Force
SA	Staging Area
SAC	Staging Area Coordinator
SAE	Site Area Emergency
SAIC	Science Applications International Corporation
SAM	Staging Area Manager
SAV	Staff Assistance Visit
SCBA	Self-Contained Breathing Apparatus
SEOC	State Emergency Operations Center
SERS	State Emergency Radio System
SEVAN	State Emergency Voice Activation Network
SFMT	State Field Monitoring Team
SHC	Salem Hope Creek
SIP	Shelter In Place
SIRS	Statewide Interoperability Radio System
SME	Subject Matter Expert
SO	State Official
SOP	Standard Operating Procedure
SPS	Surry Power Station

SRO	School Resources Officer
SSES	Susquehanna Steam Electric Station
SSO	Social Services Officer
STARS	Statewide Area Radio System
SPS	Surry Power Station
Sv	Sievert (sv)
SWAN	State Warning Alert Notification
TAC	Technical Assistance Center
TACP	Traffic and Access Control Point
TCP	Traffic Control Point
TED	Total Effective Dose (whole body dose)
TEDE	Total Effective Dose Equivalent
TEP	Training and Exercise Plan
TEPW	Training and Exercise Planning Workshop
THD	Technological Hazards Division
THIRA	Threat and Hazard Identification and Risk Assessment
TLD	Thermoluminescent Dosimeter
TMI	Three Mile Island
TO	Transportation Officer
TSC	Technical Support Center
TTD/TTY	Telecommunication Device for the Deaf/TeleType
TTX	Tabletop Exercise
UEM	Utility Emergency Manager
USDA	U.S. Department of Agriculture
UTL	Universal Task List
VDEM	Virginia Department of Emergency Management
VDH	Virginia Department of Health
VDOT	Virginia Department of Transportation
VEOC	Virginia Emergency Operations Center
VERT	Virginia Emergency Response Team
VEST	Virginia Emergency Support Team
VHF	Very High Frequency
VMS	Variable Message Sign
VSP	Virginia State Police
VOAD	Voluntary Organizations Active in Disaster
VOIP	Voice Over Internet Protocol
WEA	Wireless Emergency Alerts
WVDEP	West Virginia Department of Environmental Protection
WVDHHR	West Virginia Department of Health and Human Resources
WVDHSEM	West Virginia Division of Homeland Security and Emergency Management
WVSP	West Virginia State Police

PEACH BOTTOM PLUME 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 April 16, 2024 Peach Bottom Plume Exercise.

TAYLOR S GRIFFITHS Digitally signed by TAYLOR S GRIFFITHS Date: 2024.04.11 16:32:47 -04'00'	April 11, 2024
FEMA Site Specialist	Date
Laurin E. Fleming Digitally signed by Laurin E. Fleming Date: 2024.04.12 15:05:48 -04'00'	
Lead State Planner	Date
JOSEPH A SUDERS Digitally signed by JOSEPH A SUDERS Date: 2024.04.12 21:09:18 -04'00'	
FEMA Team Leader	Date

Appendix B: Method of Operation and Extent of Play

OBJECTIVE 1 – Emergency Operations Management

Capability Target 1.1: Mobilization *(Vice Sub-Element 1.a.1)*

Core Capability: Operational Coordination; Planning

Recommended Evaluation Frequencies: At every assessment activity.

Recommended Assessment Activities: Exercise; Drill.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (A.1, A.1.a, A.1.b, A.3, A.4, A.5, C.1, C.2, C.2.a, C.2.b, C.3, E.1, E.1.a, E.3, F.1.c, H.6, and O.1)

Intent: The capability to alert, notify, and mobilize OROs to staff facilities in support of emergency operations.

Demonstration and Evaluation Guidance:

5. Alert, notify, and mobilize key personnel, to include a twenty-four (24) hour staffing roster, and activate facilities in a timely manner.
6. Receive and verify notifications.
7. Identify and request additional resources, as needed.
8. Determine a facility operational.

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.

Capability Target 1.1 (Mobilization) State of Maryland Negotiated Extent of Play:

Table 1: Capability Target 1.1 State of Maryland Negotiated Extent of Play

1.1 State of Maryland Negotiated Extent of Play:
• All activities must be based on the ORO's plans/procedures and completed as they would be in an actual emergency, except as noted below. • Players and Controllers will pre-stage at various locations to reduce the amount of travel time to the respective Emergency Operations Centers (EOCs). • Pre-staging within the facility is permitted, however EOCs will not initiate activation until notification to mobilize and respond has been received. • If possible, FEMA Evaluators will be added to the EverBridge System to receive notifications from the MJOC. • Upon receipt of the notification messages pre staged SEOC staff will report to the SEOC at the MDE AAC from the staging areas. • The MJOC and SEOC participants can discuss back up conference call platforms with the FEMA Evaluator. • The MJOC will not be in the Maryland Department of Emergency Management's facility for this exercise. They will be relocating to the SHA State Operations Center (SOC), the designated Continuation of Operations (COOP) alternative facility. • Under normal circumstances the following MDEM Staff SEOC Positions and State Agencies would be in Person at the MDE AAC:

1.1 State of Maryland Negotiated Extent of Play:

- MDEM SEOC Commander/Duty Office
- MDEM Executive Liaison.
- MDEM Executive Director
- MDEM Executive Administrative Assistant
- MDEM Joint Information Center (JIC) Manager
- MDEM PIO and staff
- MDEM PIO deployed to the Constellation Emergency Offsite Facility JIC
- MDEM Operations Section
- MDEM Liaison deployed to the Constellation Emergency Offsite Facility
- MDEM Liaison deployed to the PEMA SEOC
- MDEM Liaison deployed to the ICP/TOC
- MDEM Planning Section
- MDEM Resource and Logistics Section
- MDEM Liaison Officers (deployed to the Local Jurisdictions EOCs)
- MDEM Rumor Control SimCell
- Maryland Department of the Environment (MDE)
- Maryland Department of Health (MDH)
- Maryland Department of Natural Resources (DNR)
- Maryland Department of Agriculture (MDA)
- Maryland Department of Transportation (MDOT)
- Maryland State Police (MDSP)
- MDSP Liaisons deployed to the ICP/TOC
- United States Coast Guard Sector Maryland-NCR (USCG)
- The Maryland Institute for Emergency Medical Services Systems (MIEMSS)
- DHS Cybersecurity and Infrastructure Security Agency (CISA)
- National Weather Service (NWS)
- Maryland Coordination and Analysis Center (MCAC)

- However, currently, due to a real-world disaster incident in Maryland many of our State Agency State Coordinating Functions (SCFs) will not be able to participate in this Exercise. We will be participating in another State EOC exercise on September 10, 2024. The following State Agencies will NOT be participating in the 2024 PBAPS HAB Graded Exercise:
  - Maryland Department of Transportation
  - Maryland State Highway Administration
  - US Coast Guard (Baltimore and National Capital Region)
  - Maryland Department of Natural Resources
  - Maryland State Police
  - Maryland Natural Resources Police

- The Following MDEM SEOC staff positions and State Agencies will be activated virtually:
  - MDEM Finance & Admin Section Chief
  - The Maryland Department of Human Services (MDHS)
  - Maryland Department of Disability (MDOD)
  - Maryland Military Department
  - Maryland Department of Education (MSDE)

1.1 State of Maryland Negotiated Extent of Play:
○ Maryland Department of General Services (DGS) ○ Maryland Energy Administration (MEA) ○ Maryland Military Department (MMD) ○ The American Red Cross (ARC) ○ The Maryland Department of Planning (MDP) ○ The Public Service Commission (PSC) ○ Radio Amateur Civil Emergency Services (RACES) • MDEM and Local Jurisdictions will provide FEMA Evaluators with all electronic notification records. ○ WEBEOC logs will be provided electronically after the exercise. ○ Checklists will be provided electronically after the exercise. ○ Incident Briefs will be provided electronically after the exercise. Locations Evaluated • MDEM SEOC at the MDE AAC • EOF • ICP/TOC • State AAC (MDE) • MDEM JIC (MDE) • MJOC at the SHA SOC • EOF JIC

Capability Target 1.1 (Mobilization) Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:

Table 2: Capability Target 1.1 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play

1.1 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:
• All activities must be based on the ORO's plans/procedures and completed as they would be in an actual emergency, except as noted below. • Local Jurisdiction EOC staff may stage outside of the EOC or designated staging area. • The Local Jurisdictions will include FEMA Evaluators in notifications used to notify their staff of the exercise incident. • Once notification of the incident is received staff may enter the EOC. • The Local Jurisdictions OOS demonstrations will not include the notification process. However, personnel will describe their notification and mobilization process. Locations Evaluated • Cecil County EOC • Harford County EOC

Capability Target 1.2: Direction and Control *(Vice Sub-Element 1.b.1, 1.c.1, 1.e.1)*

Core Capabilities: Operational Coordination; Environmental Response/Health and Safety; Public Information and Warning; Mass Care Services; Public Health, Healthcare, and Emergency Medical Services; Situational Assessment; Critical Transportation; Planning

Recommended Evaluation Frequencies: At every assessment activity.

Recommended Assessment Activities: Exercise; Drill.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (A.1, A.1.a, A.1.b, A.1.c, A.2, A.3, A.5, C.2, C.2.a, C.2.b, C.3, D.4, E.1, H.6, and O.1)

Intent: The capability to provide overall direction and control of response efforts, commensurate with the responsibilities of leadership, as detailed in plans/procedures.

Demonstration and Evaluation Guidance:

7. Support protective action decision-making.
8. Conduct briefings in a timely manner.
9. Maintain situational awareness.
10. Coordinate response activities with other organizations.
11. Obtain resources to support emergency operations.
12. Provide and maintain adequate facilities and equipment to support the emergency response.

Capability Target 1.2 (Direction and Control) State of Maryland Negotiated Extent of Play:

Table 3: Capability Target 1.2 State of Maryland Negotiated Extent of Play

1.2 State of Maryland Negotiated Extent of Play:
• All activities must be based on the ORO's plans/procedures and completed as they would be in an actual emergency, except as noted below. • The ICP/TOC may utilize plans and procedures for operational security purposes. Locations Evaluated • MDEM SEOC at the MDE AAC • EOF • ICP/TOC • State AAC (MDE) • MDEM JIC (MDE) • MJOC at the SHA SOC • EOF JIC

Capability Target 1.2 (Direction and Control) Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:

Table 4: Capability Target 1.2 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play

1.2 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:
• All activities associated with direction and control will be performed based on the ORO's plans and procedures and completed, as they would be in an actual emergency. Locations Evaluated • Cecil County EOC • Harford County EOC

Capability Target 1.3: Protective Action Recommendations *(Vice Sub-Element 2.b.1; 3.e.1)*

Core Capabilities: Operational Coordination; Environmental Response/Health and Safety; Situational Assessment; Planning

Recommended Evaluation Frequencies: Biennially

Recommended Assessment Activities: Biennial exercise only

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (D.4, J.7, J.8, J.8.b, J.9, and O.1)

Intent: The capability to use dose assessment and field data, compare this data to the PAGs, and choose among a range of protective actions those most appropriate in a given emergency.

Demonstration and Evaluation Guidance:

Plume

5. Select and implement pre-planned precautionary protective actions.
6. Utilize the methodology in plans/procedures to select among a range of protective actions most appropriate in a given emergency. This could also include the use of preplanned precautionary protective actions contained in plans/procedures.
7. Develop Protective Action Recommendations (PARs).
8. Transmit PARs in a timely manner.
9. Transmit PARs in a timely manner. Who, by title/position and organization, transmitted each PAR to the decision makers.

Post Plume

2. Assess radiological consequences and provide appropriate PARs for the ingestion exposure pathway.

Capability Target 1.3 (Protective Action Recommendations) State of Maryland Negotiated Extent of Play:

Table 5: Capability Target 1.3 State of Maryland Negotiated Extent of Play

1.3 State of Maryland Negotiated Extent of Play:
• All activities are based on the ORO's plans and procedures and completed as they would be in an actual emergency. • PARs and PADs will be based on the 2017 Environmental Protective Agency (EPA) Protective Actions Guidelines (PAGs). • Preplanned precautionary protective actions are listed on our State PAD forms. These precautionary measures will be discussed at the SAE and GE ECL. • PAR discussions for the State begin at a SAE ECL prior to Peach Bottom Atomic Power Station (PBAPS) issuing a PAR for the States and their Local Jurisdictions. • There are no post-plume/ingestion graded criteria for this exercise.
Locations Evaluated:

1.3 State of Maryland Negotiated Extent of Play:
• MDEM SEOC at the MDE AAC • State AAC (MDE)

Capability Target 1.3 (Protective Action Recommendations) Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:

Table 6: Capability Target 1.3 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play

1.3 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:
• All activities are based on the ORO's plans and procedures and completed as they would be in an actual emergency. • The Local Jurisdictions will be on both Bridge Lines, the State-to-State Bridge Line and the Maryland to Local Jurisdiction Bridge Line for the PARs and PADs. • Maryland as a proactive State will begin with PAR to PAD discussions at a SAE ECL, even without a specific PAR from the PBAPS. • The Local Jurisdictions may decide on a different PAD than what the Decision-Makers for the State have recommended since Maryland is a Home Rule State.   ○ If the Local Jurisdictions do not accept the State PAD, they are still required to provide reasonable assurance that their populations will be protected. • The Local Jurisdictions will receive electronic versions of the PAD forms from MDE so that the EAS messaging can follow the PAD. Locations Evaluated: • Cecil County EOC • Harford County EOC

Capability Target 1.4: Protective Action Decisions for the Plume Phase *(Vice Sub-Element 2.b.2; 2.c.1)*

Core Capabilities: Operational Coordination; Environmental Response/Health and Safety; Situational Assessment; Critical Transportation; Planning

Recommended Evaluation Frequencies: Biennially

Recommended Assessment Activities: Biennial exercise only.

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (D.1.b, D.4, J.6, J.7, J.8, J.8.b, J.10, J.10.a, J.10.b, J.11.c-g, and O.1)

Intent: The capability to utilize appropriate factors and necessary coordination in the decision-making process used to make PADs for the public.

Demonstration and Evaluation Guidance:

3. Coordinate and make PADs for members of the general public.
4. Coordinate and make PADs for those with access and functional needs.
5. Coordinate and make PADs for students at schools.
6. Coordinate and make subsequent or alternate PADs.
7. Coordinate and make decisions on the administration of KI (where applicable) for the public and institutionalized members of the population.

Capability Target 1.4 (Protective Action Decisions for the Plume Phase) State of Maryland Negotiated Extent of Play:

Table 7: Capability Target 1.4 State of Maryland Negotiated Extent of Play

1.4 State of Maryland Negotiated Extent of Play:

• All activities will be based on the ORO's plans and procedures and completed as they would be in an actual emergency.
• PAR discussions leading to a PAD for Maryland will begin at a SAE prior to PBAPS issuing a PAR for the States and Local Jurisdictions.
  ○ The Commonwealth of Pennsylvania will include Maryland and its affected counties in their decision-making process, but they may decide independent of the Maryland's decision.
• MDE is the lead decision-making State Agency.
• The decision makers on the Bridge Line will review and verbalize information regarding plant conditions, wind direction, weather conditions, and field data from the FMTs.
• MDEM will use the Maryland Bridge Line with the risk counties, MDE, MDH, and other decision-making SCFs to discuss the PARs and to decide on the PADs.
  ○ These State Agencies and Local Jurisdictions will coordinate together and arrive at a PAD based on all available information. This includes plant conditions, as described by the Emergency Action Level (EAL) and ECL given, and information generated from the MDE AAC, FMTs and EOF.

1.4 State of Maryland Negotiated Extent of Play:
• The decision making SCFs, along with Harford County, and Cecil County on the Maryland Bridge Line will transition to the PEMA Bridge Line to decide on the simultaneously timing for the simulated "sounding of the sirens" and the timing to disseminate the EAS message. • Additional PAR and PAD discussions will occur with a change in an ECL or an airborne release under an SAE and GE. Locations Evaluated: • MDEM SEOC at the MDE AAC • State AAC (MDE) • MDEM JIC (MDE)

Capability Target 1.4 (Protective Action Decisions for the Plume Phase) Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:

Table 8: Capability Target 1.4 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play

1.4 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:
• All activities will be based on the ORO's plans and procedures and completed as they would be in an actual emergency. **Note:** Harford and Cecil County do not have any institutionalized populations within the ten (10)-mile EPZ. Locations Evaluated: • Cecil County EOC • Harford County EOC

Capability Target 1.5: Protective Action Decision Implementation for the Plume Phase *(Vice Sub-Element 3.b.1; 3.c.1; 3.c.2)*

Core Capabilities: Operational Coordination; Public Information and Warning; Environmental Response/Health and Safety; Critical Transportation; Health and Social Services; Housing; Natural and Cultural Resources; Planning

Recommended Evaluation Frequencies: Biennially

Recommended Assessment Activities: Exercise; Drill

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (A.4, C.2.a, G.1, J.11, J.11.a, J.11.b, J.11.c, J.11.e, J.11.g, and O.1)

Intent: The capability to implement precautionary protective action and/or PADs, including evacuation and/or sheltering, for all populations within the plume and ingestion exposure pathway EPZs. The populations include those with access and functional needs, students, and institutionalized individuals.

Demonstration and Evaluation Guidance:

8. Implement PADs, ensuring communication and coordination with all appropriate jurisdictions.
9. Assist those with access and functional needs during the implementation of PADs.
10. Communicate, coordinate, and implement protective actions for schools.
11. Communicate with transportation officials.
12. Identify evacuation routes for the general public.
13. Make KI available to both institutionalized persons and the general public, in accordance with plans and procedures.

Capability Target 1.5 (Protective Action Decision Implementation) State of Maryland Negotiated Extent of Play:

Table 9: Capability Target 1.5 State of Maryland Negotiated Extent of Play

1.5 State of Maryland Negotiated Extent of Play:
• All activities will be based on the ORO's plans and procedures and completed as they would be in an actual emergency. • All implementation of PADs will be executed at the local level.
Locations Evaluated: • MDEM SEOC at the MDE AAC

Capability Target 1.5 (Protective Action Decision Implementation) Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:

Table 10: Capability Target 1.5 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play

1.5 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:

• All activities will be based on the ORO's plans and procedures and completed as they would be in an actual emergency.
• Protective actions for Risk schools, including the evacuation to host schools, will be implemented at the Local level.
• Both Cecil and Harford County will discuss their measures for implementing PADs, including communicating and implementing these protective actions for those with disabilities and access and functional needs.
• Local Jurisdictions will discuss their plans for communicating with transportation officials and how evacuation routes are identified.
• These evacuation routes will be shown on a map at the local's EOC.
• KI distribution for the Emergency Workers will be discussed.
  ○ KI is made available to the public through distribution events held throughout the year.
• Both school bus drivers and school representatives will be interviewed as part of the evaluation in the OOS School Drill. This will cover the implementation of the school-based protective actions.
• During the OOS CRC Drill on April 17, 2024, Harford and Cecil County will discuss how citizens that require transportation will reach the CRC.
• During the OOS Risk School Evacuation Drill, the Principal, school facilities employee, a bus driver, or the school nurse will be available to discuss their evacuation procedures.
  ○ The State Controller will read the scenario to the EOC. The EOC will notify the County School Administrator who will notify the Risk School to evacuate.
  ○ This will include information about ensuring KI is provided to the children and bus drivers.
  ○ One bus driver will be available to discuss the evacuation route with a FEMA Evaluator.
  ○ The OOS Risk School evaluations will occur on April 17, 2024, at the Risk schools, at 0900hrs.
 	
Locations Evaluated:
• Cecil County EOC
• Harford County EOC

OBJECTIVE 2 - Exposure Control

Capability Target 2.1: Emergency Worker Exposure Control Decision-Making Process *(Vice Sub-Element: 2.a.1)*

Core Capabilities: Operational Coordination; Environmental Response/Health and Safety; Situational Assessment; Planning

Recommended Evaluation Frequencies: Biennially

Recommended Assessment Activities: Exercise; Drill

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (C.2.c, H.11, K.2, K.2.b, K.3, K.3.a, M.1.b, M.8, and O.1)

Intent: The capability to assess and control the radiation exposure and dose received by emergency workers and utilize a decision-making chain to authorize emergency worker exposure limits to be exceeded for specific missions.

Demonstration and Evaluation Guidance:

9. Control emergency workers' exposure and dose, including offsite workers performing duties onsite.
10. Maintain record of dose as a result of exposure.
11. Authorize exposures and dose in excess of identified limits.
12. Process for considering occupational exposures and to authorize individuals to receive doses in excess of occupational dose limits.
13. Determine a correction factor for DRD-based isotopic release mixture.
14. Control exposure and dose for temporary reentry of emergency workers, or members of the public, to restricted areas.
15. Determine the need to authorize radioprotective drugs using projected thyroid doses and field measurements. Projections are compared to previously established PAGs.
16. Adequately protect members of the public from radiological exposure and control dose for those who are authorized to temporarily reenter a restricted area.

Capability Target 2.1 (Emergency Worker Exposure Control Decision-Making Process) State of Maryland Negotiated Extent of Play:

Table 11: Capability Target 2.1 State of Maryland Negotiated Extent of Play

2.1 State of Maryland Negotiated Extent of Play
• All activities are based on the ORO's plans and procedures and completed as they would be in an actual emergency. • Distribution of PPE, KI tablets, to the FMT emergency workers, after their Emergency Worker brief, will be simulated by the MDE FMTs.

2.1 State of Maryland Negotiated Extent of Play
• The AAC will discuss how they authorize radioprotective drugs using projected thyroid doses and field measurements. • The AAC will discuss their process for considering occupational exposures and dose limits and how they authorize individuals to re-enter restricted areas. • All protective actions are based on the 2017 EPA PAGs. Locations Evaluated: • State AAC (MDE) and FMTs

Capability Target 2.1 (Emergency Worker Exposure Control Decision-Making Process) Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:

Table 12: Capability Target 2.1 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play

2.1 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:
• All activities are based on the ORO's plans and procedures and completed as they would be in an actual emergency. • A staging area will be established for emergency workers to receive their Emergency Worker briefing, KI tablets, and dosimetry before responding to the plant with law enforcement. • Emergency Workers in the Harford and Cecil County EOCs will receive an Emergency Worker briefing. • The Local Jurisdictions will provide information on the contents of the Emergency Worker kits. • Emergency Workers will discuss with the FEMA Evaluator how they would gain Re-entry permission from the Radiological Officer (RO). • The Local Jurisdictions will discuss the reentry and escorting of pre-approved citizens back into the EPZ. Locations Evaluated • Harford County EOC • Cecil County EOC

Capability Target 2.2: Emergency Worker Exposure Control Management *(VICE Sub-Element 3.a.1)*

Core Capabilities: Operational Coordination; Environmental Response/Health and Safety; Planning

Recommended Evaluation Frequencies: Biennially

Recommended Assessment Activities: Exercise; Drill

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (C.2.c, H.11, H.11.b, K.2.b, K.3, K.3.a, M.1.b, and O.1)

Intent: The capability of emergency workers to manage dose and exposure, use equipment (e.g., dosimetry, radio protective drugs), and identify procedures to monitor their exposure and dose, including following procedures to obtain authorization to receive emergency exposures in excess of the PAGs.

Demonstration and Evaluation Guidance:

10. Maintain an appropriate inventory of DRDs that are leak-tested or current in calibration.
11. Maintain an appropriate inventory of PRDs.
12. Retain an adequate supply of radioprotective drugs.
13. Adequately distribute appropriate DRDs and PRDs.
14. Adequately distribute radioprotective drugs to emergency workers.
15. Record and report exposures in the field.
16. Implement decisions to administer radioprotective drugs.
17. Report to individual responsible for managing exposure and dose when limits are reached.
18. Implement exposure control decisions to members of the public from radiological exposure and control dose for those who are authorized to temporarily reenter a restricted area.

Capability Target 2.2 (Emergency Worker Exposure Control Management) State of Maryland Negotiated Extent of Play:

Table 13: Capability Target 2.2 State of Maryland Negotiated Extent of Play

2.2 State of Maryland Negotiated Extent of Play
• All activities are based on the ORO's plans and procedures and completed as they would be in an actual emergency. • The ALC, which is presented to FEMA annually, contains information including calibration, expirations dates, and leakage checks. However, this does not preclude the FEMA evaluator from validating instrument calibration during the assessment activity. • The MDE AAC will discuss their supply of radioprotective drugs, and their process for distributing DRDs and PRDs, including discussing the contents of the Emergency Worker kits.

2.2 State of Maryland Negotiated Extent of Play
• MDE FMT staff will ensure that emergency workers under their control receive a radiological briefing, are equipped with radiological dosimetry and are practicing emergency worker exposure control. Dosimetry will be distributed to these initial deployment personnel as soon as reasonably possible. • Radiological briefings will be provided to address exposure limits, procedures to replace those approaching limits, and how permission to exceed limits is obtained from the county. Emergency workers will also be briefed on when to take KI and on whose authority. • Distribution of KI will be simulated. • The AAC will demonstrate the Emergency Worker Brief for the FMTs and discuss the distribution of the KI and forms. • FMTs will discuss and demonstrate their KI, Dosimetry, sampling forms, how they manage exposures and who they report to when dose limits are reached. • The MDE AAC FMTs will demonstrate their operational checks during an OOS Drill. • There will be two (2) teams deployed for the Full Participation Exercise. FMT "A" will be in Harford County and FMT "B" will be in Cecil County. Locations Evaluated: • State AAC (MDE) • FMTs A and B in the Local Jurisdictions

Capability Target 2.2 (Emergency Worker Exposure Control Management) Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:

Table 14: Capability Target 2.2 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play

2.2 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play
• All activities are based on the ORO's plans and procedures and completed as they would be in an actual emergency. • Actual KI will not be distributed. • KI will be available for inspection at the respective storage location. (Note – this may be demonstrated during the OOS evaluations). • Local Jurisdictions will provide inventory counts and demonstrate the number of cases and boxes of KI they have to the FEMA Evaluator, but they will not open boxes of KI. • Emergency Workers will receive an Emergency Worker briefing, equipment, simulated KI, and protective gear before heading out into the field.

2.2 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play
• Emergency Workers will demonstrate basic knowledge of procedures by discussing what they learned in the Emergency Worker brief to the FEMA Evaluator. • Harford and Cecil County EOC will discuss their inventory of dosimetry and radio-protective drugs. Locations Evaluated: • Harford County EOC • Cecil County EOC

OBJECTIVE 3 - Alert and Notification

Capability Target 3.1: Communications *(Vice Sub-Element: 1.d.1)*

Core Capabilities: Operational Communications; Operational Coordination; Situational Awareness; Planning

Recommended Evaluation Frequencies: At every assessment activity

Recommended Assessment Activities: Exercise; Communication Drill (N.4.e)

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (E.1.a, E.3, F.1, F.1.a, F.1.b, F.1.c, F.3, and O.1)

Intent: The capability to provide and maintain reliable communications with emergency personnel.

Demonstration and Evaluation Guidance:

- Utilize communication systems that are fully functional, continuously available, and redundant.
- Maintain periodic test results and corrective actions on a real time basis.
- Access at least one communication system that is independent of the commercial telephone system.
- Manage the communication systems and ensure that all message traffic is handled without delays that might disrupt emergency operations.
- Identify and address any failures of the systems.
- Transmit, receive, and understand messages (i.e., "content check").

Capability Target 3.1 (Communications) State of Maryland Negotiated Extent of Play:

Table 15: Capability Target 3.1 State of Maryland Negotiated Extent of Play

3.1 State of Maryland Negotiated Extent of Play
• All activities are based on the ORO's plans and procedures and completed as they would be in an actual emergency. • All communication, both written and electronic, will begin with **"THIS IS AN EXERCISE".** • The MJOC will send out an Everbridge message to all the Local Jurisdictions, MDEM staff, SCFs, the Governor's office, and others on the SEOC activation list. • The MJOC will keep an electronic log of all EOC representatives that receive the EverBridge Alerts and present it to the FEMA Evaluator. This includes the initial notification messages about the NPP Incident, activation of the SEOC, and an increase of ECLs.   ○ The MJOC and SEOC staff will discuss the back-up to this system. • Backup communications are available for WebEOC which will be discussed. • Law enforcement staff at the ICP/TOC and Staging Area will demonstrate two methods of communication.

3.1 State of Maryland Negotiated Extent of Play
• The MDE FMTs will use Google Sheets and radios as their primary communication method. Cell phones are the backup method. • MDEM Staff and certain State Agencies will be co-located in one room.   ○ Face-to-face communication will be utilized throughout the exercise. • Communication tests are held throughout the year and results were recorded in the 2023 ALC, which has been submitted to, and approved by, FEMA. Locations Evaluated • MJOC at the SHA SOC • MDEM SEOC at the MDE AAC.

Capability Target 3.1 (Communications) Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:

Table 16: Capability Target 3.1 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play

3.1 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:
• All activities are based on the ORO's plans and procedures and completed as they would be in an actual emergency. • FEMA Evaluators receive all electronic notifications. • All communication, both written and electronic, will begin with "THIS IS AN EXERCISE". Locations Evaluated • Cecil County Public Safety Answering Point (PSAP)/911 Center • Harford County PSAP/911 Center • Harford County EOC • Cecil County EOC

Capability Target 3.2: Alert and Notification of the Public *(Vice Sub-Element: 5.a.1; 5.a.3; 5.a.4)*

Core Capabilities: Public Information and Warning; Planning

Recommended Evaluation Frequencies: Biennially

Recommended Assessment Activities: Biennial exercise only

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (E.2, E.4, E.5, F.3, and O.1)

Intent: The capability to provide instructions to the public.

Demonstration and Evaluation Guidance:

Alert and Notification System

10. Sequentially provide an alert signal followed by an initial instructional message to populated areas.
11. Alert and notify the general public.
12. Identify and address any failures of the system(s) or portion of a system(s).
13. Actual testing of the mobile public address system will be conducted at an agreed upon location.

Emergency Alert System (EAS)

14. Identify the process to activate the EAS.
15. Ensure that updated emergency information is disseminated in a timely manner.
16. Ensure that current emergency information is repeated at pre-established intervals.
17. Identify the process to activate the EAS, to include the process to receive and then broadcast updated information/messages and verification of the message, if applicable.
18. EAS/National Warning System (NAWS) Station.
19. Broadcast the message on a 24-hour basis.

Route/Alternate Alerting

- Complete route alerting, whether because of failure for system/portion of a system or for exception areas, as needed to demonstrate all routes are capable of being run in allotted time. Emphasis on the most challenging routes and demonstration of these routes will be varied from assessment activity to assessment activity. Challenging routes are defined as those that may be difficult to accomplish, such as those that are lengthy or with conditions (physical or otherwise) that may affect the speed and accuracy with which the route can be completed (e.g., traffic patterns and/or capacity, road conditions, etc.)

Capability Target 3.2 (Alert and Notification of the Public) State of Maryland Negotiated Extent of Play:

Table 17: Capability Target 3.2 State of Maryland Negotiated Extent of Play

3.2 State of Maryland Negotiated Extent of Play:
• All activities are based on the ORO's plans and procedures and are completed as they would be in an actual emergency. • Alert and Notification of the Public will commence once a PAD has been agreed upon at the State and Local Level. Harford County is responsible for creating, approving, and disseminating the EAS message for the Counties and the State. • The decision-making SCFs, along with Harford and Cecil County on the Maryland Bridge Line, will transition to the PEMA Bridge Line to decide on the simultaneous timing for the simulated "sounding of the sirens" and the timing to disseminate the EAS message. Locations Evaluated: • MDEM SEOC at the MDE AAC

Capability Target 3.2 (Alert and Notification of the Public) Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:

Table 18: Capability Target 3.2 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play

3.2 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:
• All activities are based on the ORO's plans and procedures and are completed as they would be in an actual emergency. • Siren sounding will be simulated. • Harford County will develop and simulate sending the EAS message for the respective Maryland Local Jurisdictions and will describe the process of using EMnet to the Evaluator. • Harford County will discuss their process for scripting and approving EAS messages, including sending updated Public Information messaging to the public. • Harford County will demonstrate the approval process of the EAS message and show the sharing of the message with MDEM and other Agencies. • The method of sending the message will be verified by a FEMA Evaluator however, the actual message will not be broadcasted. • Harford County will contact one EAS station and send a simulated EAS through the EMNET to that Station.   ○ The EMNET system is computerized without human intervention. • Both Local Jurisdictions will have a failed siren Inject at the initial siren sounding at an SAE.

3.2 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:
o The announcement of the failed siren message will be simulated by the MDEM Controller at the Local Jurisdiction's EOCs. o Both Local Jurisdictions will demonstrate Route Alerting. • The Route Alerting participants will receive their Emergency Worker Briefings at their EOCs prior to going to the Route Alerting demonstration. • Harford and Cecil County will discuss, with the FEMA Evaluator, where their confidential and secure list of citizens that have disabilities, access, and functional needs are located. o These lists provide information to Local Jurisdictions as to which homes have people with disabilities, access, and functional needs. o The Sheriff Deputy demonstrating the route alerting will discuss knocking on doors to alert this population. • **Harford County Route Alerting:** o Harford County's Sheriff's Office (HCSO) will receive the Emergency Worker briefing during the Exercise. o Harford County's Sheriff's Office (HCSO) will demonstrate the route alerting for the simulated siren failure. ▪ Harford County will dispatch one (1) team consisting of a lead Sheriff's Deputy and two (2) staff/team members as driver and back-up. • **Cecil County Route Alerting:** o Cecil County Sheriff's Office (CCSO) will demonstrate the route alerting for the simulated siren failure. o The Sheriff's Deputy will receive the Emergency Worker briefing during the Graded Exercise and then drive to the Rising Sun Fire Department – Station 8 and meet the FEMA Evaluator. o The FEMA Evaluator will drive directly to the Rising Sun Fire Company and await the arrival of the CCSO Deputy. o The Address for the Rising Sun Fire Department – Station 8 is: ▪ 300 Joseph Biggs Memorial Hwy., Rising Sun, MD 21911 o The Sheriff's Deputy will demonstrate to the FEMA evaluator where that is and proceed with the route alerting. Locations Evaluated: • Harford County EOC • Cecil County EOC • Harford County Route Alerting Teams (Harford County EOC)

3.2 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:
• Cecil County Route Alerting Staging (Rising Sun Fire Department – Station 8)

Capability Target 3.3: Emergency Information and Instructions for the Public and News Media *(Vice Sub-Element: 5.b.1; 3.e.2)*

Core Capabilities: Public Information and Warning; Planning

Recommended Evaluation Frequencies: Biennially

Recommended Assessment Activities: Biennial exercise only

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (E.2, E.4, E.5, G.1, G.2, G.3, G.3.a, G.4, G.5, and O.1)

Intent: The capability to disseminate emergency information and instructions to the public during all phases of an incident.

Demonstration and Evaluation Guidance:

Plume Phase

- Deliver coordinated, prompt, reliable, and actionable information in a timely manner.
- Provide clear, concise, accessible messaging using plain language.
- Messaging addresses appropriate cultural and linguistic considerations.
- Ensure subsequent messaging is consistent with protective actions.
- Update information as the incident progresses, to include validating previously identified protective areas and clearly identifying any new protective action areas, any information that is no longer valid, and any changes to previously provided information (e.g., rerouting of evacuation routes due to impediments, etc.).
- Respond to media and public inquiries.

Post-Plume Phase

3. Rapidly disseminate of ingestion exposure pathway information to predetermined individuals and businesses.
4. Provide information to the public that addresses temporary reentry to a restricted area, permanent relocation from areas not evacuated, and return to formerly restricted areas will be communicated.

Capability Target 3.3 (Emergency Information and Instructions for the Public and News Media) State of Maryland Negotiated Extent of Play:

Table 19: Capability Target 3.3 State of Maryland Negotiated Extent of Play

3.3 State of Maryland Negotiated Extent of Play:
• All activities are based on the ORO's plans and procedures and completed as they would be in an actual emergency. • Law enforcement will vet all press releases and briefings to the public prior to release. • An MDEM PIO liaison will be present for consultation at the EOF JIC. • There are no populations in the ten (10)-mile EPZ that meet the criteria for our public messaging to be translated.

3.3 State of Maryland Negotiated Extent of Play:
• Press releases will be created in accordance to plans and procedures, but not published. Any press releases scripted should be approved, released to players, and electronic copies provided to the evaluators at the end of the exercise. • MDEM will have the Public Inquiry phone staff to field all public inquiries made directly to Maryland. • The Public inquiry SimCell will make phone calls to the Public Inquiry phone. • MDEM will not handle Press releases for risk and host school transfers, parks, and emergency worker KI ingestion. The Local Jurisdictions will send these out. • Any post-plume criteria listed will not be demonstrated during this exercise. Locations Evaluated: • MDEM SEOC at the MDE AAC • EOF JIC

Capability Target 3.3 (Emergency Information and Instructions for the Public and News Media) Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:

Table 20: Capability Target 3.3 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play

3.3 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:
• All activities are based on the ORO's plans and procedures and completed as they would be in an actual emergency. • There are no populations in Harford or Cecil County that meet the criteria for translated public messaging. • The Local Jurisdictions will handle all public messaging for risk and host school transfers, parks, and emergency worker KI ingestion. • The Local Jurisdictions SHA representative, along with the Local Jurisdiction's Department of Works will monitor any road impediments or evacuation concerns and coordinate with Local Jurisdictions EOCs to provide accurate information for public messaging. • The Public inquiry SimCell will make phone calls to the Public Inquiry phones in Harford and Cecil County's EOCs. • Any post-plume criteria listed will not be demonstrated during this exercise. Locations Evaluated: • Cecil County EOC • Harford County EOC

OBJECTIVE 4 - Detect, Measure, Sample, Analyze, and Assess

Capability Target 4.1: Field Monitoring Teams Management *(Vice Sub-Elements: 4.a.2)*

Core Capabilities: Operational Coordination; Environmental Response/Health and Safety; Planning

Recommended Evaluation Frequencies: Biennially

Recommended Assessment Activities: Exercise; Drill

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (H.11, H.13, I.5, I.6, I.9, I.10, M.7, M.8, and O.1)

Intent: The capability to provide overall management of FMTs to direct movements and measurements to characterize the plume and its impacts.

Demonstration and Evaluation Guidance:

10. Brief FMTs on predicted plume location and direction, plume travel speed, equipment operational checks, background measurement, and exposure control procedures before deployment.
11. Direct the FMTs to monitoring locations, predesignated points or otherwise, at times and locations sufficient to characterize the plume.
12. Obtain peak plume measurements from FMTs.
13. Direct FMTs to collect air samples at locations and times sufficient to characterize the plume.
14. Keep Incident Command informed of FMTs activities and location(s) during a Hostile Action Based (HAB) incident or other instances when an Incident Command Post (ICP) or other may be in use.
15. Coordinate and share information amongst all FMTs (licensee, Federal, state, and local).
16. Coordinate sample analysis from field to those responsible for assessing radiological data.
17. Coordinate transfer of sample media to locations and organizations responsible for assessing radiological data.
18. Assist with development and modification of sampling plans, as appropriate.

Capability Target 4.1 (Field Monitoring Teams Management) State of Maryland Negotiated Extent of Play:

Table 21: Capability Target 4.1 State of Maryland Negotiated Extent of Play

4.1 State of Maryland Negotiated Extent of Play:
• All activities are based on the ORO's plans and procedures and completed, as they would be in an actual emergency. • The FMTs will demonstrate their operational checks OOS. • The FMTs will pre-stage in the counties for the Full Participation Exercise. There will be two (2) teams deployed for the Full Participation Exercise. FMT "A" will be at Harford County and FMT "B" will be in Cecil County.

4.1 State of Maryland Negotiated Extent of Play:
• At least six (6) readings will be obtained by each team at one (1) or more survey point locations. This will be demonstrated in OOS. • Delivery of samples for additional analysis will not be demonstrated. • One (1) sample will be obtained in an area that exhibits above ambient background radiation levels (plume edge) in accordance with plans and procedures. • FMTs will describe to the evaluator how peak exposure rate is measured and reference any LOAs if applicable. • The FMTs will discuss their process for information sharing with the licensee, or any Federal or State Agencies. Locations Evaluated: • State AAC (MDE) • FMT's A and B in the Local Jurisdictions

Capability Target 4.1 (Field Monitoring Teams Management) Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:

Table 22: Capability Target 4.1 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play

4.1 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:
• N/A

Capability Target 4.2: Plume Phase Measurements and Sampling *(Vice Sub-Element: 4.a.3)*

Core Capabilities: Environmental Response/Health and Safety; Planning

Recommended Evaluation Frequencies: Biennially

Recommended Assessment Activities: Exercise; Environmental Monitoring Drill (N.4.d)

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (H.9, H.11, H.11.a, H.11.b, H.12, H.13, I.2, I.5, I.6, I.7, I.8, I.9, I.10, and O.1)

Intent: The capability to make and report measurements of ambient radiation.

Demonstration and Evaluation Guidance:

15. Maintain emergency equipment including calibration and operational checks according to manufacturer's specifications or per national standards.
16. Maintain inventory for emergency kits.
17. Operate and monitor radiation survey instruments to detect changes in radiation exposure rate while moving and in stationary positions.
18. Use appropriate contamination control and PPE.
19. Be in location(s) at the appropriate time(s) to detect and characterize the active release (plume).
20. Obtain peak plume measurements either directly or from licensee field teams.
21. Correctly interpret survey instrument readings to determine submersion in the active plume.
22. Collect representative air samples in the active plume on particulate media (e.g., glass or paper filter) and iodine selective media (e.g., silver zeolite cartridge).
23. Handle sample media and equipment to avoid sample cross-contamination, contamination of equipment and personnel contamination.
24. Determine an appropriate low background location to count sample media.
25. Count iodine and particulate media using appropriate and effective instrumentation and counting geometries or have samples analyzed by a supporting laboratory within four (4) hours.
26. Report to field monitoring team manager all survey and counting results in format and units suitable for use by the organization's dose assessor.
27. Procedures, qualified collection and counting efficiencies, and calculations are capable of detecting airborne radioactive iodine concentrations as low as 10-7 µCi/cc.

Capability Target 4.2 (Plume Phase Measurements and Sampling) State of Maryland Negotiated Extent of Play:

Table 23: Capability Target 4.2 State of Maryland Negotiated Extent of Play

4.2 State of Maryland Negotiated Extent of Play:
• All activities are based on the ORO's plans and procedures and completed, as they would be in an actual emergency. • The FMTs will pre-stage in the counties for the Full Participation Exercise. There will be two (2) teams deployed for the Full Participation Exercise. FMT "A" will be at Harford County and FMT "B" will be in Cecil County. • At least six (6) readings will be obtained by each team at a one (1) survey point at different times in the scenario or at different survey point locations. • In accordance with (IAW) agreements with Constellation Energy Group and State and Local organizations, State teams will not measure plume centerline radiation levels, but will explain to the evaluator how peak exposure rates are calculated. • Airborne radioactivity samples will be counted in sequence with the scenario. However, the air sample may be taken in an area that is safe for the participants which will be agreed upon the evening of the exercise. • The FMTs will demonstrate and discuss their operational checks OOS. • The FMTs will discuss the PPE gear they use and their process for avoiding cross contamination and contamination of equipment. • FMTs will demonstrate the contents of their Emergency Worker kits. • The AAC can discuss the inventorying of the Emergency Worker kits. • All communications will be between the AAC and FMTs and can be demonstrated using their primary communications methods (Google Sheets and radios). • Scenario data location may not result in access to plume dose. • The FMTs can discuss the counting of iodine and particulate media if applicable, but this will not be demonstrated. • Procedures for the detection of low airborne radioactive iodine concentrations can be discussed, if applicable. • Delivery of samples for additional analysis will not be demonstrated. • Only the State FMTs will demonstrate this objective. Locations Evaluated: • State AAC (MDE) • FMT's A and B in the Local Jurisdictions

Capability Target 4.2 (Plume Phase Measurements and Sampling) Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:

Table 24: Capability Target 4.2 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play

4.2 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:
• N/A

Capability Target 4.5: Plume Phase Analysis and Dose Assessment *(Vice Sub-Element: 2.b.1)*

Core Capabilities: Environmental Response/Health and Safety; Planning

Recommended Evaluation Frequencies: Biennially

Recommended Assessment Activities: Exercise; Drill

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (A.3, H.13, I.6, I.8, I.10, K.3, and O.1)

Intent: The capability to collect data, project doses to members of the public and emergency workers and analyze and communicate the results.

Demonstration and Evaluation Guidance:

12. Obtain adequate data to make dose projections.
13. Use software and/or other methods (e.g., manual calculations) to make dose projections for members of the public (both TED and thyroid dose) based on plant data.
14. Compare dose projections to members of the public to EPA PAGs.
15. Compare dose projections to the public with those of the licensee and discuss differences greater than a factor of ten with the licensee and explain reasons for the difference.
16. Make initial PARs based on recommendations of the licensee, release data, meteorological data, and other pertinent information.
17. Promptly communicate PARs to decision-makers.
18. Receive ambient exposure rates from FMTs and compare to model projections.
19. Calculate iodine and particulate concentrations from FMT air samples.
20. Calculate plume ratios of noble gas, iodine's, and particulates, and compare to model projections.
21. Adjust PARs, as necessary, based on analysis of field data.
22. Calculate an incident-specific correction factor for emergency workers inside the plume exposure pathway EPZ.

Capability Target 4.5 (Plume Phase Analysis and Dose Assessment) State of Maryland Negotiated Extent of Play:

Table 25: Capability Target 4.5 State of Maryland Negotiated Extent of Play

4.5 State of Maryland Negotiated Extent of Play:
• These activities are based on the ORO's plans and procedures and completed, as they would be in an actual emergency. • At least six (6) readings will be obtained by each team at a one (1) survey point at different times in the scenario or at different survey point locations. • In accordance with (IAW) agreements with Constellation Energy Group and State and Local organizations, State teams will not measure plume centerline radiation levels.

4.5 State of Maryland Negotiated Extent of Play:
• The FMTs can, if applicable, discuss the comparison of their dose projections with those of the Licensee. Processes for explaining or mitigating any difference in dose projections can be discussed. • Collecting airborne radioactivity samples will be simulated in the field. • Chain of custody procedures to deliver samples for additional analysis will be described to the Evaluator. • The FMTs can discuss how they calculate any iodine and particulate concentrations from their air samples, if applicable. • One (1) sample will be obtained in an area that exhibits above ambient background radiation levels (plume edge) if applicable. • Scenario data location may not result in access to plume dose. • Delivery of samples for additional analysis will not be demonstrated. Locations Evaluated: • State AAC (MDE) • FMT's A and B in the Local Jurisdictions

Capability Target 4.5 (Plume Phase Analysis and Dose Assessment) Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:

Table 26: Capability Target 4.5 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play

4.5 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:
• All activities are based on the ORO's plans and procedures and completed, as they would be in an actual emergency. • During the OOS Monitoring and Decontamination Drills, the Local Jurisdictions will demonstrate thyroid monitoring only for the Emergency Workers. A Ludlum reader will be used for this.   ○ Any data gathered from this process will be shared with MDH to assist in the analysis of field data. • All data collected from the monitoring of the general public and Emergency Workers will be provided to MDH. • The Local Jurisdiction's Health Departments can discuss their role in dose projections for the public.

OBJECTIVE 5 - Operate

Capability Target 5.1: Monitoring, Decontamination, Sheltering, and Registration of Evacuees *(Vice Sub-Element: 6.a.1; 6.c.1)*

Core Capabilities: Operational Coordination; Environmental Response/Health and Safety; Mass Care; Planning

Recommended Evaluation Frequencies: Biennially*

Recommended Assessment Activities: Exercise; Drill

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (J.11.d, J.13, K.4, and O.1)

Intent: The capability to implement radiological monitoring and decontamination of evacuees, and to identify, register, temporarily shelter, and provide congregate care for evacuees at reception centers.

Demonstration and Evaluation Guidance:

3. Set-up operations.
4. Operationally check instruments and equipment.

Monitoring

- Attain and sustain the overall monitoring productivity rate per hour needed to monitor 20 percent of the plume exposure pathway EPZ population, including transients, within a 12-hour period at each facility. The monitoring productivity rate per hour is the number of evacuees that can be monitored, per hour, per location, by the total complement of monitors using an appropriate procedure.
- Monitor evacuees, service animals, pets, vehicles, and possessions.
- Utilize trigger/action levels for determining the need for decontamination.

Decontamination

3. Decontaminate evacuees, and personal belongings, while limiting the spread of contamination.
4. Follow-up with any evacuee(s) who cannot be appropriately decontaminated for assessment; ensure the capability to provide evacuee-referrals.

Vehicles

5. Monitor and decontaminate vehicles.
6. Provide adequate, separate space for both contaminated and non-contaminated vehicles.
7. Monitor emergency worker personnel and their equipment and vehicles for contamination.
8. Decontaminate evacuee vehicles based on trigger/action levels.

Sheltering and Congregate Care

4. Coordinate for incoming evacuees who have been monitored and, if necessary, decontaminated.
5. Establish shelter operations.
6. Congregate care centers and operations in host/support jurisdictions are sufficient to support the expected number of evacuees.

Registration

5. Register evacuees.
6. Ensure the registration area is clean and controlled.

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.

*Exercise participation may be rotated among facilities, but each facility designated in the plan must be evaluated no less than once every eight (8) years.

Capability Target 5.1 (Monitoring, Decontamination, Sheltering, and Registration of Evacuees) State of Maryland Negotiated Extent of Play:

Table 27: Capability Target 5.1 State of Maryland Negotiated Extent of Play

5.1 State of Maryland Negotiated Extent of Play:
• All activities are based on the ORO's plans and procedures and completed, as they would be in an actual emergency. • The Local Jurisdictions will demonstrate the operation of their CRCs including monitoring, decontamination, and sheltering. • State Agencies do not participate in CRC Drills except to provide MDEM Controllers.

Capability Target 5.1 (Monitoring, Decontamination, Sheltering, and Registration of Evacuees) Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:

Table 28: Capability Target 5.1 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play

5.1 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:

• All activities are based on the ORO's plans and procedures and completed, as they would be in an actual emergency.
• The setup of the CRC for monitoring, decontamination, and sheltering will be completed prior to the OOS Drill.
 	
Harford County Community Reception Center and Mass Care Center:
 	
• CRC Monitoring and Decontamination for Citizens
  ○ Harford Community College APGFCU Center on April 17, 2024, at 1900hrs.
  ○ Need to demonstrate at least six (6) people or one (1) person going through six (6) times through.

5.1 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:
▪ Harford County will have an inject for two (2) contaminated persons (one Emergency Worker and one citizen) at this CRC. ○ The monitoring sequences for the first six (6) simulated evacuees per monitoring team will be timed by the Evaluators to determine whether the twelve (12)-hour requirement can be met. ○ Decontamination efforts will be procedurally explained, but due to the nature of the decontamination process and in consideration of the modesty of the participants any decontamination beyond the level of washing of hands or removal of an outer layer of clothing provided for exercise purposes may be simulated and conducted by interview. • The Mass Care Drill will be at Harford Community College APGFCU Center on April 17, 2024, at 1900hrs. **Cecil County Community Reception Center and Mass Care Center:** • The CRC Monitoring and Decontamination for Citizens: ○ Rising Sun High School on April 17, 2024, at 1900hrs. ○ Need to demonstrate at least six (6) people or one (1) person going through six (6) times through. ○ The monitoring sequences for the first six (6) simulated evacuees per monitoring team will be timed by the Evaluators to determine whether the twelve (12)-hour requirement can be met. ○ Cecil County will have an inject for two (2) contaminated people at this CRC. ○ Decontamination efforts will be procedurally explained, but due to the nature of the decontamination process and in consideration of the modesty of the participants any decontamination beyond the level of washing of hands or removal of an outer layer of clothing provided for exercise purposes may be simulated and conducted by interview. **Cecil and Harford County OOS CRC Drills:** • The personnel will have one-third of the resources (e.g., monitoring teams, instrumentation, portal monitors) available at the CRC as necessary to monitor twenty (20) percent of the population within a twelve (12)-hour period. • CRC staff will demonstrate the process of checking their instruments. • CRC Staff will demonstrate the capability to register evacuees upon completion of the monitoring and decontamination activities. • The CRC Staff will discuss the forms that are used to track and record evacuees. The CRC Staff will discuss their recording of radiological monitoring and decontamination data. • CRC and Mass Care Personnel will discuss their procedures for service animals.

5.1 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:

- Provisions that separate contaminated and uncontaminated individuals will be demonstrated.
- CRC Staff will discuss providing changes of clothing for those with contaminated clothing.
- Personnel will discuss the storage and monitoring of contaminated clothing and personal belongings.
    - Players will not disrobe during the exercise.
- Monitoring personnel will explain the procedures for contacting Emergency Medical Services (EMS) for transporting contaminated evacuees and Emergency Workers to the hospital for a technical decontamination.

Mass Care Extent of Play:

- OROs will set-up stations for various services and providing those services to simulated evacuees.
- Mass Care staff will 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.
- The Local Jurisdictions will demonstrate that individuals arriving at Mass Care facilities will 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.
- Mass Care Staff will provide the Evaluator a list of sources with locations and estimates of quantities of cots, blankets, toiletries, food, and other billeting items for evacuees.

Table 29: Local Jurisdiction Monitoring and Decontamination Data

Cecil County	
Total Population Est.	102,000
Est. Population Within EPZ	7,400
Est. @ Reception (~20% of Risk Population)	~1,500
Time to monitor population (no contaminations) using 1 portal monitor	>10 minutes
Time to monitor population (10% contaminations) using hand-held instruments	30 minutes / team
Teams required for hand-held monitoring in 24 hours	1
Teams required for exercise demonstration (1/3)	1

5.1 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:	
Harford County	
Total Population Est.	250,000
Est. Population Within EPZ	~12,000
Est. @ Reception	~2,400
Time to monitor population (no contaminations) using 1 portal monitor	>10 minutes
Time to monitor population (10% contaminations) using hand-held instruments	30 minutes / team
Teams required for hand-held monitoring in 24 hours	1

Capability Target 5.2: Monitoring and Decontamination of Emergency Workers, Equipment, and Vehicles *(Vice Sub-Element: 6.b.1*)

Core Capabilities: Operational Coordination; Environmental Response/Health and Safety; Planning

Recommended Evaluation Frequencies: Biennially

Recommended Assessment Activities: Exercise; Drill

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (K.4 and O.1)

Intent: The capability to implement radiological monitoring and decontamination of emergency workers, equipment, and vehicles.

Demonstration and Evaluation Guidance:

8. Set-up operations.
9. Operationally check instruments and equipment.
10. Monitor emergency worker personnel and their equipment and vehicles for contamination.
11. Decontaminate emergency worker personnel and their equipment and vehicles based on trigger/action levels.
12. Control the spread of contamination.
13. Create and maintain a record of monitoring and decontaminating workers upon completion of monitoring and decontamination activities.
14. Process for prioritizing emergency workers and equipment before the public in facilities where the public and emergency workers are both processed for contamination.

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.

*****Exercise participation may be rotated among facilities, but each facility designated in the plan must be evaluated no less than once every eight (8) years.

Capability Target 5.2 (Monitoring and Decontamination of Emergency Workers, Equipment, and Vehicles) State of Maryland Negotiated Extent of Play:

Table 30: Capability Target 5.2 State of Maryland Negotiated Extent of Play

5.2 State of Maryland Negotiated Extent of Play:
• All evaluation criteria for this Capability Target will be demonstrated by the Local Jurisdictions.

Capability Target 5.2 (Monitoring and Decontamination of Emergency Workers, Equipment, and Vehicles) Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:

Table 31: Capability Target 5.2 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play

5.2 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:

• All activities are based on the ORO's plans and procedures and completed, as they would be in an actual emergency.
• Facilities will be staffed, set up, and operational prior to the evaluation.
Harford County Emergency Worker and Emergency Vehicles Monitoring and Decon:
15. Monitoring and Decontamination for Emergency Workers and an Emergency Worker Vehicle will be at the Harford County CRC:
  o Emergency Workers will be included with the general population.
  o Emergency Worker vehicles will be at the same location as general population vehicles, but in a different area of the property Harford Community College APGFCU Center on April 17, 2024, at 1900hrs.
  o They will demonstrate a simulation of one (1) contaminated Emergency Worker Vehicle.
  o Harford County will have an inject for two (2) contaminated persons (one Emergency Worker and one citizen) at this CRC.
16. Decontamination efforts will be procedurally explained, but due to the nature of the decontamination process and in consideration of the modesty of the participants any decontamination beyond the level of washing of hands or removal of an outer layer of clothing provided for exercise purposes may be simulated and conducted by interview.
17. CRC staff will discuss and demonstrate that Emergency Workers will take priority in monitoring and decontamination over citizens in the CRC.
18. If the actual flow of water is not used, then procedures and processes will be simulated and discussed for the decontamination of an Emergency Worker vehicle.
Cecil County Emergency Worker and Emergency Vehicles Monitoring and Decon:
19. Monitoring and Decontamination for Emergency Workers and one (1) Emergency Worker Vehicle at Community Company of Rising Sun on April 17, 2024, at 1700hrs.

5.2 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:
o Cecil County has Monitoring and Decontamination at different locations for Emergency Workers and the general population. 20. Cecil County will have an inject for one (1) contaminated Emergency Worker. 21. They will demonstrate a simulation of decontamination of one (1) contaminated Emergency Worker Vehicle. 22. Decontamination efforts will be procedurally explained, but due to the nature of the decontamination process and in consideration of the modesty of the participants any decontamination beyond the level of washing of hands or removal of an outer layer of clothing provided for exercise purposes may be simulated and conducted by interview. 23. If the actual flow of water is not used, then procedures and processes will be simulated and discussed for the decontamination of an Emergency Worker vehicle. **Locations Evaluated:** 24. Harford Community College APGFCU Center-Harford County o 401 Thomas Run Rd, Bel Air, MD 21015 25. Community Company of Rising Sun-Cecil County o 300 Joseph Biggs Memorial Hwy, Rising Sun, MD 21911

Capability Target 5.3: Transportation and Treatment of Contaminated, Injured Individuals *(Vice Sub-Element: 6.d.1)*

Core Capabilities: Environmental Response/Health and Safety; Public Health, Healthcare, Emergency Medical Services; Planning

Recommended Evaluation Frequencies: Biennially

Recommended Assessment Activities: Medical Services Drill (N.4.b)

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (C.2.d, F.2, H.11, H.12, J.2, K.3, K.4, L.1, L.3, L.4, and O.1)

Intent: The capability to provide medical transport and treatment services to contaminated, injured individuals.

Demonstration and Evaluation Guidance:

Transportation

- Transport contaminated, injured individuals to medical facilities.
- Maintain communications between the medical transportation provider and the receiving medical facility.

Medical Facility

5. Operationally check instruments and equipment.
6. Set-up, activate, and operate a Radiation Emergency Area (REA).
7. Monitor and decontaminate the individual, equipment, and other items.

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.

Capability Target 5.3 (Transportation and Treatment of Contaminated, Injured Individuals) State of Maryland Negotiated Extent of Play:

Table 32: Capability Target 5.3 State of Maryland Negotiated Extent of Play

5.3 State of Maryland Negotiated Extent of Play:
• These will be assessed during the OOS Medical Service (MS-1) Drills for each risk county.

Capability Target 5.3 (Transportation and Treatment of Contaminated, Injured Individuals) Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:

Table 33: Capability Target 5.3 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play

5.3 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:
• All activities are based on the ORO's plans and procedures and completed, as they would be in an actual emergency. • Cecil County's MS-1 Drill will be at the Christiana Care Union Hospital, on March 27, 2024, at 0900hrs. • Harford County's MS-1 Drill will be at the University of Maryland Upper Chesapeake Medical Center on May 8, 2024, at 0800hrs. • A separate ExPlan and Extent of Play will be developed for both Drills. Locations Evaluated: • Christiana Care Union Hospital • University of Maryland Upper Chesapeake Medical Center

Capability Target 5.4: Traffic and Access Control *(Vice Sub-Element: 3.d.1; 3.d.2)*

Core Capabilities: Critical Transportation; Access Control/Identity Verification; Environmental Response/Health and Safety; On-Scene Security, Protection, and Law Enforcement; Operational Coordination; Planning; Situational Assessment.

Recommended Evaluation Frequencies: Biennially

Recommended Assessment Activities: Exercise; Drill

Planning Reference: NUREG-0654/FEMA-REP-1, Rev. 2 (H.12, J.8, J.8.b, J.10, J.10.a, J.11.c, J.11.e, J.11.f, J.14.d, J.14.e, M.1.b, and O.1)

Intent: The capability to select, establish, and staff traffic and access control points and removing impediments to the flow of evacuation traffic.

Demonstration and Evaluation Guidance:

9. Select, establish, and staff appropriate TCP/ACPs, consistent with current conditions and PADs (e.g., evacuating, sheltering, and relocation), in a timely manner.
10. Provide instructions to TAC staff on actions to take, including when modifications in protective action strategies necessitate changes in evacuation patterns or in the area(s) where access is controlled.
11. Contact the state or Federal agencies that have the authority for the different transportation modes (e.g., rail, water, and air traffic).
12. Identify and take appropriate actions concerning impediments that affect the evacuation and evacuation routes.
13. Make the decision to re-route traffic and coordinate with key decision-makers and the JIC to ensure the alternate route information is appropriately communicated to evacuees.
14. Establish procedures to control access to and monitor people and vehicles from the evacuated and restricted areas.
15. Authorize reentry of individuals into the restricted areas.
16. Establish exit procedures.

Capability Target 5.4 (Traffic and Access Control) State of Maryland Negotiated Extent of Play:

Table 34: Capability Target 5.4 State of Maryland Negotiated Extent of Play

5.4 State of Maryland Negotiated Extent of Play:
• All activities are based on the ORO's plans and procedures and completed, as they would be in an actual emergency. • MDOT is the decision maker for restricting air space and railways in the area. • Implementation of all PADs will be executed at the local level. Locations Evaluated: • MDEM SEOC at the MDE AAC

Capability Target 5.4 (Traffic and Access Control) Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:

Table 35: Capability Target 5.4 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play

5.4 Risk Jurisdictions (Cecil & Harford) Negotiated Extent of Play:

• All activities are based on the ORO's plans and procedures and completed, as they would be in an actual emergency.
• The Local Jurisdictions are responsible for the decision of evacuation routes, and traffic and access control points for their citizens.
  ○ Actions taken by the Incident Commander, such as closing major roadways, may also significantly impact protective action considerations.
• Transportation representatives in the Local Jurisdiction EOCs will demonstrate their routes, and how they will ensure they don't send traffic through the EPZ with the FEMA Evaluator.
• The Local Jurisdictions will discuss their Access Control Points/Traffic Control Points (ACP/TCP) process through an interview with a FEMA Evaluator.
  ○ EOC representatives will discuss the process to allow citizens re-entry, if re-entry is needed, with the FEMA Evaluator.
• The ACP/TCP procedures will be discussed with the FEMA Evaluator in the Cecil and Harford County's EOC during the graded exercise and will be based on scenario conditions.
• Communications with the ACP/TCP (law enforcement) will occur as they would in an actual emergency.
• There is one (1) road impediment inject for both Cecil and Harford County.
• Both Local Jurisdictions will discuss the alternate evacuation routes with a FEMA Evaluator based on the road impediment inject.
• Both Local Jurisdictions will demonstrate their public messaging during the Exercise which includes providing updates to citizens about changes to evacuation routes as necessary.
 	
Locations Evaluated:
• Cecil County EOC
• Harford County EOC

Appendix C: Participating Agencies

Table 36 Participating Agencies

Federal Agencies
Federal Emergency Management Agency (FEMA)
Nuclear Regulatory Commission (NRC)
United States Coast Guard- Baltimore
The Department of Homeland Security- Cybersecurity and Infrastructure Security Agency (DHS-CISA)
State Agencies
Maryland Department of Emergency Management (MDEM)
Maryland Department of Agriculture (MDA)
Maryland Department of Environment (MDE)
Maryland Department of Health (MDH)
Maryland Department of Human Services (DHS)
Maryland Department of Disabilities (MDOD)
Maryland State Department of Education (MSDE)
Maryland Department of General Services (DGS)
Maryland Department of Information and Technology (DoIT)
Maryland Department of Natural Resources (DNR)
Maryland Department of Planning (MDP)
Maryland Department of Transportation (MDOT)
Maryland Energy Administration (MEA)
Maryland Institute for Emergency Medical Services Systems (MIEMSS)
Maryland Military Department (MMD)/ Maryland National Guard (MDNG)
Maryland Public Service Commission (PSC)
Maryland Coordination and Analysis Center (MCAC)
Maryland State Police (MDSP)
Pennsylvania Emergency Management Agency (PEMA)
Pennsylvania Bureau of Radiation Protection (BRP)
Pennsylvania Commonwealth Response Coordination Center (CRCC)
Local Jurisdictions
Cecil County
Cecil County Sheriff's Office (CCSO)
Harford County
Harford County Sheriff's Office (HCSO)
Support Jurisdictions
N/A
Private Sector Organizations
Peach Bottom Atomic Power Station (PBAPS)
Constellation Energy Group
Volunteer Organizations/NGO
American Red Cross (ARC)

Appendix D: Addresses

Table 37 State Locations for Full Participation Exercise

State Locations for Full Participation Exercise	
Venue	**Address**
MDE AAC	1800 Washington Boulevard, Baltimore, Maryland 21230
Maryland Joint Operations Center (SHA SOC)	7491 Connelley Drive Hanover, MD 21076

Table 38 Risk Locations for the Full Participation Exercise

Risk Locations for the Full Participation Exercise	
Venue	**Address**
Harford County EOC	2220 Ady Road, Forest Hill, MD 21050
Cecil County EOC	107 Chesapeake Blvd. Suite 108, Elkton, MD 21921

Table 39 Support Locations for the Full Participation Exercise

Support Locations for the Full Participation Exercise	
Venue	**Address**
Rising Sun Fire Department – Station 8 (Route Alerting Staging)	300 Joseph Biggs Memorial Hwy, Rising Sun, MD 21911
Emergency Operations Facility	175 N Caln Rd., Coatesville, PA 19320
Incident Command Post/Tactical Operations Center (ICP/TOC)	Calvary Chapel of Delta 5911 Delta Road Delta, PA 17314

Table 40 Out-of-Sequence Locations

Out of Sequence Locations	
Harford County	
Venue	**Address**
Harford County Risk Schools Evaluation Drills April 17, 2024, at 0900hrs.	Dublin Elementary • 1527 Whiteford Rd, Street, MD 21154 Darlington Elementary School • 2119 Shuresville Rd, Darlington, MD 21034 Harford Christian Elementary School • 1736 Whiteford Rd, Darlington, MD 21034
Harford County CRC Monitoring and Decontamination for Citizens April 17, 2024, at 1900hrs.	Harford Community College APGFCU Center • 401 Thomas Run Rd, Bel Air, MD 21015
Harford County Monitoring and Decontamination for Emergency Workers and one (1) Emergency Worker Vehicle April 17, 2024, at 1900hrs.	Harford Community College APGFCU Center • 401 Thomas Run Rd, Bel Air, MD 21015
Harford County Mass Care April 17, 2024, at 1900hrs.	Harford Community College APGFCU Center • 401 Thomas Run Rd, Bel Air, MD 21015
Harford County MS-1 Drill May 8, 2024, at 0800hrs.	University Of Maryland Upper Chesapeake Medical Center • 500 Upper Chesapeake Drive, Bel Air, MD 21014

Out of Sequence Locations	
Harford County	
Venue	**Address**
Cecil County	
Venue	**Address**
Cecil County Risk School Drills April 17, 2024, at 0900hrs.	Conowingo Elementary • 471 Rowlandsville Rd, Conowingo, MD 21918
Cecil County CRC Monitoring and Decontamination for Citizens April 17, 2024, at 1700hrs.	Rising Sun High School • 100 Tiger Dr, North East, MD 21901
Cecil County Mass Care April 17, 2024, at 1700hrs.	Rising Sun High School • 100 Tiger Dr., North East, MD 21901
Cecil County Monitoring and Decontamination for Emergency Workers and one (1) Emergency Worker Vehicle March 27, 2024, at 1700hrs.	Community Company of Rising Sun EMS • 300 Joseph Biggs Memorial Hwy, Rising Sun, MD 21911
Cecil County MS-1 Drill March 27, 2024, at 0900hrs.	Christiana Care Union Hospital • 106 Bow St, Elkton, MD 21921
Cecil County EMS unit for the MS-1 Drill April 17, 2024, at 0900hrs.	Community Company of Rising Sun EMS • 300 Joseph Biggs Memorial Hwy, Rising Sun, MD 21911

Appendix E: Acronyms

Table 41: Acronym List

Acronym	Description
AAC	Accident Assessment Center
AAM	After-Action Meeting
AAR	After-Action Report
ACP	Access Control Point
ALC	Annual Letter of Certification
ANS	Alert and Notification System
ARC	American Red Cross
CALVEX	Calvert Cliffs Full Participation Exercise
CCSO	Cecil County Sheriffs Office
CFR	Code of Federal Regulations
COOP	Continuity of Operations Plan
CRC	Community Reception Center
CTL	Capability Target List
DHS	Department of Homeland Security
DNR	Maryland Department of Natural Resources
DOE	Department of Energy
DoIT	Maryland Department of Information Technology
DO	Duty Officer
DoC	Director on Call
DRD	Direct Reading Dosimeter
EA	External Affairs
EAL	Emergency Action Level
EAS	Emergency Alert System
EC	Emergency Coordinator
EEG	Exercise Evaluation Guide
ECL	Emergency Classification Level
EMS	Emergency Medical Services
EMnet	Emergency Management Network
EO	Executive Order
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EONS	Electronic Offsite Notification Program
EOPA	Extent of Play Agreement
EOP	Extent of Play
EPA	Enivironmental Protection Agency
EPT	Exercise Planning Team
EPZ	Emergency Planning Zone
ETE	Evacuation Time Estimate
EW	Emergency Workers
ExPlan	Exercise Plan
FEMA	Federal Emergency Management Agency
FMT	Field Monitoring Team
FSE	Full Scale Exercise
GE	General Emergency
HAB	Hostile Action Based

HAZMAT	Hazerdours Materials
HCSO	Haford County Sheriffs Office
HSEEP	Homeland Security Exercise and Evaluation Program
HSIN	Homeland Security Information Network
IAW	In Accordance With
ICP	Incident Command Post
ICS	Incident Command System
IP	Improvement Plan
IPW	Integrated Preparedness Workshop
IPZ	Ingestion Pathway Zone
JIC	Joint Information Center
JIS	Joint Information System
KI	Potassium Iodide
LO	Liaison Officer
MCAC	Maryland Coordination and Analysis Center
MCC	Mass Care Center
MDA	Maryland Department of Agriculture
MDOD	Maryland Department of Disability
MDE	Maryland Department of Environment
MDEM	Maryland Department of Emergency Management
MDH	Maryland Department of Health
MDHS	Maryland Department of Human Services
MDNG	Maryland National Guard
MDOT	Maryland Department of Transportation
MDP	Maryland Department of Planning
MEA	Maryland Energy Administration
MIEMSS	Maryland Institute of Emergency Medical Services Systems
MMD	Maryland Military Department
MSDE	Maryland Department of Education
MSP	Maryland State Police
MJOC	Media Joint Operations Center
MOU	Memorandum of Understanding
MS-1	Medical Services Hospital
MSEL	Master Scenario Events List
MSP	Maryland State Police
NPP	Nuclear Power Plant
NPS	National Preparedness System
NRC	U.S. Nuclear Regulatory Commission
NUREG	Nuclear Regulatory
OOS	Out of Sequence
ORH	Office of Radiological Health
ORO	Offsite Response Organization
PA	Public Address (System)
PA	Public Affairs
PAD	Protective Action Decision
PAG	Protective Action Guideline
PAR	Protective Action Recommendation
PBAPS	Peach Bottom Atomic Powers Station
PBEX	Peach Bottom Full Participation Exercise

PEMA	Pennsylvania Emergency Management Agency
PIO	Public Information Officer
POC	Points of Contact
PPE	Personal Protective Equipment
PPP	Post-Plume Phase
PRD	Permenant Record Dosimeters
PSAP	Public Safety Answering Point
PSC	Maryland Public Service Commision
RAC	Regional Assistance Committee
RAD	Radiation Absorbed Dose
REA	Radiation Emergency Area
REP	Radiological Emergency Plan
REPP	Radiological Emergency Preparedness Program
RO	Radiological Officer
RPM	Radiological Emergency Preparedness Program Manual
SAE	Site Area Emergency
SAL	State Activation Level
SCF	State Coordinating Function
SEOC	State Emergency Operations Center
SHA	State Highway Administration
SimCell	Simulation Cell
SME	Subject Matter Expert
SO	State Official
SOC	State Operations Center
SOP	Standard Operating Procedure
TACP	Traffic and Access Control Point
TCP	Traffic Control Point
TOC	Tactical Operations Center
UTL	Universal Task List

PEACH BOTTOM PLUME 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 April 16, 2024 Peach Bottom Plume Exercise.

FEMA Site Specialist	Date
marci catlett Lead State Planner	Date
Joseph A. Sellers FEMA Team Leader	Date

PBEX HAB EXPLAN for MDEM V5 4-12-24 signatures

Final Audit Report 2024-04-14

Created:	2024-04-13
By:	marci catlett (marci.catlett@maryland.gov)
Status:	Signed
Transaction ID:	CBJCHBCAABAAs3pHo3YjQk1X5THkCzO5PJMh8CCVVqU_

"PBEX HAB EXPLAN for MDEM V5 4-12-24 signatures" History

Document created by marci catlett (marci.catlett@maryland.gov)
2024-04-13 - 10:14:46 PM GMT- IP address: 166.137.175.61

Document emailed to taylor.griffiths@fema.dhs.gov for signature
2024-04-13 - 10:16:16 PM GMT

Email viewed by taylor.griffiths@fema.dhs.gov
2024-04-14 - 11:10:36 AM GMT- IP address: 104.47.64.254

Signer taylor.griffiths@fema.dhs.gov entered name at signing as Taylor Griffiths
2024-04-14 - 11:12:17 AM GMT- IP address: 136.226.38.117

Document e-signed by Taylor Griffiths (taylor.griffiths@fema.dhs.gov)
Signature Date: 2024-04-14 - 11:12:19 AM GMT - Time Source: server- IP address: 136.226.38.117

Document emailed to joseph.suders@fema.dhs.gov for signature
2024-04-14 - 11:12:20 AM GMT

Email viewed by joseph.suders@fema.dhs.gov
2024-04-14 - 11:18:10 AM GMT- IP address: 104.47.66.254

Signer joseph.suders@fema.dhs.gov entered name at signing as Joseph A. Suders
2024-04-14 - 11:20:14 AM GMT- IP address: 136.226.38.169

Document e-signed by Joseph A. Suders (joseph.suders@fema.dhs.gov)
Signature Date: 2024-04-14 - 11:20:16 AM GMT - Time Source: server- IP address: 136.226.38.169

Agreement completed.
2024-04-14 - 11:20:16 AM GMT

Adobe Acrobat Sign